Ribavirin and bronchiolitis: variation in use in the UK

Editor,—Following a recent study demonstrating the lack of efficacy of dexamethasone in bronchiolitis,1 Everard has commented that there is little evidence that any specific treatment for bronchiolitis is of major clinical benefit.2 The American Academy of Paediatrics (AAP) has issued guidelines for the use of ribavirin in respiratory syncytial virus (RSV) bronchiolitis.3 These guidelines have not been widely accepted in the UK and the indications for ribavirin use remain controversial.

To investigate this further we have recently conducted a nationwide survey of UK paediatricians’ attitudes and use of ribavirin, two-thirds of UK paediatricians were asked which groups of children at risk of severe RSV disease (from the AAP guidelines), who had been hospitalised with RSV bronchiolitis, they would routinely treat with ribavirin. We also asked how many children with bronchiolitis they had admitted, ventilated, or treated with ribavirin during the winter 1 October 1993 to 30 April 1994. Replies were received from 73% of all hospitals. For the following high risk groups the percentage of paediatricians who indicated that they would routinely use ribavirin for the treatment of an infant hospitalised with RSV bronchiolitis was: congenital heart disease 62%, bronchopulmonary dysplaesa 69%, cystic fibrosis 62%, immunodeficiency 67%; for those severely ill requiring fractional inspiratory oxygen >0.535%, and with raised carbon dioxide tension 30%, neonates 15%, infants with multiple congenital abnormalities 9%, and with significant neurological disease 7%.

From the replies, we estimated (by extrapolating from the infant population of each district), that there were 20 000 infants admitted, 640 ventilated and 620 treated with ribavirin in the UK during the 1993-4 season. From a similar questionnaire we sent to pharmacy departments (response rate 84%), we estimated that 1700 vials of ribavirin were dispensed for use in children, at a cost of over a third of a million pounds, although many of the larger units in the UK are no longer using ribavirin at all. The results of this survey demonstrate that only two-thirds of UK paediatricians would routinely use ribavirin for children with underlying heart or lung disease and those with immunodeficiency. For the other clinical indications recommended or suggested by the AAP, most paediatricians would not routinely use ribavirin. This study confirms that there is considerable uncertainty and variation in the use of ribavirin in high risk infants among UK paediatricians. Mortality rates for high risk infants with RSV bronchiolitis seem now to be lower than previously quoted.4 American critical care paediatricians remain unconvinced about the safety and efficacy of ribavirin, and are unhappy with the AAP guidelines.5 There are no published data on the cost effectiveness of ribavirin treatment. As the mortality of RSV bronchiolitis now appears very low, a large double blind placebo controlled trial assessing the clinical and cost effectiveness of ribavirin treatment in high risk infants is both ethical and essential for evidence-based decision making.

We thank the Royal College of Paediatrics and Child Health for help with information, and Professor Martin Bland (St George’s Hospital) for statistical advice.

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A diagnosis obscured: pyloric stenosis with situs inversus

Editor,—The recent paper by Godbole et al is an interesting addition to the debate over the value of clinical examination versus ultrasound scanning in the diagnosis of infantile hypertrophic pyloric stenosis.6 Pyloric stenosis can often be diagnosed reliably on the basis of history and examination alone, with ultrasound imaging used only as an adjunct. In less certain situations, suggestive but examination is negative, ultrasound can be crucial. We describe a patient in whom an unusual incidental secondary diagnosis obscured the primary diagnosis and ultrasound confirmed both equally simply.

A 6 week old boy was seen in clinic with a two week history of vomiting and weight loss. The vomiting occurred 10-20 minutes after a bottle feed, without bile staining, and the parents described it as ‘like a fountain’ rather than projectile. After vomiting he would settle until the next feed was due. His birth weight was 3995g, at 4 weeks he reached 4400g, but had fallen to 4200g when seen. He was the first child of healthy parents, though the father was said to have had problems with vomiting as a baby which settled without treatment. On examination he was an unhealthy, wizened child. He was tachycardic at 160/min, all peripheral pulses were normal, heart sounds were thought to be normal, and there was no evidence of cardiac failure. No gut peristalsis was seen and palpation shortly after a feed did not reveal a pyloric tumour even though the child vomited. The differential diagnosis was between gastrooesophageal reflux and pyloric stenosis. The ultrasound reported a dilated stomach with a thickened pylorus on the left side. The liver was also on the left side with the heart on the right and a right sided descending aorta. In the light of this the abdomen was re-examined after a feed with palpation in the left hypochondral region rather than the right. A typical pyloric mass was found. An echocardiogram was done before surgery. This showed all connections were present, in a mirror image inversion. The inferior vena cava was on the left and the aorta was on the right. Uneventful pyloromyotomy (Ramstedt’s procedure) was performed two days later after correction of his biochemical status and he went home four days after that. At the first follow up three weeks after surgery, all vomiting had stopped and he had gained 740g.

Pyloric stenosis has an incidence of 2-4/1000 live births,7 though this figure rises if a parent was affected, especially for firstborn males of an affected mother, for reasons unknown. Dextrocardia with situs inversus has an incidence of 0.09/1000 live births.8 There are no previous reported cases of the occurrence of these two conditions together. It is likely that their concurrence in this boy is simply a random association and does not imply any genetic linkage. In this case the situs inversus obscured the clinical diagnosis of pyloric stenosis and ultrasound was decisive.

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Paediatric organ donors

Editor,—A recent communication in the BMJ brought attention to the under utilisation of paediatric cadaveric donors in the UK. At present, a potential organ donor is referred to the UK Transplant Service, and if under 18, is offered for transplant into a paediatric recipient at those centres with paediatric programmes. In the case of paediatric kidneys, if suitable paediatric recipients are not identified, then the kidneys are offered on to adult recipients. With small donors (under 4 years), the kidneys can be transplanted into adults, with best results obtained with en bloc transplants (two kidneys, aorta, and vena cava). The UK centres have been slow to develop the en bloc transplants and so far only 10 have been performed (six at our centre).

Perhaps, in consequence, the number of paediatric donors, particularly under the age of 2, whose organs are offered are considerably fewer than are seen in the United States, where 7% of donors is less than 5 years. This would suggest that the rejection rate for paediatric donors in this country is below its full potential. As the results of transplanting organs from these small donors into adults is excellent,9 paediatricians should be encour-
aged to offer paediatric patients who are brain dead for donation. Parents often consider this as the only positive aspect of their child’s death.

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Gene polymorphisms and the use of the Bonferroni correction factor: when and when not to apply?

EDITOR—We read with interest the paper by Rahim et al examining the relationship between heat shock protein (hsp) gene polymorphisms and sudden infant death syndrome (SIDS).1 The authors described a total of 15 restriction fragment length polymorphisms (RFLP) in three hsp genes in a control population, and in 12 SIDS infants. One RFLP, a 15 kb fragment in the Mspl control population, and in 12 SIDS infants. Phisms (RFLP) in three hsp genes in a

BOOK REVIEWS


Hardly anyone encounters a new edition of ‘Nelson’ with an innocent mind: it has simply been the standard paediatric text for the English-speaking world for too long. True, ‘Forfar and Arneil’ is a UK production with many virtues, but it hasn’t been around for so long, it costs more—even in Britain—and it isn’t updated quite so frequently. In any case, as anyone who has spent much time in the witness box of an English court knows, it is Nelson that our own lawyers consider to be the ‘Bible’ on paediatric matters.

To have reached a 15th edition is an achievement in itself, having taken 63 years in the process. As this writer knows too well, the passage of the years tends to bring obesity, and textbooks, too, tend to get fatter and heavier. While this edition contains 12% more pages than the previous one, it weighs 3% less, their thickness is within a millimetre of each other. The structure is much the same as previous editions, although there has been a very thorough revision of the contents. It is strikingly up-to-date: the editors have achieved marvels in gathering their material from contributors who know how to keep to a deadline.

When I spent a summer as an extern at an American hospital 30 years ago, I was struck by the fact that American students used larger textbooks than most of my Edinburgh classmates; indeed, there seemed to be few very American texts on anything medical. The text used for paediatrics was Nelson, and this new edition still has a section introducing the newcomer to the special problems of child health and development. There is a short chapter on the evaluation of medical literature, which, I suspect, is too elementary for those who need to critically assess data, and incomprehensible to those who know little of statistical theory. There is also a chapter on medical ethics. I cannot help feeling that Nelson is far too big to be a student text, other than for reference: there is simply too much information to give perspective to a student. What Nelson does best is to give, in a single (past) manageable volume, an overview of the state of the art of paediatrics for the practising paediatrician, and that it does supremely well. Its contributors are almost all from North America with just single ‘strays’ from France and Israel, but its all-American provenance does not, as far as I can judge, limit its usefulness to the paediatrician in the UK: I have kept close to this volume over the last seven months, consulting it over almost every difficult case, and reading closely through several sections, and day by day, I have become ever more impressed by its authority and practical value. No individual can be qualified to judge all the sections of such a large book, but when I read those chapters on conditions with which I have more than a nodding acquaint- ance, I found its combination of accuracy and conciseness striking. Furthermore each part of the book is prefaced by an elegant overview of the topic: these will be more than mere pictures used purely for reference. It would be inconceivable that such an enormous text would be entirely free of inconsistencies, but I did not find any major ones, while endomysial antibodies are emphasised as valuable in the diagnosis of gluten enteropathy, they are not mentioned in the section on screening for malabsorption. A reader in the UK may be surprised that gabapentin is mentioned in the treatment of epilepsy, but lamotrigine or vigabatrin are not. I was disappointed that there was no mention of streptococcal proctitis, a cause of much misery in young children.

The excellent chapter on respiratory diseases is marred by poor quality of reproduction of x-rays: on page 1202 there is an x-ray picture purporting to show the ‘Steeple’sign: it defeated my attempts to decipher it, but I suspect that making such pictures clearer would have required thicker, heavier paper, and pushed up the book’s price considerably.

For years we British have sneered at the turgid prose of some American and European texts: I defy anyone to find a better textbook of paediatrics in English than this new edition of Nelson. That it costs only £70 is wonderful, and in this secular age when daily Bible reading is no longer universally de rigueur, a paediatrician of any seniority could do worse than opening this book at a new part each day and reading it for five minutes: Nelson continues to deserve the title of Bible of Paediatrics. Congratulations to all concerned in its production.

ROBERT A F BELL
Consultant paediatrician


‘Paediatric Gastroenterology—A Formidable Past, a Challenging Future’ the first chapter of this multiple, and international, author text highlights some advances in our understanding of gastrointestinal diseases in children. The second edition could not have come at a better time, with many countries now recognising ‘certification’ in this rapidly developing subspecialty. The two volumes are divided into six sections: I. Approach to child and family; II. Normal development and function; III. Cardinal manifestations: pathophysiology, IV. Clinical manifestations and malnutrition; V. Diagnosis of gastrointestinal disease in children; and VI. Principles of therapy.

In attempting to make the most of the new while retaining the best of the old, the first edition (published 1991) has been extensively
The Atlas of Pediatric Oncology has the remarkable effect of giving the feeling, no doubt an illusion, that one knows all about the subject after spending a few minutes looking at the page. It is in fact only the companion volume to Practical Pediatric Oncology, which has already been published. Although it just has to have a place together with everything else, both written and clinical in the continuing education of the specialist, it is particularly welcome to those who work with children without being responsible for the ultimate care of those with malignant disease.

Epistaxis for instance, common in children, is covered by otolaryngologists, pediatricians, and ophthalmologists. Occasionally one of these children will have leukemia and it is essential to have an up-to-date idea not only of the clinical manifestations but of the cytogenetics, the modern treatment and prognosis.


Two volumes, 1600 pages (more pages than newly diagnosed children with cancer each year in the UK) 83 chapters, and 114 contributing authors. This represents a substantial project with a wide ranging intention: 'a useful reference for the clinician and the clinical investigator as well as medical students, residents and fellows'. In his introduction the editor states his intention to make the text 'truly international' although fewer than 25% of the authors actually come from North America. There are some big names but not all necessarily writing on the subjects one might expect. Most of the chapter headings are logical and worthwhile, with some exceptions—a whole chapter on the 'techniques of bone marrow biopsy' seemed a bit excessive!). The balance of content was certainly reflective of the time required to prepare with the pace of clinical practice. This almost certainly reflects the time required to prepare a text of this length rather than poor authorship.

In looking at areas I thought I ought to know more about, I was interested to read the chapter on retinoblastoma. I was disappointed. The discussion on the molecular genetics was surprisingly brief. The list of references quoted was dated later than 1987. Cancer biology is a fast moving field but the authors could have made more effort here. The use of chemotherapy in management was similarly out dated with references quoted only from the early 1980s. This was really not good enough. Again, perhaps the firmness of an editorial hand was the missing factor.

As far as 'hens teeth' go, this text was as good as many. Much depends on the structure of the index in searching for the bizarre. In this case the index was well constructed and designed to be easy on the eye. In fact it was something of a godsend for enteral nutrition seemed a bit excessive!). The balance of content was satisfactorily distributed between the general and the specific. It was good to see chapters on pain control, ethical issues, and self help groups. Nutrition was given some prominence, rightly in my view, although I did not agree with its approach or many of its recommendations. Home total parenteral nutrition is almost unheard of in paediatric oncology in
Letters, Correction, Book reviews, Software review

the UK but seems to be big business in the United States—is this really justified? Late effects issues are spread out in the text and can be found in individual tumour sections as well as some specific chapters but this can make it hard to get an overview. Late effects are, after all, a feature rather than disease related and this approach also leads to some duplications.

There have been at least two other major texts in paediatric oncology published in the last few years, so how does this book compare? By reviewing a book published in 1994 and probably written two years earlier, it cannot possibly appear 'state of the art' but its basic content is reliable if not truly as international as was intended. There are however plenty of good illustrations, the overall presentation is attractive and the index is useful. Personally I am not sure that this is the best of the major texts available but it is a worthy contributor to the field. At £280 it is scarcely going to be in any resident or fellow's personal book collection, (unless, of course, they have a very generous boss!).

MICHAEL C G STEVENS
Consultant paediatric oncologist


The authors of this book are to be congratulated for having produced, overall, a clear, user friendly introduction to the subject of paediatric dermatology. If what follows seems to be critical, then I hope it will be seen in this context.

No prior knowledge of dermatology or paediatrics is assumed, and the reader is carefully taken through what the authors somewhat paradoxically call 'physiological disorders' such as erythema toxicum, although the major part of the book is concerned with pathological conditions. The ratio of pictures to text is about 1:1; the quality of the photographs is excellent, and the information is set out clearly and readable. The authors have decided to sacrifice detail for brevity and clarity.

The subject matter is grouped sensibly; it took me no more than a few seconds to find whatever I was looking for.

References are not included. This created problems whenever I came up against a statement with which I disagreed. Were they wrong, or was I out of date? For example, should children with chickenpox be off school for a week after the rash appears (p 88)? Not according to a straw poll of health visitors, practice nurses, and general practitioners who all felt that no more new spots was the correct advice.

Similarly, I don't know if plantar warts are spread in swimming pool changing rooms, as they assert, but if so, I'd like the chance to see the evidence. If there isn't any then I'd have to think of a new generation of health professionals acquisicing to swimming pools' demands to distribute ghastly verruca socks, or, worse still, withdraw children from swimming lessons. I am also concerned to note that the maxim of active genital herpes = caesarian (sic) section, is still being promoted (p 99); they are not alone however—in fact our local gynaecologist maintains that the single most important thing to do if you have herpes and are pregnant is not to tell the obstetrician.

There is an underlying issue here— if statements are made ex cathedra then a student may be more inclined to accept dogmatic statements at face value in the future, rather than develop an inquiring, questioning response.

Emphasis is rightly given to common disorders such as eczema. I was delighted to see that the amendment given to head and scabies mirrors their incidence in the community. A few rarities are included but there seems to be no obvious criterion for inclusion; in addition, incidences are not always quoted and the confirmed reader may well infer that Netherton's syndrome (of which I had never heard) is as common as chickenpox.

There are one or two other minor issues when discussing the general practitioners' diagnosis of erythema toxicum it is suggested that electron microscopy of the contents of a vesicle will exclude viral infection. I'm sure it would, but in practice I find it neither a helpful nor a practical suggestion.

Non-accidental injury is relegated to a small section at the back; although there are competing claims for space in a book of this size, I feel that the importance of considering it and of knowing how to act upon the suspicion should be stressed.

More than most specialties, dermatology evolved as a descriptive specialty ('wallpaper-ology' as my first consultant put it), and several terms mean nothing to a non-classicist. Perhaps a short addition of Greek and Latin terms to the glossary in this book might help students to make more sense of the terminology. 'Pityriasis rubra pilaris' doesn't mean as much to the average student as 'red scaly eruptions around hair shafts'.

I think many groups of health workers will find this book useful and informative; not just undergraduates and general practitioners, but midwives, health visitors, and practice nurses.

Having whetted the reader's appetite for more, it may be worth considering a section on further reading in future editions.

SARAH WOOKEY
General practitioner and clinical assistant in dermatology


By 1995, over 1000 individuals had received experimental gene therapy treatment. The principles are clear—the gene of interest has to be identified, a delivery system developed, and the regulation of the expression of the gene has to be understood—for example our understanding of the control of the insulin and β-globin genes is incomplete and so gene therapy for diabetes and haemoglobinopathies is distant. The best candidates are disorders involving 'housekeeping' genes that do not require tight regulation of gene expression to match their function.

Gene transfer can be performed in vitro whereby tissue of interest is removed from the body, altered genetically, and then returned to the patient. In vivo techniques involve direct gene transfer into the patient either as 'naked DNA' or in liposomes, viral vectors, or conjugated to a targeting structure such as an antibody to a specific cell surface moiety (receptor mediated gene transfer). This latter method holds considerable promise though no clinical trials have yet been performed.

The ideal viral vector would allow efficient transfer of the gene into specific cells and then integrate the gene into the host cell's genome so that it can be replicated—provided that the gene has suitable applications at a specific site where there is no risk of mutagenesis. The virus should not induce an immune response, have no risk of becoming infectious, and be big enough to contain large human genes. Culver discusses the advantages and disadvantages of each of the current vectors.

The above systems deal with inserting normal genes into cells but there are alternative strategies, for example repairing or blocking the function of a mutant gene. Repairing genes by homologous recombination has proved inefficient but a novel method is suggested whereby a disease causing point mutation is identified and an oligonucleotide synthesized that will bind adjacent to the mutation. A DNA damaging agent is added to the end of the oligonucleotide so that it is positioned next to the mutation. The mutated nucleotide is then damaged, activating normal DNA repair processes.

Blocking the products of abnormal genes is an attractive proposition for dealing with 'gain of function' mutations. Oligonucleotides can be synthesised to bind to DNA or RNA sequences and prevent transcription if so far the clinical application of this 'anti-sense' technology has been limited by inability to produce molecules with sufficient survival and duration of inhibitory effect.

There are numerous possible applications of gene therapy in non-neoplastic disease. Expected advances may be most rapid in areas other than genetic disease—Culver predicts that the use of recombinant vaccines will be the most prevalent application of gene therapy over the next decade. Some ideas are futuristic, for example Culver considers the potential use of gene therapy in pain relief by transfer of 'analgesic genes', for example β-endorphin into sensory neurons in a neurotropic vector, such as herpes simplex virus.

The majority of gene therapy trials involve cancer treatment. Culver lists 15 strategies that are being considered and then illustrates them from current research.

This is a readable and stimulating book which is geared to an American audience, listing all the current gene therapy trials in the USA and the biotechnology companies engaged in such research. It nevertheless provides a clear overview of the subject.

ALAN FRYER
Consultant clinical geneticist


Wilson’s disease, although known to every undergraduate, is rarely seen in clinical practice. The modes of clinical presentation are varied, and initial manifestations may be subtle. Highly effective and specific treatment is available, which must start early in the course of the disease to prevent irreversible pathological changes, and delayed diagnosis may be disastrous. Patients with unrecognised Wilson’s disease are therefore great risk.

For those willing to commit a few hours to
learning more about this fascinating condition... this is the book to read... In approximately 200 pages every facet of the disease is covered, from the history of its early recognition, to the cloning of the gene in 1993. Shortly before this discovery, the gene for Menkes’ disease had been cloned, and proved to encode a copper transporting ATPase. In Menkes’ disease, copper export from cells is defective in many tissues, including enterocytes, so copper absorption is impaired. In Wilson’s disease copper absorption is normal, but patients fail to excrete copper in the bile. It therefore seemed reasonable to suspect that the defective gene in Wilson’s disease might also encode a copper transporting protein, and this indeed proved to be the case. The Wilson’s gene was cloned by using a probe from the copper binding region of the Menkes’ disease gene. As is so often the case, identification of the gene and its product leaves many questions unanswered regarding the pathophysiology of the disorder. A number of mutations have been identified, and the relationship between phenotype and mutation is now being explored. Common mutation, for example, is associated with a relatively late disease onset.

There is an excellent balance between the discussion of fundamental biological issues and clinical aspects. The author encourages a preference for the use of zinc sulphate in treatment, but the alternative approaches to treatment are also discussed. Although this volume is from the Major Problems in Neurology series, the non-neurological aspects of the disorder are well covered. The writing is lucid, and the photographic illustrations are strikingly clear. If you have ever wondered what a Kayser-Fleischer ring looks like, consult this excellent monograph.

M STEPHEN MURPHY
Consultant paediatric gastroenterologist and senior lecturer in paediatrics and child health

Parental Psychiatric Disorder.
Distressed Parents and their Families.


One of the most important things about this book is... the reader must assess a preference for the use of zinc sulphate in treatment, but the alternative approaches to treatment are also discussed. Although this volume is from the Major Problems in Neurology series, the non-neurological aspects of the disorder are well covered. The writing is lucid, and the photographic illustrations are strikingly clear. If you have ever wondered what a Kayser-Fleischer ring looks like, consult this excellent monograph.

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Alcohol and the Young.


The abuse of alcohol by young people is an area of social behaviour that exemplifies the giving of mixed and confusing messages to young people by familial adults, professionals, policy makers, and the media. This short and well conceived report carefully details the many and significant adverse effects of inappropriate use of alcohol by young people and adults. It also graphically illustrates the lack of effective political will or professional drive to address its serious consequences. The report starts with a review of the adverse biological and sociological effects of parental alcohol abuse. This emphasises the importance of prevention of development of unhealthy life styles during adolescence that persist into adulthood.

The report details significant and robust data about the effects of fiscal, legal, and public policy in relation to alcohol use and abuse. In the light of this evidence it is clear that much could be achieved by changes in policy but governments have not applied this knowledge. A striking feature of the review, referred to in the final chapter, is the extraordinary lack of evaluated interventions of programmes of prevention or treatment. I am particularly disappointed that the authors feel justified in making the following statement: ‘Educational approaches should, therefore, not form a lead approach on their own in combating alcohol misuse among young people. There is insufficient evidence to support it...’ I welcome this true current there is some evidence that appropriate, though expensive, interventions which are based on social learning theory may influence teenage behaviour when delivered in an educational environment. It is primarily a lack of evaluated applications of interventions, particularly in the UK, that precludes their recommendation.

Reading this volume I can only conclude that lack of investment in evaluated programmes, together with unwillingness to enforce the law or to apply fiscal measures which would limit alcohol consumption indicate that there is not the political will to address this important health problem. The book will be useful, not only as a resource for interested professionals, but also for groups advancing direction of resources towards influencing teenage behaviour with potential for significant social and health benefit.

If Alcohol and the Young is successful in raising public, professional, and political awareness of the problems that alcohol presents to young people and the very limited responses that have been made it will have served society well.

JOHN TRIPP
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Unwillingly to School.


Jack Kahn was one of the most loved and respected child psychiatrists of recent years. The third edition of Unwillingly to School, which he edited with Jean Nursten, was published in 1981. Like its predecessors it focused predominantly on the pattern of school non-attendance associated with anxiety that is usually called school refusal. The vast majority of school non-attendance is ostensibly because of physical illness and short lived. Of the more persistent patterns and those for which social or psychopathology has been more clearly demonstrated school refusal is the least common, truancy being much more frequent in community surveys. Ian Berg has joined Jean Nursten to edit the 4th edition of Unwillingly to School. It commemorates and is a tribute to Jack Kahn, and although it appropriately includes four chapters from the previous edition on which he was the only or lead author, it has been broadened to include aspects of the whole range of school non-attendance. For example, adult sequelae of truancy are reported from the National Child Development Study, the Cambridge Study in Delinquent Development, and the American Epidemiologic Catchment Area Study. Chronic disease and school non-attendance is also addressed with new contributions from child psychiatrists, educational psychologists and educational psychiatrist; however, most of the treatment described appears focused on school refusal.

There is a most striking contrast between the depressing and indeed appalling longer term sequelae of these conditions, and the relatively benign outcome of a 20–30 year follow up study of Swedish urban children with school refusal. This contrast is matched by sensitive and perceptive descriptions of the treatment of school refusal and the depressing situation with regard to truancy and withdrawal. Incidentally, withdrawal—school non-attendance with which parents collude—receives relatively little attention. With regard to truancy it is con-

With increasing emphasis placed upon excellence in sport, there is now a widely held belief that to achieve success, particularly at national or international level, training and competition should begin at an early age, well before the onset of puberty. Some are concerned about the possible negative effects of intensive training at such a young age. Much anecdotal evidence suggests cases of over training and competitive pressure leading to young athletes’ premature retirement from sport, although little scientific evidence has validated these impressions. In general, knowledge regarding physiological, psychological, and medical aspects of paediatric exercise has lagged behind that generated for adults. The editor of this encyclopaedia has gathered 46 experts from the world of paediatric exercise science, and produced a book that reviews much of this important area.

This is the third volume of the Encyclopaedia of Sports Medicine (an International Olympic Commission publication) and the first to focus on a demographic portion of the population. Each chapter reviews the current literature (references in some cases up to 1994) and discusses its themes, relating evidence from young athletes to those observed in normal healthy children. At the end of each chapter the authors set out challenges for future research.

The first six chapters form part 1 and outline the inter-relationships between a child’s growth and development, and aspects of physical performance, with the concluding chapter discussing such inter-relationships with reference to the search for talent in the young. Part 2 delbrates the trainability of children and adolescents. It discusses the effectiveness of training during preadolescence, emphasising the importance of lack of exercise on the growing child’s musculoskeletal system. This leads into the next section which discusses injury from overloading the musculoskeletal system. The importance of distinguishing between chronological and biological age is discussed, a recurrent theme throughout the book, in this case its relationship to matching opponents.

Part 4 outlines other health concerns: nutritional, hormonal, congenital, and psychological. Issues such as socialisation through sport, self esteem, emotional stress and anxiety, and intelligence are outlined in part 5. Part 6 concentrates on the area of disease and exercise, focusing on asthma, diabetes, hypertension, and motor disability. The final part of the encyclopaedia comprises recommendations on assessing and interpreting the morphological and physiological characteristics of the young athlete.

As stated by Professor Bar-Or in his preface, this book provides valuable reference material for professionals who are interested in the effects of exercise and sports on children and adolescents. Although directed to a broad audience, the book is most suitable for physical educators, coaches, and researchers in this field. The sports physician, general practitioner, or paediatrician may wish for more complete pathophysiology in certain sections. Notwithstanding this shortcoming, I recommend the book, as it offers a good overview of the subject, providing an excellent review of our current understanding. It is an excellent starting place for researchers looking for background and ideas for what needs to be done next in this important field of research.

ANTONY COX
Professor of child and adolescent psychiatry


For the novice writing a paper is a daunting task. In the future, changes in training of junior doctors will lead to many taking up research at an earlier stage of their career but unfortunately relatively few of them will have access to practical books and guidelines to help. For the individual who has already published many papers there may be considerable scope for improvement in quality and as Tim Albert points out in his book, it is not just a question of having an article published but it matters which journal accepts it for publication. For example, it may be relatively easy to have a paper accepted for the Journal of Paediatrics: Genodontology but it is a certainty that a much more highly published article will be required for the BMJ, New England Journal of Medicine, or the Archives. This is not necessarily to do with the scientific content of the research, which may be excellent—clearly there is quite an art in getting the scientific message across to the audience.

For the beginner one of the difficulties is the time consuming nature of the initial drafting process. After 10 hours of scribbling and attempted starts there may be little tangible progress. However, the book gives practical suggestions about dealing with these problems and goes through the various stages of the process to do this in a time efficient manner. What does the editor of a journal want? Looking at the publications game from his point of view is a useful exercise because the way in which the paper is constructed and how the message is given is crucial to the chances of acceptance. It was reassuring to know that even in this day and age there are alternatives to using a word processor for the first draft, which can restrict the flow of ideas.

Furthermore, the need for some people to go back endlessly and adjust words and phrases is discussed.

The author of this book, who lecturers on writing techniques, has considerable experience of teaching doctors how to publish. It is an authoritative and useful document written in a clear style which is easy to read; this task can be completed in 2–3 hours. I feel the potential author will be wiser and produce a better paper in a shorter time after reading this book. Why not relax and enjoy the task in the bath?

NICHOLAS MANN
Consultant paediatrician


Since 1984, when Developmental Neuropsychiatry edited by Michael Rutter was published, there has been a burgeoning of interest in this field both in the UK and the United States. The roots of child psychiatry in the United States concentrated on the child guidance movement and have focused particularly on the psychosocial aspects of child development. This goes some way to explain the relatively late understanding that a neuroscientific perspective can give to developmental psychiatry. These two volumes from James C Harris are a welcome initiative into furthering our understanding of developmental disorders. Volume 1 provides a useful introductory framework to neural sciences, and how aspects of cognitive neuroscience inform our thinking on concepts such as motivation and attention control. Throughout both volumes there is an emphasis on the developmental perspective, which is so important to our understanding of the emergence and continuities of such disorders.

In volume 2 there is a more formally structured review of neuropsychiatric disorders, prefaced by a section on current diagnostic tools available in all disciplines. Each topic is well presented and written, although one may quibble regarding the relative weight given to particular aspects. For example, the chapter on traumatic brain injury seemed remarkably brief in comparison with the evaluation of behavioural phenotypes. Certain parts of the texts reflect a particularly American perspective, which may be of particular interest to those on cerebral palsy and attentional problems, important research contributions from other parts of the world are surprisingly omitted. Nevertheless this is an important, very well presented, and highly readable work comprehensively covering the fascinating area of developmental neuropsychiatry.

MARIAN PERKINS
Consultant child and adolescent neuropsychiatrist
The term 'behavioural phenotype' was introduced by Professor William Nyhan in his presidential address to the Society for Pediatrician Academic Forum in 1972 with a vivid description of the self-mutilation that characterises the condition to which his name is attached—the Lesch-Nyhan syndrome. The observation that individuals with the same genetic disorders behave in similar ways is not new and descriptions of behaviours were included in the early descriptions of his eponymous patients by Down. The study of behavioural phenotypes and their clinical relevance diagnostically and therapeutically is receiving increasing attention. This is the first textbook designed specifically to address this topic.

The opening chapter provides an excellent introduction to the concept of behavioural phenotype and its place in genetics and developmental medicine. The interface between behavioural phenotype, psychiatric disorder, and phenotype is discussed and the complex aetiology of these phenotypes explored. This work draws from a broad scientific field and subsequent chapters summarise advances in human genetics, pathways from genotype to phenotype, and lessons from the X chromosome. There are two chapters concentrating on methodological issues and measurement of behaviour. These provide an extremely helpful overview to this complex area for those considering research.

A major part of the book is devoted to a review of the psychological and behavioural phenotypes that are associated with a number of genetically determined disorders. The genetic underpinnings, physical features, and natural history of the more than 30 syndromes are reviewed followed by descriptions of the cognitive profiles, learning difficulties, and behavioural characteristics that are associated with each. Research in this area is in its infancy and in many cases descriptions are anecdotal. It is difficult to provide up to date information in this rapidly advancing field.

In summary, this first book specifically devoted to behavioural phenotypes summarises the work of the Society for the Study of Behavioural Phenotypes over the last few years. I feel it will be of value to professionals from both mental health and paediatric backgrounds who are working in the field of learning disability. This is a developing and controversial area and I hope this book will promote the concept of behavioural phenotypes to a wide audience.


Hyperactivity Disorders of Childhood is the second topic considered in this new series of monographs in child and adolescent psychiatry. The aim of the series is to provide comprehensive coverage of particular topics, while aspects which have received less attention in the recent past are more thoroughly examined. A historical perspective is given as guides to historical research evidence in the field of child and adolescent psychiatry may otherwise obscure the contribution made by previous generations. I have some sympathy with this view of hyperactivity, having been reminded of the early description of Still in 1902, and how little it has changed.

The most illuminating chapters cover developmental, social, sex differences, and cross cultural aspects. Olson's chapter on the developmental perspective considers how early caregiver-infant attachment may affect self regulation, a factor that may be important in the syndrome. Research into early temperamental factors and developmental course of hyperactivity are discussed in great detail. These discussions highlight possible pathways in the aetiology of hyperactivity and how they may affect outcome. The chapter by Hepinstall and Taylor on the significance of sex differences raises interesting issues. They discuss diagnostic considerations and the possible impact of referral bias affecting observed differences in prevalence between boys and girls. The chapter on cross cultural aspects by Luk is particularly fascinating. Issues relating to cross cultural comparisons of diagnostic groups, the influence upon the concept of pervasiveness, and presentation of the symptoms is not only of academic interest but important clinically. The topic is well covered but as in many multiauthor works, there are some irritating repetitions. It is most useful in offering usual slants on hyperactivity.

MARIAN PERKINS
Consultant child and adolescent neuropsychiatrist


Professor Davies was appointed to the Foundation Chair of Paediatrics at the Chinese University of Hong Kong between 1981-9. Not only was he involved in setting up the Department of Paediatrics in the newly founded medical school, his research and astute clinical observations during this period undoubtedly marked an important milestone in the development of paediatric services in Hong Kong. This book is largely a comparison of disease patterns, clinical practices, customs, lifestyle, and social attitudes between the Chinese in Hong Kong and white people in the West.

The book is divided into three main sections, and each chapter is based on articles published locally. The first section relates mainly to his clinical research interests in childhood growth and nutrition, contrasting the differences and similarities between Chinese children and their white counterparts. The second section focuses on his interests in paediatric medical education, where he discusses the current paediatric curriculum at the Chinese University of Hong Kong, the way medical students should be taught, and the future format of examinations. The last section describes his clinical observations and impressions on the variations of paediatric diseases in Hong Kong and Britain.

This book is of particular interest to me as a Hong Kong born Chinese neonatologist who was trained in Britain, and worked there for almost 20 years before returning in 1993 because of my father's illness. After my return, I have been intrigued by, and at times unexpected, differences in neonatal disease patterns. Professor Davies' book provides much insight into this aspect. His observation that Hong Kong's extremely low sudden infant death rate might be related to certain cultural and social factors, has undoubtedly contributed to further research and critical appraisal. During the past decade, globalisation has resulted in significant movement of people from one region to another, and many young people have emigrated to Europe, Australia, and North America. There is, thus, an increasing need for clinicians in Western countries to be aware of the 'Chinese disease pattern'.

The book is very easy to read. I would warmly recommend it to all paediatric and child health professionals who have an interest in cross cultural disease patterns and medical education. Trainee paediatricians completing a sabbatical or study leave in the Far East would also find the book to be of value.

P C NG
Associate professor in paediatrics and honorary consultant neonatologist


Prenatal diagnosis encompasses several disciplines: clinical and laboratory genetics, obstetrics and antenatal ultrasound, biochemistry, paediatrics, and fetal pathology. Those working in this area must be a 'Jack of all trades'. They may well feel daunted at the rapid changes taking place, by the difficulties at communicating sometimes imprecise information, and helping families face very difficult decisions.

The stated aim of this book is to provide a basic practical introduction for the wide range of health professionals involved. With the very few reservations outlined below it fulfils this aim.

The principles of screening and prenatal maternal screening are covered comprehensively and very readily; I highly recommend this chapter. The role of ultrasound and the more common abnormalities detected are well covered to give an overview but not in enormous detail. The section on invasive procedures has concentrated too much on the actual technique for most, who will not turn to this text for advice on how to do a procedure. I take issue with the conclusion suggesting no association between chorionic villus sampling and fetal malformation. It may be important in any gestation, because this is based on the work of one group and ignores the concerns raised by other groups throughout the world.

Laboratory investigation by cytogenetic and combinatorial DNA technology are up to date, helpful and well covered. There is quite a lot of detail for those uninitiated in molecular matters. One or two errors—recurrence after the birth of a non-translocation Down's syndrome child is not more likely if the mother was young (although the increase in risk is greater); a presumed misprint has led to an unfortunate sentence concerning chickenpox 'fetal death is rare and unpredictable and termination of pregnancy is recom
for statistical analyses by other programmes. and to generate data files that can be exported. This is an extremely valuable but still expensive software—which takes some persistence to master.

PATRICIA A BOYD
Clinical geneticist

SOFTWARE REVIEW

Castlemead Growth Program II. Compiled and written for Castlemead Publications by the MRC Dunn Nutritional Laboratory, University of Cambridge, 1994. Available from Castlemead Publications, 12 Little Mundells, Welwyn Garden City, Herts AL7 1EW; price £475 + VAT.

The objective of this innovative software, the Castlemead Growth Program, was to provide a readily accessible system of recording growth data for computerised visual display. With the aid of the program it should be possible to dispense with paper growth charts altogether, and to generate data files that can be exported for statistical analyses by other programmes.

The potential clinical benefits to the busy practitioner are considerable.

The program was originally released in two versions. Program I was aimed at a broad medical market, such as general practitioners, and restricted to the recording of weight, height, and head circumference data; this has now been discontinued. The more advanced version, program II, which is aimed at a specialist market, has other features too. These include the capacity to record other measurements (for example, leg length, triceps and subscapular skinfolds, Turner’s syndrome height, Down’s syndrome height and weight and body mass index). It is also possible to analyse growth parameters with a variety of growth standards and to import and export data files from other software packages such as SPSS or Microsoft Excel. Program II is supplied with the new Buckler-Tanner British Clinical Longitudinal Growth Standards (1995) for height and weight.

We have been using the specialist version of the software in a variety of research projects since its release in 1993. Accordingly, we should by now be familiar with its functions and idiosyncrasies. Yet we still approach any task that involves more advanced functions than simple data entry with trepidation. The manual supplied with the program gives the user limited information and is not at all clearly written. Although a telephone support service is supposed to be available we have persistently met with limited success in finding anybody able to advise us. The usual response is that the ‘adviser’ is unable to help with anything other than the most basic functions of the program. Furthermore, when colleagues visited the suppliers they were extremely disappointed at the lack of knowledge of those demonstrating the program’s capacities.

Even our research staff who are highly computer literate have encountered difficulties in using this arcane system. For example, when setting up a data file a number of different record fields need to be created, and these vary depending on the growth measures wanted. Each of the records (for example, composite record, primary record, and growth standards) needs to be linked. Yet the manual provides little insight into how to go about this task. Although it should be possible to transfer data and to import and export growth data created in ASCII format elsewhere, this relatively straightforward task took a student, already very familiar with the program, a number of days to complete.

Once a file is set up and data have been entered it is possible to generate a variety of graphical representations of your data, either in SD scores or centiles. Printing the information is rather more difficult. Despite having tried at least four different printers we still experience problems printing growth charts; the printer interface certainly does need revision. When it works though, the results are wonderful!

Despite all the drawbacks, once one is familiar with its idiosyncrasies the program is an invaluable tool for anybody seriously concerned with the measurement of growth in children. For example, the computation of SD scores for a variety of anthropometric measures, including body mass index, saves an inordinate amount of time when compared with calculating these measures by hand. The variety of ways in which growth charts may be printed is also a potentially valuable resource. To summarise, this is extremely valuable but still expensive software—which takes some persistence to master.

DAVID H SKUSE
Professor of behavioural sciences