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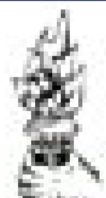

The Short Textbook of
Pediatrics

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Pediatrics

Incorporating National and International Recommendations
(MCI, IAP, NNF, WHO, UNICEF, CDC, IPA, ISTP, AAP, etc.)

Twelfth Edition

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The fond memory of my parents
whose inspiration, motivation, blessings
and moral support continue to contribute a great
deal to my academic endeavors
and
everybody striving to contribute to child health
and welfare for a brighter future
globally.

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Foreword to the Twelfth Edition

I am really at a loss for words to write a *Foreword* for the 12th edition of *The Short Textbook of Pediatrics*, a book which has such a track record and long history of excellence since its first release at the 15th International Congress of Pediatrics in 1977, New Delhi. In fact, a book of this caliber does not need introductions, forewords and endorsements for its continuous success.

The publication of a book is a process as laborious as the process of delivering a baby. Maturity (contents and the quality), weight gain (number of pages) and intact survival (final copy) all have to be carefully looked after. Moreover, bringing out a new edition of a textbook is a tight-rope-walk. There is a need to maintain a continuity in academic contents and advances without affecting the flavor of the earlier editions.

Mercifully, *The Short Textbook of Pediatrics* by Prof Suraj Gupte, an eminent educationist, researcher and author of national and international repute, continues to remain a prestigious publication, highlighting the phenomenal and fast explosion of knowledge in modern pediatrics in edition after edition.

The 12th edition of this book is an excellent combo of clinical pediatrics with recent advances in the field of child health. The value of this textbook is largely due to its expert and authoritative contents by scores of knowledgeable contributors drawn from India and abroad. Every reader should be indebted to the dedicated authors for their hard work, knowledge, thoughtfulness and good judgment in providing a wealth of information in the form of profusely-illustrated and state-of-the-art chapters with spotlight on problems in the Indian subcontinent. In the formative stage of medical career, it is important that a student gets authentic information about different topics.

I am confident that the 12th edition of *The Short Textbook of Pediatrics* will act as a support system for medical teachers and help medical students, especially undergraduates, to "Update Grey cells"! The new edition should be yet more successful in improving the standard of pediatric education and child healthcare in the Indian subcontinent in particular.

Dr Pramod Jog MD, MNAMS, FIAP
President (2016),
Indian Academy of Pediatrics

Preface to the Twelfth Edition

The much-awaited 12th edition of *The Short Textbook of Pediatrics* appears at a time when pediatrics has well established its status as an independent subject in the undergraduate curriculum with a separate examination at university level in India following the laudable endeavors of the *Indian Academy of Pediatrics*.

Since the last edition eminently succeeded in meeting the needs of the undergraduate students, here in the 12th edition we have made further strides to attain the enhanced excellence not only for them but also for the benefit of postgraduates, residents, practitioners and teachers. The goal is to provide a blend of time-honored concepts along with new advances with special emphasis on the needs in the Indian subcontinent.

Each and every chapter stands updated with extensive revisions and/or rewriting, reorganization and additional material. Besides a few new chapters, hundreds of fresh illustrations (clinical photographs, diagrams, algorithms/flow charts), boxes and tables are added. An enlarged Index shall further facilitate easy retrieval of information.

In keeping with the changing needs, two new features have been incorporated at the end of each chapters in the form of self-assessment *Multiple Choice Questions (MCQs)* and *Clinical Problem-solving Reviews*.

As a result, the new edition is yet more reader-friendly, state-of-the-art and practical-oriented. Yet, the hallmarks of the earlier editions, namely brevity with comprehensiveness, simple and straightforward style and easy to understand expression have been retained and, in fact, further strengthened.

Without any shadow of doubt, the unique and enhanced value of the 12th edition is very much on account of the expertise, hard work and command in the respective fields of the distinguished contributors. My hats off to them!

A multitude of colleagues, friends and readers, in India and abroad, made worthy suggestions for enhancing the utility of the book. Informed assistance from the faculty of the Postgraduate Department of Pediatrics, Mamata Medical College and Hospitals, especially Dr G Somaiah, Dr MAM Siddiq and Dr G Arpitha, is particulary acknowledged. Also, the time-to-time academic feedbacks from our residents/postgraduates deserve appreciation.

The Management and the Administration of Mamata Medical College and Hospitals, especially Mr P Nageshwara Rao (Founder), Mr P Ajay Kumar, MLA (Chairman), Dr G Venketeshwara Rao (Medical Director), Dr K Koteshwer Rao (Dean), and Dr T Jaysree (Principal) have been gracious enough for blessing the project and for providing moral support and motivation in successfully completing the project.

My wife, Shamma, graciously assisted me so much in taking the project to its logical conclusion. So did my daughter, Dr Novy; son-in-law, Dr Gagan; son, Er Manu; and daughter-in-law, Er Shivani, in spite of their tight schedules and preoccupation. My brothers, Dr Satish, Raji (alas, we lost him some months back!), Subhash and Rajendra's continuing interest in this project and suggestions for the betterment of the book has all along been a support for my endeavors.

Dr Pramod Jog, President (2016), Indian Academy of Pediatrics, has been gracious enough to write a *Foreword* to this edition. My hats off to him for warmly recommending the book.

Finally, I wish to thank Mr Jitendar P Vij (Group Chairman), Mr Ankit Vij (Group President), Ms Chetna Malhotra Vohra (Associate Director-Content Strategy) Jaypee Brothers Medical Publishers (P) Ltd., and their dedicated staff for the skillful production qualities of the 12th edition.

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Preface to the First Edition

“Whyn’t a handy pediatric book for our students?”-Requests like this virtually flooded me as I was in the thick of editing the *Newer Horizons in Tropical Pediatrics* last year. Today, I am glad to offer that much-demanded work in the form of *The Short Textbook of Pediatrics*.

The Short Textbook of Pediatrics is aimed at providing a concise, simple and profusely-illustrated digest of the contemporary pediatrics, relevant to the developing world. Common tropical problems, such as nutritional deficiencies, diarrheas, tuberculosis and other frequent infections and parasitic infections and immunization, have received special attention. Certain areas that are important to us but have been ignored by the western authors are, in particular, dealt with. Indian childhood cirrhosis, infantile tremor syndrome, primary bladder stone disease, BCG as a diagnostic tool and tuberculous encephalopathy figure in this list. The accent is on priorities, clinical aspects and latest information rather than on rare conditions and outdated theoretical discussion.

The book is addressed primarily to the medical students, new entrants to the specialty of pediatrics and practising physicians who deal with infants and children as well. Some material especially the statistical data and upto date reference—some as latest as of 1977—are likely to be of value to the seniors either. How far have I succeeded in my endeavors? In this behalf, I would love to have your assessment. That shall help me to make up the deficiencies and introduce the “necessary changes for the better” in the future edition.

The publisher, Mr Jitendar P Vij of M/s Jaypee Brothers Medical Publishers (P) Ltd., and the Managing Editor, Rajendra Gupte’s contributions have been vital to the appearance of this manual.

Much of the material included in *The Short Textbook of Pediatrics* is based on articles in the recent WHO/UNICEF publications, *Indian Journal of Pediatrics, Indian Pediatrics, Indian Practitioner* and other Indian and foreign periodicals and books. I have punctuated the accounts with our own observations at the prestigious Postgraduate Institute of Medical Education and Research, Chandigarh, HP Medical College, Shimla, and Govt. Medical College, Jammu. The superb teaching of Prof BNS Walia, Dr (Mrs) Saroj Mehta, Dr ON Bhakoo, Dr SK Mehta, Dr (Mrs) A Perkash and Col ML Magotra has proved to be a source of guidance and stimulation in preparing this book.

Hats off to many of my past and present colleagues, friends and well-wishers for lots of good-will, ideas and cooperation; Dr JC Lall, Dr RK Chaudhary, Dr (Miss) Kalpana Kohli, Dr (Miss) Rita Malhotra, Dr Vinod Seth, Mrs Neelam Virmani, Mr Ayudhia Kaul and Mr GS Malhotra deserve a special mention. Dr Satish Gupte, Dr (Miss) Prem Gupte and Miss Shamma Bakshi extended enthusiastic assistance in preparing the manuscript, proof-reading and indexing.

Major (Mrs) BK Sohi and Lt. Col AS Sohi have been exceedingly courteous in making available a number of excellent clinical photographs. I must also acknowledge the help received from Prof H Shirkey, Dr Roy Brown, Prof Ashfaq Ahmad and Dr VK Dogra.

Prof NS Tibrewala has been kind enough to write the *Foreword* in spite of his preoccupations, especially as President of the forthcoming *15th International Congress of Pediatrics*. He has indeed done me an honor.

Principal NS Pathania, Prof SS Manchanda, Prof PM Udani, Prof RS Dayal and Prof VB Raju figure among our eminent medical men who graciously blessed this project. I should record my appreciation of the fond interest evinced in this manual by Mr KA Padmanabhan, Mr Suraj Saraf and Dr K Chaudhry—all leading journalists.

Finally, I greatly value the favors extended by my folks through various stages of this publication. My kid sister, Veenu and brothers, Subhash and Raji helped me in many a way. They would cheer me up as and when I found the going tough.

To all of them, plus all those who contributed but are not identified here, I am highly grateful.

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- Medical journals, identified under "Excerpts from Journals" (see cover [back]), for critical reviews
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Every attempt has been made to acknowledge the sources of information at concerned points, in further reading and/or here. Omission, if any, is unintentional and is regretted.

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SECTION 1

Introduction to Pediatrics

Section Outline

I. Pediatrics: Contemporary Trends

1 Pediatrics: Contemporary Trends

Suraj Gupte

DEFINITION AND ORIGIN

By modern definition, ***pediatrics is the study of the child from the very conception through infancy, childhood and adolescence to adulthood***.

In other words, pediatrics is the medical science (the science of right living), which enables an anticipated newborn to grow into a healthy adult, useful to the society.

The term, pediatrics, is derived fromwww the Greek words ***pedia*** (meaning a child or pertaining to a child), ***iatrike*** (meaning treatment) and ***ics*** (meaning a branch of science). As already pointed out, the contemporary understanding of this Greek term is—***science of child care, preventive as well as curative***.

Pediatrics, therefore, is concerned with the health of infants, children and adolescents, their growth and development, and attaining full potential as adults. A pediatrician's responsibility is not only to care for the physical, mental and emotional health from conception to maturity, but also to demonstrate concern for the social, environmental and cultural influences that are known to have considerable fallout on children and their families.

Among the factors that have a bearing on health problems of children rank climate, environment and geography, prevalence and ecology of infectious agents and their hosts, agricultural resources and practices, education, economic, social and cultural considerations, stage of urbanization and industrialization, and gene frequencies.

In United States of America, pediatrics includes individuals upto the age of 21 years. United Nations Children's Emergency Fund (UNICEF) is content with ***upto 18 years*** as the pediatric age group. According to the Indian Academy of Pediatrics (IAP), health problems of children upto 18 years (inclusive) should be the responsibility of pediatricians.

PEDIATRICS AS AN INDEPENDENT AND UNIQUE SPECIALTY

There are quite a few logics for regarding pediatrics as an independent medical speciality.

- ***First,*** the health problems of children differ from those of adults in many a way.
- ***Secondly,*** children's response to an illness is influenced by age.
- ***Thirdly,*** management of childhood illness is significantly at variance with that of an adult.
- ***Finally,*** children also need special care since they are world's most important resource and amongst the most vulnerable in the society.

This modern concept of pediatrics lends it a unique status. Unlike other specialities, it deals with the excitingly dynamic process of continuous care of the growing child, ***nay the whole child***. The semantic whole child, according to UNICEF, means that assistance for meeting the needs of children should no longer be restricted only to nutrition which is of immediate benefit to them. Instead, it should be broad based and geared to their long-term personal development and to the development of the countries in which they live. This approach is called ***country health programming***. The differences between a child and an adult are appropriately spelt in the saying, ***the child is not a little man*** or ***the child is not a miniature adult***.

CHANGING PEDIATRIC SCENARIO

Pediatrics as a discipline per se took birth in 19th century in the prosperous countries of the West. Notwithstanding the fact that health care of children occupied pride of place in the ancient Indian health system (also in Chinese and Greek systems), formal recognition of pediatrics as a discipline is too much young in India and other resource limited countries. Paradoxically, over one-half of the world's total children (1.5 billion out of 3 billion) live in these regions. In India, for instance, around 40% of the 1.25 billion population is constituted by the most vulnerable segment, i.e. infants and children. Further, a high proportion of the total morbidity and mortality is accounted by the pediatric age group. The corresponding figures for the prosperous countries are considerably low.

Apparently, appreciation of the significance of child care has come rather late. Let us hope it is not too late! In India, for example, our achievements in child health and care are a cocktail of ***success, lukewarm success and failure***.

On the positive front, we can take pride in:

- Total eradication of smallpox,
- Total eradication of guineaworm,
- Success of oral rehydration therapy,
- Maternal and neonatal tetanus-free status,
- Polio free status,
- Fall in incidence of serious forms of tuberculosis,
- Fall in mortality from tuberculosis,
- Fall in prevalence of severe malnutrition,
- Fall in mortality from diarrheal disease,

Table 1.1: Important current indices of child mortality in India in 2014–2015

Mortality index	*Mortality/1000 live births*
PMR/ENMR	20
NMR	24
IMR	36
U-5MR	50

Abbreviations: PMR, perinatal mortality index; ENMR, early neonatal mortality rate; NMR, neonatal mortality rate; IMR, infant mortality rate; U-5MR, under-5 mortality rate.

- Five-fold hike in school enrolment of girls since independence,
- Fall in infant, perinatal, neonatal and under 5 mortality rates.

On the negative (somewhat failure) front, we have:

- Persistence of still high incidence of tuberculosis and emergence of resistant strains,
- Still high child mortality indices (Table 1.1),
- Inadequate availability of safe drinking water,
- Insufficient sewage disposal,
- Still unacceptably high dropout rate in schools (especially in case of girls).

In other words, pediatrics which was by and large a scratch in India (just a poor appendage of general/internal medicine) when it became independent in 1947, has come a long way. Yet, the progress has fallen short of what should have been attained.

A large chunk of pediatricians (90%) in the Indian subcontinent (perhaps in most developing countries) are generalist though many of them have an area or two of special interest. Thus, by and large, each and every pediatrician is seemingly doing everything. In institutions, growth of subspecialties such as neonatology, cardiology, nephrology, gastroenterology, hematology, neurology, endocrinology, allergy, pulmonology, etc. is beginning to be palpable.

Despite the fact that some centers have started these subspecialties, their growth remains quite slow, except for, perhaps, neonatology. More recently, voice has been raised to develop pediatric subspecialty divisions in all medical colleges. It has been argued that denial of a super/subspeciality care to children has no justification whatsoever.

At the same time, it is felt that a spirit of partnership and shared responsibility should be developed between the limited number of pediatric subspecialists and the general pediatricians and the physicians who still continue to offer pediatric care as well. In this context, the initiative of the IAP to ask its subspecialty chapters to prepare guidelines for management of common pediatric problems, which can be put on Internet and linked to the IAP website, is indeed commendable. There is a need for affiliation of the IAP subspecialty chapters with the subspecialty international associations. Hopefully, this development would contribute to the development of the subspecialties at an international level.

Adolescent medicine, though fairly well-established in the West, is yet at a conceptual stage in India and neighboring countries. The IAP has advocated that pediatric care be extended upto (and including) 18 years age. As a matter of fact, a commendable beginning was made in India with the declaration of the year 2000 as the IAP ***(year for the adolescence and child at risk)***. Subsequently, every year we continue to observe *IAP* ***(child and adolescent health care week)*** in the month of November, ensuring that 14 November essentially falls within the week.

Box 1.1 ***Mission Kishore Uday*: Major approaches**

- Intervention by counseling on normal body development
- Avoiding or minimizing the risk-taking behavior
- Sexuality issues
- Positive parenting
- Effective communication

Fig. 1.1: Adolescent Health. This no-man's land, neglected by physicians as well as pediatricians, is now beginning to receive increasing attention from pediatricians. IAP's *Mission Kishore Uday* is a worthy step in this behalf.

More recently, IAP has launched a fresh initiative—***Mission Kishore Uday,*** which aimed at addressing the health needs of the adolescents in India (Box 1.1). Hopefully, the mission shall contribute to better health and wellness for our teenagers (Fig. 1.1).

Apart from the practicing pediatricians, the collaboration from the international agencies like World Health Organization (WHO) and UNICEF and Non-Governmental Organizations (NGOs) like Child Rights and You (CRY), in addition to the Union and State Governments, is a must for success of the strategy. Also, *See* Chapter 7 (Adolescent Medicine).

CHILD HEALTH IN INDIA'S NATIONAL HEALTH SYSTEM

National programs on child health include universal immunization program (UIP), diarrheal disease control program, respiratory infections control program, child survival and safe motherhood program (CSSM), reproductive and child health (RCH) program, etc.

NATIONAL HEALTH MISSION

It was launched in 2005. This is India's umbrella program under which many schemes, initiatives and programs have

been brought to provide universal access to quality health care. Its major subunits are—National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM).

National Rural Health Mission

India's flagship health initiative, the NRHM is an initiative undertaken by the Government of India (GoI) to address the health needs of underserved rural areas. Its major goal is providing accessible, affordable, accountable, effective and reliable primary health care, and bridging the gap in rural health care through creation of cadre of Accredited Social Health Activists (ASHA). This mission integrates multiple vertical programs.

It was launched in 2005; NRHM was initially tasked with addressing the health needs of 18 states that had been identified as having weak public health indicators. Under the NRHM, the empowered action group (EAG) States as well as North Eastern States, Jammu and Kashmir and Himachal Pradesh have been given special thrust.

The spotlight is on establishing a fully functional, community owned, decentralized health delivery system with intersectoral convergence at all levels, to ensure simultaneous action on a wide range of determinants of health such as water, sanitation, education, nutrition, social and gender equality. Institutional integration within the fragmented health sector was expected to provide a focus on outcomes, measured against Indian public health standards for all health facilities.

The focus on covering rural areas and rural population will continue along with upscaling of NRHM to include non-communicable diseases and expanding health coverage to urban areas.

Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH + A) Strategy

Realizing need for extra thrust on neonatal and adolescent health, a new program, Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH + A) strategy was launched in 2013 under the NRHM.

The RMNCH + A strategy is based on provision of comprehensive care through five pillars, or thematic areas of reproductive, maternal, neonatal, child, and adolescent health, and is guided by central tenets of equity, universal care, entitlement, and accountability. The plus within the strategy focuses on:

- Including adolescence for the first time as a distinct life stage,
- Linking maternal and child health to reproductive health, family planning, adolescent health, human immunodeficiency virus (HIV), gender, and preconception and prenatal diagnostic techniques,
- Linking home and community based services to facility based care,
- Ensuring linkages, referrals, and counter referrals between and among health facilities.

Rural health with emphasis on child health, in particular occupies a central place in India's health policy as depicted in pyramid with subcenters at the bottom through community health centers in the middle and medical college(s)/tertiary hospitals on top (Fig. 1.2).

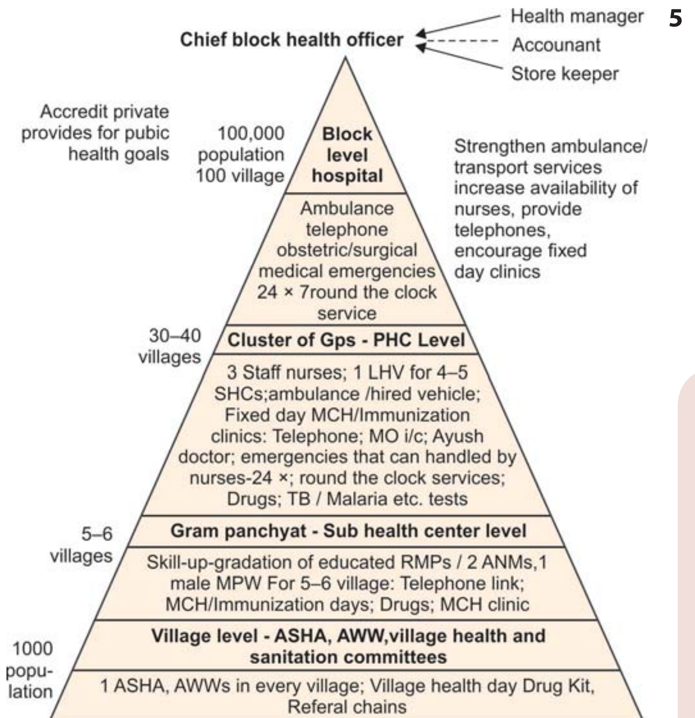

Fig. 1.2: A pyramid representation of NRHM structure. Note that at the base are subcenters which are fed by the frontline workers: Accredited Social Health Activist (ASHA), and Anganwadi Workers (AWW). On top is the Block-level hospital.

National Urban Health Mission

National Urban Health Mission aims at improving the health status of the urban poor, especially slum dwellers, thrust on public health—sanitation, clean drinking water, vector control, etc. and strengthening public health capacity of urban local bodies.

INDIA NEWBORN ACTION PLAN

India newborn action plan (INAP) in operation since 2014 outlines a targeted strategy for accelerating the reduction preventable newborn deaths and stillbirths. It defines the latest evidence on effective interventions which are likely to contribute to reduction in the burden of stillbirths, perinatal and neonatal mortality and maternal deaths. The goal is to achieve a single digit stillbirth and neonatal mortality rate by 2030.

CHILD HEALTH IN INDIA'S 12TH FIVE YEAR PLAN

The 12th five year plan (2012–2017), aimed at working towards national health outcome goals, carries two significant target health indicators:

1. Reduction in infant mortality rate (IMR) to 25. Now that the IMR is 36, an achievement of 25 by 2017 is workable only if the current rate of decline (5–6% every year) gets accelerated.
2. Prevention and reduction in undernutrition in children under 3 years to half of levels of national family health

survey (NFHS-3) (conducted in 2005–6). At present rate of decline, the estimated prevalence of underweight children in India is 29%. To achieve the 12th five year plan goal by 2017, India needs to accelerate the decline rate. The Millennium Development Goal (MDG) by 2015 is 26%. In 2015, we are little short of meeting even that.

Since child and mother is supposed to be a single unit, it would not be out of place to make a passing reference to projections in the plan concerning the maternal mortality rate, reduction in maternal mortality rate (MMR) to 100 by 2017 is the goal of the plan. The estimated MMR in 2015 is 139. At the present 5.8% yearly decline, India can achieve only a MMR of around 123 by 2017. In order to meet the projected target of 100, an accelerated decline in rate is needed.

INDIA'S NEW NATIONAL HEALTH POLICY

Mercifully, the GoI has now drafted 2015 National health policy which promises a hiked of 2.5% of GDP on health care. The impact of this hike on child health and survival are likely to be considerable.

TROPICAL PEDIATRICS: RADICAL CONCEPT

Literally, the term, ***tropical pediatrics***, denotes care of children in the tropical countries, i.e. countries occupying the region between tropic of Cancer and tropic of Capricorn. With the exception of Australia and Singapore, all these countries are disadvantaged on account of economical deprivation. In majority of these countries, the per capita income is under US $775. High infant mortality and under-5 mortality rates are common denominators; so are the ***parasitic diseases***. Despite tropical environmental factors, Malaysia and Sri Lanka are successfully catching up with an IMR of 10 and under-5 mortality rate of 11/1000 livebirths.

The so-called ***tropical diseases*** are no longer restricted to the tropics only. Factors such as globalization and shrinkage of the world with a free exchange of vectors and microorganisms have spread them to the non-tropical countries such as those of Europe and America with special involvement of the underprivileged. Afghanistan is a glaring example of a country outside the tropics hit by the tropical diseases as a result of two decades of civil war. Its infant mortality is as high as 175/1000 livebirths.

Thus, more crucial than the tropical environment in development of tropical diseases is the economy and living standard of the community. For this reason, we need to redefine the term, tropical pediatrics, as ***care of children of the economically disadvantaged communities, not only in the tropical countries, but also in the non-tropical countries***.

RIGHTS OF THE CHILD: YESTERDAY, TODAY AND TOMORROW

CHILD RIGHTS UNDER UNITED NATIONS

- The ***United Nations' declaration of the rights of the child*** as far back as in 1959 (Box 1.2), to which India is a signatory, gives the child pride of place, as also makes the people aware of his needs and rights and their duties towards him.

Box 1.2 Ten basic rights of children as per United Nations' Declaration of 1959

1. The child shall be brought up in a spirit of understanding, friendship, peace and universal brotherhood and shall not be exposed to racial, religious or other forms of discrimination.
2. The child shall be protected against all forms of neglect, cruelty, exploitation and traffic and shall not be permitted to be employed before an appropriate minimum age.
3. The child shall, in all circumstances, be among the first to receive protection and relief.
4. The child entitled to free and compulsory elementary education and such an education as is in his best interests for which the parents are to be responsible.
5. The child is entitled to grow up in an atmosphere of affection and moral and material security, with public authorities taking care of children without families or other support.
6. The physically, mentally or socially handicapped child shall be entitled for special treatment, education and appropriate care.
7. The child shall have the right to adequate nutrition, housing, recreation and medical services, including special health care and protection and postnatal care for the mother.
8. The child shall be entitled to a name and a nationality.
9. The child shall enjoy special protection to be able to develop in every way in conditions of freedom and dignity.
10. All children—irrespective of their race, color, sex or creed of their parents shall be entitled to these rights.

- ***Defense for Children International***, Geneva, has been in operation since 1979 to ensure ongoing, systemic international action, especially directed towards promoting and protecting the rights of the child. November 14 is observed as ***Universal Children's Day*** ever since 1954. The United Nations has assigned the responsibility to promote this annual day to the UNICEF.

Since 1989 the realization that children have special needs and hence the special rights have given birth to an international law in the shape of ***Convention on the Rights of the Child*** (CRC). The provision of the Convention was confirmed in 1990 by the ***World Summit for Children***. Now, the Convention is credited as the most widely ratified human rights treaty in the world.

Empowered with 54 Articles, the Convention defines children as people below the age 18 years (Article 1) whose best interests must be taken into account in all situations (Article 3). It protects children's right to survive and develop (Article 6) to their full potential, and among its provisions are those affirming children's right to the highest attainable standard of health care (Article 24) as shown in Figure 1.3 and to express views (Article 12) and receive information (Article 13). According to article 28, the states are obliged to make primary education compulsory and available to all children. Children have a right to be registered immediately after birth and to have name and nationality (Article 31) and to protection from all forms of exploitation and sexual abuse (Article 34).

Among the large number of countries that have adopted comprehensive child rights legislation in their children's act following the birth of the Convention rank as small a country as Nepal.

Fig. 1.3: Child Rights Protection. Convention on rights of the Child (1989–90) promises protection of children's right to survive and develop to their full potential, and affirms children's right to the highest attainable standard of health care.

Fig. 1.4: Elementary Education. Every child's right. Compulsory and free elementary education is one of the 10 fundamental rights of the child to which India too is committed.

Fig. 1.5: Child's Right to Education and the Government. Provision of facilities for free elementary education is the responsibility of the government. However, the onus lies on the parents to ensure that child obtains such an education rather than have him involved in activities that amount to school withdrawal.

Fig. 1.6: Child's Right to Education and Parents. As high as 130 million (21%) primary school age children in the resource-limited world do not attend school out of a total of 625 million children of this age group in these countries thanks to reasons on parental side.

Mercifully, notable advances have been made during the last decade of the 20th century and the subsequent years of the present century for the welfare of children, including:

- Laws to safeguard them from suffering and exploitation,
- Near eradication of poliomyelitis,
- Reduction of morbidity and mortality from neonatal tetanus and measles,
- Fall in vitamin A deficiency (VAD) blindness,
- Reduction in deaths from diarrheal dehydration,
- Sensitization of people against child labor and CAN, etc.

Today, more children are born healthy and more are immunized, more can read and write, and more are free to learn, play and simply live as children than would have been thought possible years ago, according to a UNICEF report. This is the direct result of translation of the commitments made in the Convention into concrete action.

Yet, for all the gains made, violations of children's rights, particularly in the resource limited world, continue to be breathtaking, ranging from failure to register births and provide healthcare and education (Figs 1.4 and 1.5) to exploitation in the form of child labor, abuse and neglect (Fig. 1.6), and involvement of adolescents in terrorist and militancy-related armed conflicts. As aptly put by the UNICEF:

- Every day that nations fail to meet their moral and legal obligations to realize the rights of children, 30,500 boys and girls under-5 years die of primarily preventable diseases.
- Every month that the full-scale campaign needed to stop the HIV/AIDS pandemics is postponed, 250,000 children and young people become infected with the fatal virus.
- Every year that Governments fail to spend for the basic social services or slash developmental assistance, millions of children across the developing world stand deprived of access to safe drinking water and sanitation facilities as also health and school services that are vital for their survival and growth and development.

Undoubtedly, there is a strong case for a social movement to fan the flame that burned years ago for rights of the child and the adolescent for smooth navigation into adulthood. This is particularly a must for advancing human development in the developing countries and those of us responsible for health and care of children and adolescents must in particular take it as a call for vision and leadership to realize a new dream of humankind, free from poverty, disease and discrimination.

It is pertinent to recall the historic general assembly special session on children, held in 2002 to which, for the first time a large number of children were included as official members of the delegations. True to the spirit of the convention on the rights of the child, the assembly gave a call for considering the views of children and young people when decisions that affect their lives are being made.

CHILD RIGHTS IN INDIA

In India's Constitution, Article 24 prohibits employment of children below the age of 14 years in factories. Article 24 prevents abuse of children of tender age. In Article 45 is incorporated provision of free and compulsory education for all children until they complete the age of 14 years (Figs 1.4 and 1.5).

Thus, India's Constitution undertakes to guarantee equality before the law, pledging special protection for children.

Subsequent to India's accepting the obligations of united nations convention on the rights of the child, following are some of the initiatives launched by India towards advancement, promotion and protection of child rights:

- National commission for protection of child rights.
- National plan of action for children.
- Right to education.

CHILD RIGHTS ADVOCACY AND THE PEDIATRICIANS

More often than not, children are vulnerable and disadvantaged in the society. Undoubtedly, they are in need of a special attention. A global perspective for the field of pediatrics is, therefore, not just desirable, but mandatory.

Since children are usually not in a position to speak out and advocate for themselves, it is the pediatricians who need to advocate for them in order to advance children's well-being and welfare. This applies to all children across the board, regardless of national boundaries, ethnicity, race, religion, culture, and gender. Pediatricians need to create awareness:

- For child's nutrition, growth and development, education and, in fact, overall care so that the child not only survives, but also grows into a healthy adult useful to himself, the family and the society.
- Against exploitation, neglect and abuse, child labor (Figs 1.6 and 1.7), trafficking, etc.

Furthermore, pediatricians need to provide a platform or contribute to it for promotion of coordinated child-centric endeavors with involvement of like minded groups of social workers, teachers, psychologists, child rights activists and community leaders. Collaboration with national and international NGOs is useful to positively influence the government to model its policy in keeping with the UN convention on child rights. The scenario in India is no better.

CONTEMPORARY DISEASE PATTERN AND CHANGING CONCERNS

Disease pattern amongst under-5s in India (Fig. 1.8) is at considerable variance with that of developed world (Fig 1.9). Every year, 70% of deaths in children are due

Fig. 1.7: Child Labor. Gateway to deprivation of child rights to education. Child labor, often encouraged by parents for one or the other reason, is the most important cause of school withdrawal and dropout.

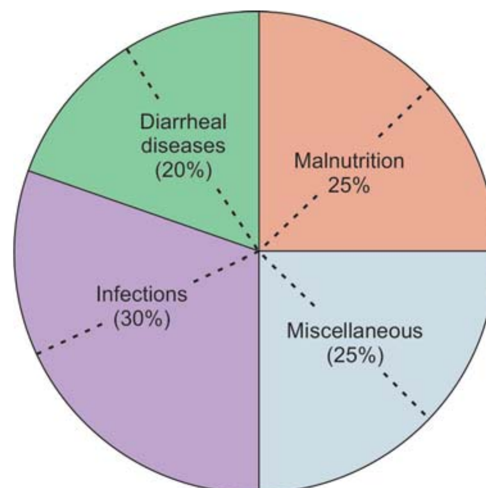

Fig. 1.8: Childhood Disease Pattern in Resource-limited World. Relative frequency of diseases responsible for admission of infants and children in Indian hospitals show predominance of malnutrition, diarrheal diseases and infectious diseases. Dotted lines indicate much overlap.

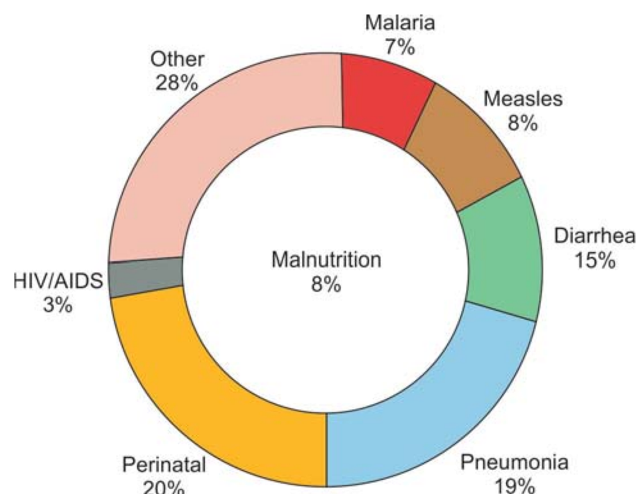

Fig. 1.9: Childhood Disease Pattern in Developed World. Distribution of disease pattern in developed world in the under-5 populations shows predominance of perinatal problems and pneumonias and other infections.