

Hoist the sails, promote the hopes

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With the combined efforts of the pediatric medical practitioners, children's health level and pediatric disease treatment standards in China have greatly improved. The mortality of infants and children under the age of 5 has decreased significantly. Life-supportive technology, including newborn care and management of difficult and critical cases, has developed by leaps and bounds. Clinical diagnosis, treatment, and scientific research levels of pediatric subspecialties have become comparable to developed countries. We have cooperated with international colleagues to write guidelines and expert consensus on a number of pediatric conditions for global promotion. Chinese expertise has a great influence in the field of international pediatrics and has become indispensable and important. Chinese Medical Journal, a high-ranking medical journal in China, sends this special issue to compile hot and key issues of pediatrics and publishes 9 articles on basic and clinical research, which are of great significance for the development of pediatrics.

With the development of China's economy and society and the implementation of the Healthy China 2030 strategic goal objective, children's health has moved from survival requirements to high-quality developments at present. Health improvement has become the new focus of medical attention. Medical and health undertakings have extended from the treatment of simple diseases to ensuring comprehensive physical, psychological, and behavioral health.

Under the government's leadership, China's child health and development has continuously progressed, including tertiary level prevention of birth defects, neonatal and infant follow-up and community management, prevention and control of children's infectious diseases, optimization of vaccination, and child health promotion.

Developmental pediatrics and pediatric nutrition were introduced as the time demand and greatly improved children's health level and significantly improved nutritional status in China.

China's pediatric nutrition and child development specialist team has been expanding. Owing to the efforts of all pediatric medical workers, the overall health status of children in China

has greatly improved. Nutritional deficiencies were one of the major health concerns among children and adolescents in China before 1995.^[1] The nutritional status of children aged 0 to 19 from 1995 to 2015 shows that China has made great achievements in preventing and controlling the nutrition of children and adolescents in recent 25 years. Many measures have effectively controlled and prevented nutritional deficiencies and consistently improved children's health. From 1990 to 2015, the age-standardized prevalence of nutritional deficiencies declined by 7.03%, whereas the age-standardized mortality declined by 93.80%, from 6.13 per 100,000 to 0.38 per 100,000.^[1] But, the percentage change in the age-standardized years lived with a disability rate of nutritional deficiencies among children and adolescents was <8.0 between 1990 and 2015, with no obvious decline.^[1] Nutritional deficiencies still affect the health of Chinese children and adolescents, needing continuous interventions.

COVID-19 pandemic has demanded that pediatricians ponder further on the issue of vaccination. Two articles in the journal are vaccine related. One study introduced the epidemiology and etiological characteristics of hand-foot-and-mouth disease (HFMD) before and after the enterovirus 71 vaccine, which is the first study demonstrating the epidemiological and etiological characteristics of HFMD in Sichuan Province, before and after the introduction of EV-71 vaccines.^[2] The other paper emphasizes the necessity and importance of COVID-19 vaccines in children,^[3] to provide new ideas for the scientific research regarding COVID-19 vaccine inoculation in children.

In recent years, especially after COVID-19 pandemic, the spectrum of disease in pediatrics has changed significantly, bringing into light of many hot topics and key clinical issues in pediatrics.

The rapid progress of various diagnostic technologies, especially gene sequencing technology, has promoted the development of pediatric genetics, highlighting the disciplinary characteristic that "children are not the epitome of adults."

In view of the rapid progress in the research of children's conditions caused by congenital, genetic, or epigenetic factors,

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the research on pediatric disease spectrum and mechanism is expanding rapidly. This issue especially invited experts to discuss the relationship between epigenesis and children's disease.^[4] This impressive paper introduces research progress of epigenetic age with respect to the interpretation for epigenetic age deviations in the pediatric population and their association with external factors, developmental trajectories, and pediatric diseases, discussing the pathogenesis of children's diseases from a new perspective.

The development of new management options and medicine therapy has introduced new pediatric subspecialties, including gene therapy and minimally invasive interventions. These subspecialties encourage the development of therapeutic technology for difficult, critical, and rare diseases in pediatrics, and support standardized diagnosis and treatment in various aspects of pediatrics.

Moreover, pediatric surgical methods are also more refined. The multi-dimensional and precise management of perioperative period improves the success rate of children's surgery, including neonates. To achieve better neonatal on-pump cardiac surgery, the neonatal surgeons compare the different ways of perfusion in a total of 146 neonates who underwent on-pump heart surgery with single-shot histidine-tryptophan-ketoglutarate perfusion and find out the suitable and safe heart perfusion method for newborns.^[5]

A rationalized treatment plan, balancing the efficacy and safety, maximizing the success rate and reducing long-term complications are major concerns in pediatric clinical treatment.

This issue contains a systematic review of the preventive and therapeutic effects of azithromycin mass drug administration on trachoma in different districts and explores the possible methods to enhance the effectiveness of azithromycin mass drug administration in hyperendemic districts.^[6]

The safety and efficacy of salmeterol/fluticasone versus montelukast, or combination of montelukast and fluticasone in children and adolescents aged 4 to 18 years with bronchial asthma,^[7] which is increasing in incidence, was systematically reviewed and evidence was provided for pediatricians to determine their clinical strategy.

China has greatly increased the recovery and remission rate of hematological malignancies in children. For children with chronic myeloid leukemia in the chronic stage (CML-CP), the long-term follow-up results of 58 pediatric patients with CML-CP with Imatinib mesylate as the first-line and second-generation tyrosine kinase inhibitors as the second-line treatment are significant, which evidential value for the standardized diagnosis and treatment of children with myeloid leukemia.^[8]

The rapid advance of pediatric research and the improvement of treatment have produced remarkable achievements in promoting standardized paths for common and frequently pediatric diseases and the treatment of critically ill children.

However, many new medical issues have emerged, such as the long-term medical support after the survival of extremely preterm infants and children with genetic or congenital

diseases, the optimization of multidisciplinary diagnostic, management and long-term follow-up of extremely critical patients, optimized treatment, and long-term management of children with hematological conditions and multidisciplinary management and subsequent follow-up of children undergoing organ transplantation. There are a large number of pediatric patients in China. We should publish high-quality guidelines and research papers. But the methodological quality of the evidence-based guidelines for pediatrics published in Chinese journals in China from 2010 to 2017 is not adequate.^[9] The emergence of new clinical problems prompts higher evidence data requirements for the release of various clinical guidelines and treatment modalities.

Innovation has a long way to go. Children's health is the foundation of national health. Children's health relies primordially on the efforts of pediatricians. The high-quality articles in this special issue can arouse the curiosity and interest of people involved in pediatrics and encourage them to forge ahead and carry further basic and clinical research to promote sustainable and distinguished development of pediatrics.

Conflicts of interest

None.

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