

## Current Situation of Children's Health and Health Care in China

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### Abstract

In order to protect children's life and health, Chinese government and all sectors of society attached great importance to children's health and health care, and they have done a lot of careful work with evident effectiveness.

**Keywords:** Child mortality; Health care; Children's health; China

### Birth and Death

In 1995, the birth rate in China was 17.12‰, which had 20.63 million resident births, and the natural growth rate of population was 10.55‰. The indicator of judging the status of children under 5 is child mortality. According to the report of the national women and children's monitoring in 1994, China's infant mortality rate decreased from 200‰ in the early 50s to 37.79‰, the child mortality rate was 46.75‰. From 1950s to 1980s, the average annual decline rate of China's child mortality was beyond 5%, and this decline rate is much faster than other developing countries' child mortality (2.5%), and also faster than developed countries' child mortality (4.6%). Since the 90s, the average annual decline rate of China's infant mortality and child mortality are 6.50% and 5.85%, respectively. Nowadays, none of countries whose annual per capital income closes to China can reach this high level [1].

### Health Care

China has established the maternal and child health service system fitting national conditions. And health services network is widely founded in the urban and rural areas, in order to provide health and immunization services for children and achieve the global strategic objective "health for everyone in 2000" [2].

Using low cost children vaccine immunization is both economical and effective way for the prevention of infectious diseases and reducing children mortality. China has conducted the vaccine since the 50s in the country, and later in the early 60s, the infectious disease that seriously endangers the children health has been successful died out. Immunization activities were held in the winter and spring seasons every year and children immunization program was also widespread in 1978 in the country. This progress effectively reduced the corresponding infectious morbidity and mortality.

In the 1980s, corresponding to the proposal of the WHO to expand the country's immunity program, the children immunity procedures and issuing inoculation certificates system in China were initiated and organized, and the specialists committee was established for planned immunity and strengthened technical guidance for immunity work. At the same time, the UNICEF cooperated with China for further developing the cold chain development.

To eliminate polio, from December 1993 to January 1996 every year on December 5 and January 5, three rounds of six immunizations were conducted with 4 years old children based on the routine immunization and polio check work, each immunization round had about 80 million children. These strengthen immunization activities strongly promoted the polio elimination process.

Since the implementation of immunization program, China has greatly reduced the infectious diseases. According to the national routine disease reporting: compared with 1978, measles, diphtheria, whooping cough, polio incidence in 1994 decreased by 96.4%, 99.4%, 99.3%, 97.5%, respectively; deaths decreased by 97.4%, 99.3%, 96.5%, 97.7%, respectively; compared with 1978, the above total of four infectious diseases decreased by about 3517000 cases in 1994 and deaths decreased by approximately 13000 cases. However, the country has not been isolated from acute flaccid paralysis cases in the polio virus.

China's work in immunization program has been highly praised by the world. The UNICEF executive director awarded silver medal to the China ministry of health prevention department, praising the universal child immunization achievements in China on October 16, 1989, November 24, 1994 and August 8, 1995. And Chinese premier Li Peng highly praised and affirmed China's achievement. China has played an important role in the world health field once again.

The reduced of pneumonia and mortality is as an important and urgent task for the medical care of children in China. Chinese ministry of health has drafted a "national children's respiratory infection control plan (1992-1995)" and "diarrheal disease control program (1990-1994)" to reduce the infant mortality, especially rural infant mortality, such as the promotion of appropriate technology, training, health education and guidance systems and so on. AIR standard case management project was extended to the 24 provinces, 53 counties in China, in 1994. Diarrheal disease control program had covered 17 provinces and acute respiratory standard case management and infection prevention and control of diarrhea diseases training content were extended to 300 poor counties, more than 360000 patients accepted training.

Before 1949, neonatal tetanus is the main cause of neonatal death in China. The maternal and child health care institutions were established in the 50s and 60s. They regarded the new delivery as the primary measures to control puerperal fever and neonatal tetanus and made great achievements. China Ministry of Health further reduced neonatal tetanus mortality in 1993 so as to reach the international

standards in 2000. According to the survey results, China Ministry of Health issued the "the elimination of neonatal tetanus national plan" in 1995 to promote strict new delivery by increasing the rate of hospital delivery and rapidly developing women of childbearing age with tetanus toxoid immunization.

## The Nutritional Status

More attention had paid to improve children's nutritional status and various medical health measures were issued in China: the government issued baby food in some areas; scientific diet regime was promoted in the 60s and 70s; complementary food was developed in the 80s; the breastfeeding and optimized dietary patterns were promoted in the 90s. The nutritional status of children was improved gradually, the severe malnutrition was caused by lack of food and severe vitamin A deficiency was rare in the China.

Since the 80s, some areas in China began to use growth chart to survey the children growth trend, trying to find the problems and give guidance and treatment as soon as possible through the "community nutrition surveying". Practice proved that this is a proper method to maintain the children health.

To initiative the WHO and UNICEF, breastfeeding vigorously was promoted [3] and baby friendly hospital was established in China, especially in 1995, 1000 baby friendly hospitals were promised to create. To this end, the Chinese ministry of health issued the notice about "on the strengthening breastfeeding work" in May 1992, and formulated relevant laws and regulations to strengthen the sales management of breastmilk substitutes and limit to sale breast-milk substitutes. Under the leadership of governments at all levels, China developed baby friendly action focusing on creating baby friendly hospitals. To three years between the end of 1995, China has built 2957 baby friendly hospitals and made a positive contribution to the world baby friendly program. The activity of establishing baby friendly hospital in China was highly appraised by UNICEF and WHO.

The township hospitals, county epidemic prevention station, county MCH building were strengthened to improve the level of health care for children in rural areas and to improve the nutritional status. Since 1991, the central government invested 300 million to drive the national government, collective economy and the farmers financing 8.65 billion together. By the end of 1994, 36% of township hospitals, 29.8% of the county epidemic prevention station and 27.7% of the county MCH building had all been improved to different degrees.

Survey results showed that the nutritional status of the Chinese children has been improved considerably. The rate of children under 5 malnutrition had dropped in 1995 by 23.82 percent than 1990 which achieved the medium-term objectives proposed by the "talk Chinese children's development plan".

## Children Disease

### Low-level chronic mercury exposure in children and adolescents

Mercury is a well-known neurotoxin, Mercury poisoning should be diagnosed only with validated methods, that is, 24 h urine and blood test [4]. Hair mercury analysis is too inaccurate to be used for individual clinical decision making. Chelation therapy should be offered only to those with urine mercury level in excess of 20 g/L.

There is not enough evidence to support the association between mercury poisoning and autism [5].

## Congenital thyroid

Thyroid hormones is prime importance in human growth and development. The critical period for the central nervous thyroid hormone is critical for normal growth, skeletal and nervous system development of the fetus and newborn and congenital hypothyroidism (CH) is a primary cause of intellectual impairment for the first 2-3 years of life [6]. Within six months after birth is the fastest period of brain development, and the children with congenital hypothyroidism would cause irreversible mental retardation and poor growth for lacking of proper treatment within six months after birth or delaying in time for treatment. Early screening and treatment play a vital role in CH. Infants who are diagnosed and treated in the first three months have the best prognosis for optimal mental development system to be dependent on thyroid hormone is known to extend from fetal life until at least the first two years after birth CH is a common pediatric endocrine disease which results from decrease in thyroid hormone secretion, and this cause is difficult to be recognized in neonatal period because of normal gross appearance. The newborn screening has been introduced for 40 years, although early detection and treatment has essentially rooted out severe intellectual impairment in the developed countries, one depressing question is that a few congenital hypothyroidism may still have mild neurodevelopment problems, such as movement slow, attention deficit and alterations in memory. Some scholars think that are not related to the initial L-thyroxin dose or the timing of treatment, but related to lower initial free T4 levels. Maternal hypothyroxinemia may be important in the long-term sequelae of congenital hypothyroidism, and further studies are needed to confirm.

## AIDS care

AIDS is a kind of by retrovirus infection of human immunodeficiency virus, which damaged the immune system, gradually become the target of many opportunistic diseases, and contribute to a variety of clinical symptoms, collectively known as syndrome, rather than to simply a kind of disease, and the syndrome by direct contact with the mucous membrane organization's mouth and genitals, anus or with a virus such as blood, semen, vaginal secretions, breast milk and infect. Globally, diarrhea is the second leading cause of death in children less than 5 years of age. HIV-infected and HIV-exposed uninfected (HEU) children are at high risk of dying from diarrhea and may be more susceptible to the highest risk enteric pathogens. This increased risk associated with HIV infection and HIV exposure is likely multifactorial. Factors such as immunosuppression, proximity to individuals more likely to be shedding pathogens, and exposure to antimicrobial prophylaxis may alter the risk profile in these children. Current international guidelines failed differentiate management strategies on the basis of whether children are infected or affected by HIV, despite likely differences in etiologies and consequences. Reducing diarrhea mortality in high HIV prevalence settings will require strengthening of HIV testing and treatment programs; improvements in water, sanitation and hygiene interventions targeted at HIV-affected households; and reconsideration of the use of empiric antimicrobial treatment of pathogens known to infect HIV-infected and HEU children disproportionately [7]. But early diagnosis and intervention may halt the progression of the disease, thereby preventing morbidity and mortality.

Objective to determine the occurrence of cardiac involvement in HIV infected children and describe its spectrum using non-invasive tests like ECG and 2-Dimensional Echocardiography (2-D ECHO). A cross sectional observational study was carried out on 100 HIV infected children between 1 and 18 y of age. The various cardiac manifestations were determined clinically, by electrocardiogram (ECG) and 2-D echocardiography. Seventy four percent of the patients were males with a mean age of  $9.62 \pm 3.62$  y. Seventy seven percent children were in WHO stage I. Sixty five percent did not have significant immune suppression. Eighty six percent children were on HAART (mean duration- $35.12 \pm 29.48$  mo). Fifty nine percent of children were symptomatic and only nine patients were clinically suspected to have cardiac involvement. ECG abnormalities were found in 14% cases. The most common abnormal echocardiographic finding was left ventricular diastolic dysfunction by tissue Doppler (E/E') observed in 64% cases followed by systolic dysfunction (37%), abnormal left ventricular mass (29%), pericardial effusion (2%) and dilated cardiomyopathy (2%); 64.2% cases with left ventricular systolic dysfunction (LVSD) were in WHO stage III. Involvement of heart in HIV/AIDS is mostly subclinical. HIV myocarditis produces systolic as well as diastolic dysfunction. At present, echocardiography remains the only tool for identifying heart involvement in HIV-infected children [8].

The current study, the data from 1299 rural children affected by HIV/AIDS in central China were utilized, the relative importance of PSS functional measures (informational/emotional, material/tangible, affectionate, and social interaction) and PSS structural measures (family/relatives, teachers, friends, and significant others) in predicting psychosocial outcomes were examined including internalizing problems, externalizing problems, and educational resilience. Both functional and structural measures of PSS provided reliable measures and unique aspects of PSS. The findings of the current study confirmed the previous results that PSS is highly correlated with children's psychosocial well-being and such correlations vary by functions and sources of the PSS as well as different psychosocial outcomes.

The findings in the current study suggested the roles of specific social support functions or resources may need to be assessed in relation to specific psychosocial outcome and the context of children's lives. The strong association between PSS and psychosocial outcomes underscores the importance of adequate social support to alleviate stressful life events and improve psychosocial well-being of children affected by HIV/AIDS. Meanwhile, the study findings call for gender and developmentally appropriate and situation-specific social support for children and families affected by HIV/AIDS [9].

### Prevalence of obesity among children

Child obesity is considered to be a public health problem worldwide. According to the Pan American Health Organization (PAHO), the rates of overweight and obesity have increased disproportionately throughout the world, especially in the Americas, which is greatly impact on children. And the increase rate ranges from 11% (1990) to 21% (2000) in child population. In the Americas, an increase is observed with a rise of 24% in Mexico, 14% in Chile and 12% in Peru. According to PAHO data and the World Health Organization, this obesity is related to risk factors (that is inducers) which can generate obesity.

In China, a population of 120 million is in range of obesity. It was estimated that 8% of her children are obese. Our results indicated that the obesity prevalence status in China is still troublesome, and the

situation will go worse if we currently fail to take effective and practical measures. After evaluation of the quality of the articles, 18 papers were finally included in our study, and the total sample sizes on the obesity investigation were 247547, in which 26466 were obesity. Meta-analysis findings showed that the pooled prevalence of obesity in primary school students is 10.0% (95% CI: 7.2%-13.5%) [10].

The increased rates of the epidemic of child obesity in large coastal cities were greatest, but similar increases were found in all other regions including the once poverty-stricken rural west. Furthermore, the changing pace was much faster in boys than girls, the gender disparity suggests that the prevalence of obesity in boys will continue to be a large and growing proportion of obese children in China [11].

### Autism spectrum conditions (ASC) in children

Little is known about the current situation about ASC in mainland China. Electronic databases and bibliographies were searched to identify literature on service provision for ASC in both English and Chinese databases. 14 studies and 6 reports were reviewed. The findings of identified papers on service provision were summarized according to four settings for ASC including healthcare, mainstream education, private special education, and state-run special education. The literature on the situation of the healthcare system and educational services for children with ASC in China was profoundly limited. There were great financial problems faced by the parents of autistic children which were partly due to the under-developed healthcare and educational system for ASC.

Children diagnosed with ASD require substantial support to address not only core ASD symptoms but also a range of co-occurring conditions [12].

### References

1. Kassebaum NJ, Bertozzi-Villa A, Coggeshall MS, Shackelford KA, Steiner C, et al. (2014) Global, regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet* 384: 980-1004.
2. Meng Q, Xu L, Zhang Y, Qian J, Cai M, et al. (2012) Trends in access to health services and financial protection in China between 2003 and 2011: A cross-sectional study. *Lancet* 379: 805-814.
3. Shi L, Zhang J, Wang Y, Caulfield LE, Guyer B (2010) Effectiveness of an educational intervention on complementary feeding practices and growth in rural China: a cluster randomised controlled trial. *Public Health Nutr* 13: 556-565.
4. Barry JD (2005) Diagnosis and management of the poisoned child. *Pediatr Ann* 34: 937-946.
5. Schultz ST (2010) Does thimerosal or other mercury exposure increase the risk for autism? A review of current literature. *Acta Neurobiol Exp (Wars)* 70: 187-195.
6. Brown RS (2000) Disorders of the Thyroid Gland in Infancy, Childhood and Adolescence.
7. Pavlinac PB, Tickell KD, Walson JL (2015) Management of diarrhea in HIV-affected infants and children. *Expert Review of Anti-infective Therapy* 13: 5-8.
8. Singh P, Hemal A, Agarwal S, Kumar D (2015) Cardiac Manifestations in HIV Infected Children. *The Indian Journal of Pediatrics* 82: 230-234.
9. Zhao G, Li X, Fang X, Zhao J, Hong Y, et al. (2011) Functions and sources of perceived social support among children affected by HIV/AIDS in China. *AIDS Care* 23: 671-679.
10. Qi Y, Yu Y, Li K, Chen Z, Liu Y (2014) Prevalence of obesity among primary students between 2009 to 2014 in China: A meta-analysis. *Nutr Hosp* 31: 185-190.

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11. Cheng TO (2014) China's epidemic of child obesity: an ounce of prevention is better than a pound of treatment. *Int J Cardiol* 172: 1-7.
  12. Sun X, Allison C, Auyeung B, Baron-Cohen S, Brayne C (2013) A review of healthcare service and education provision of Autism Spectrum Condition in mainland China. *Research in Developmental Disabilities* 34: 469-479.