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REVIEW ARTICLE

CURRENT STATUS OF MAJOR HEALTH PROBLEMS OF INDIA

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ABSTRACT

India today is a booming economy and the third fastest growing in the world. At one level, India hopes to become a major force at the global stage, yet, over one third of income is spent towards food and related consumption and hence, social security support for health, education, housing etc. becomes critical. However, since independence, little has changed in context to changing the social security situation in the country. Though the government has taken numerous steps towards improving the living standards and the health situation of citizens in India, the impact has not been as profound as anticipated. The government of India has been making efforts through a galaxy of programs and initiatives over the years to improve the health situation of the nation. In the wake of the Alma Atta declaration of 'Health for All by 2000', these efforts have gained substantial momentum. Though efforts are being made in the right direction, more needs to be done to achieve the desired goal set by the governments. The current paper is a review of the major health problems plaguing the nation in the present era.

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INTRODUCTION

At the face of it, India is a booming economy and one of the fastest growing in the world. Yet, over one third of income is spent towards food and related consumption and hence, social security support for health, education, housing etc. becomes critical. However, over half a century post-independence, there is little change which has occurred in context to changing the social security situation in the country. Though the government has taken a number of steps towards improving the living standards and the health situation of citizens in India, the impact has not been as profound as anticipated. India houses the maximum number of undernourished people globally and is also the diabetic capital of the world. Anaemia accounts for the second most common cause of maternal deaths in India, 20% maternal deaths. (Raghuram *et al*., 2012)

The government of India has been making efforts through a galaxy of programs and initiatives over the years to improve the health situation of the nation. In the wake of the Alma Atta declaration of 'Health for All by 2000', these efforts have gained substantial momentum. The first National Health Policy was drafted in 1983, followed by one in 2003 and subsequently in 2015. Though efforts are being made in the right direction, more needs to be done to achieve the desired goal set by the governments. The current paper is a review of the major health problems plaguing the nation in the present era.

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MATERIALS AND METHODS

A review of articles was conducted from the different portals of literature including PubMed, Copernicus, Google Scholar and other text and similar reliable sources of literature.

Health Problems in India

1. **Communicable diseases**

a. Malaria: The incidence of malaria cases fluctuated between 1.3 and 1.6 million per year for the past five years (2007-2011). In the year 2011, there were 1.31 million reported cases of malaria in the country. About 95% population in the country resides in malaria endemic areas and 80% of malaria reported in the country is confined to areas consisting 20% of population residing in tribal, hilly, difficult and inaccessible areas. (Disease Specific Document for XII Plan: Malaria, 2014)
b. Tuberculosis: Some 1.2 million new cases annually and 0.64 million cases new smear positive of which 0.32 million cases die. Though notification rate per 1,00,000 population at national level is much less as compared to RNTCP patient notification, there has been considerable increase in private sector notification in 2013 as compared to 2012. As per WHO estimations, tuberculosis prevalence in 2012 is 230 per 100,000 populations. In absolute numbers, prevalence is 28 lakhs annually and incidence per 100,000 populations is 176 in 2012. Morality due to TB is

2.7 lakhs annually. (Disease Specific Document for XII Plan: Tuberculosis, 2014)

c. Diarrheal Disease: The second most common cause of death in Indian population. Diarrheal disease is responsible for one in every ten child deaths during the first five years of life worldwide, has the highest rate of incidence in India.
d. Acute Respiratory Infection: In India, over 4 lakh deaths annually are due to pneumonia, accounting for 13-16% of all deaths in the pediatric hospital admissions. There are some 369,000 deaths due to pneumonia among children 1-59 months. (Selvaraj *et al*., 2014)
e. Leprosy: India ranks first in new cases of leprosy. According to WHO, India accounted for 134,752 new cases in 2012 of a total worldwide of 232,857. India had more than 12 million people living with leprosy between 1991 and 2007. India is also one of the 16 countries ranked "worst" in 2012 with more than 1,000 new cases of leprosy. The other countries in the leprosy morbidity list are Brazil, Indonesia, Nigeria, Ethiopia, Bangladesh, Congo, Nepal, Myanmar, Tanzania, Sri Lanka, Philippines, South Sudan, Madagascar, China, and Ivory Coast. Some 95% of all new leprosy cases are concentrated in these 16 countries, while the rest of the world accounts for only 5% (India still tops the world in 2014 in new cases of leprosy)
f. Filariasis: Endemic in 250 districts across 20 States and Union Territories of India. About 614 million people in India are at risk of infection. (Disease Specific Document for XII Plan: Lymphatic filariasis)
g. AIDS: India has the third highest number of people living with HIV in the world with 2.1 million infected cases. This amounts to about four out of ten people infected with the deadly virus in the Asia-Pacific region. China, India, Indonesia, Myanmar, Thailand, and Vietnam account for more than 90% of the people living with HIV in the Asia-Pacific region. HIV treatment coverage is only 36% in India. At the end of 2013, more than 700,000 people were on antiretroviral therapy, the second largest number of people on treatment in any single country. (India has 3rd-hghest number of HIV-infected people)

2. **Non-Communicable Diseases:** These account for 53% of all deaths and 44% DALY in India

a. Diabetes Mellitus: India has the highest number of diabetic cases in the world. Over 77 million people in India have pre-diabetes and an estimated 40 million have diabetics.
b. Cancer: India reports about one million new cases every year. Of the eight million cancer-related deaths in 2012, nearly 700,000 were in India, accounting to about 8% of the world's cancer patients. Again, in India, 71% deaths between 30-69 years are cancer related. As against global average of 0.5%, 15% cancers in India are in minors. The estimated incidence of cases of cancer in the country rose from 1,086,783 in 2013 to 1,117,269 in 2014. The estimated cancer mortality cases in the country have also risen from 478,185 in 2013 to 491,597 in 2014. Cancer is the second most common disease in India responsible for maximum mortality with about 0.3 million deaths per year. An estimated 600,000-700,000 deaths in India were caused by cancer in 2012. In age-standardized terms this figure is close to the mortality burden seen in high-income countries. Oral cancer ranks among the top three of all cancers in India: four in ten of all cancers in India are oral cancers. Annually, 130,000 individuals succumbs to oral cancer, approximately 14 deaths per hour. (Mallath *et al*., 2014; Sundar *et al*., 2012)
c. Cardiovascular Diseases: Prevalence of heart failure in India due to coronary heart disease, hypertension, obesity, diabetes and rheumatic heart disease ranges from anywhere between 1.3 to 4.6 million, with an annual incidence of 491,600 to 1.8 million. 2.4 million Indians die due to heart disease every year. Prevalence of Coronary Heart Diseases (CHDs) is between 7-13% in urban areas and 2-7% in rural areas. A conservative estimate indicates that there could be 30 million CHD patients in India of whom 14 million are in urban areas and 16 million in rural areas. Prevalence of dyslipidemia is about 37.5% among adults of 15-64 years of age. About 25% of deaths in the age group of 25-69 years occur because of heart diseases. Heart diseases account for about 19% of all deaths across all age groups. According to the WHO, cardiovascular diseases, which affect the heart and the blood vessels resulting in heart attacks or strokes in extreme cases, account for 26% of deaths in India, or 2.5 million. The direct economic burden of heart disease in India could be $4.5 billion, which could increase to $18 billion if 100% of CAD patients were aware and received necessary treatment. Indirect costs would make the numbers even higher. (Deb *et al*., 2013; Economic Burden of Heart Disease in India, 2012)
d. Blindness: Of the 37 million blind people globally, about 15 million are in India. Cataract is the most common cause of preventable blindness in India. Though about 35,000 corneas are collected annually nationwide, the annual demand is over 150,000. (Activity Report. Innovation & Entrepreneurship Development Centre, 2015; Avachat *et al*., 2008)

3. **Environmental sanitation problems:** Some 400 million people defecate in open and 44% mothers dispose their children's faeces in open. India accounts for 60% of global and 50% of its own population open defecation. About 48% children in India suffer from some degree of malnutrition. There is an increased female school dropout rate in the adolescent age due to lack of toilet facilities. Only 25% have drinking water on their premise. Sixty seven per cent Indian households do not treat drinking water though it may be chemically and bacterially contaminated.

According to Public Health Association (which year), 53%, 38% and 30% wash hands with soap after defecation, before meals and preparing food respectively. Nearly 80% children's faeces are disposed in the open and 6% children use toilets. **(**Teotia and Teotia, 2008)

4. **Medical Care Problems:** India has a health policy, not health service. The need based services have primarily catered to the urban population, which houses 32% of the national population. The doctor population ratio stands at 1:1,700, less than the WHO prescribed 1:1,000. Reluctance by doctors to serve rural areas emerges from the feeling of professional isolation and disparity in living

conditions. There are almost four times the medical practitioners in urban than in rural areas per 10000 population. [24]

5. **Population Problem:** India accounts for 17% global population and has 2.5% of the earth's land area. Over-population has its share of ill-effects including rising unemployment, inappropriate utilization of available manpower, inadequate infrastructure, resource scarcity, drop in production & rising costs and inequitable income distribution resulting in widening inequality.

Nutritional Problems in India: Under/malnutrition makes the child susceptible to infection and results in child mortality. This accounts for 22% of the burden of disease in India and adversely affects the economic growth with an estimated adult productivity loss of 1.4% of the GDP. (Gragnolati *et al*., 2005)

1. Vitamin D Deficiency: Vitamin D deficiency is the most under-diagnosed and under-treated deficiency in the world. Nearly 60-80% Indian population is deficient in Vitamin D. According to the WHO, the daily vitamin D requirement of 600 IU and can be obtained by a daily 15 minutes' walk in the sunlight, and yet it persists. (UNICEF, 2013; Prevalence of Vitamin A Deficiency among Preschool Children in Rural Areas, 2006; Kaur, 2014; DeMayer and Tegman, 1995)
2. Calcium Deficiency: Calcium deficiency and calcium deficiency-induced osteoporosis among the elderly are one of the most common causes of bone diseases and deformities. Low calcium intake predisposes to osteoporosis and hyperparathyroidism. Twenty per cent girls in the age-group of 14-17 years in India suffer from calcium deficiency. (National Family Health Survey (NFHS-3), 2007; Dietary Guidelines for Indians, 2011; Srilakshmi, 2015)
3. Vitamin B complex deficiencies: Nearly 80% Indians have vitamin B12 deficiency. (Andezhath and Ghosh, 2000)
4. Zinc deficiency: Zinc deficiency in high among lactating women in India. Nearly 50% non-pregnant and lactating women in India have zinc deficiency.
5. Low birth weight: According to NFHS-3 (give year), 22% recorded were LBW (19% urban and 23% rural). On average, 28% children born in India are of LBW. Reducing LBW is an important indicator towards achieving the goal of Health for All.
6. Protein Energy Malnutrition (PEM): The prevalence of stunting among under-five children is 48%, wasting 19% and underweight, 42.5%. These numbers are high in magnitude. Stunting is more among rural children though malnutrition is more among urban population. Incidence of PEM in pre-school age children is 1-2%. Prevalence of underweight children increased from 11.9% (<6 months) to 37.5% (6-11 months) to 58.5% among 12-23 months old children. (Gragnolati *et al*., 2005; UNICEF, 2013)
7. Xerophthalmia: Xerophthalmia is most common among children aged 1-3 years. An estimated 5.6% children in India suffer from eye signs of VAD. The overall prevalence of Bitot spots among children aged 1-5 years is 0.8%, which is higher than the WHO cut off point of 0.5%. The overall prevalence of night blindness is about 0.3% and of conjunctival xerosis 1.8%. (Prevalence of Vitamin A Deficiency among Preschool Children in Rural Areas, 2006)
8. Nutritional Anaemia: The prevalence of nutritional anaemia is among the highest in the South Asian countries. The prevalence in India is relatively higher than that of other developing countries, affecting nearly 50% of the population. One in two women in India are anaemic, including 39% having mild, 15% moderate and 2% severe anaemia. About 55% adolescent girls suffer from anaemia in India. According to the WHO, the prevalence of anaemia in India is 65-75%. The National Nutrition Monitoring Bureau, Indian Council for Medical Research and District Level Household Survey suggest prevalence of anaemia among preschool children, pregnant and lactating women and adolescent girls as high as 90%. NFHS-III reveals that Assam, Haryana, Jharkhand have the maximum cases of married women with anaemia. The report further states that 84% and 92% pregnant and lactating women respectively suffered from varying degrees of anaemia. It has been noted that women across all age groups in India have been suffering from varying degrees of anaemia. (Kaur, 2014; DeMayer, 1995; National Family Health Survey (NFHS-3), 2007)
9. Iodine Deficiency Disorders (IID): Of the 321 districts across all the states and Union Territories of India, 260 are endemic with IDD and the prevalence is more than 10%. In terms of numbers, an estimated 71 million people are reported to be suffering from IDD. Of the 1.5 billion populations globally at the risk of IDD, an estimated 200 Million people are in the country and 167 million living in IDD areas. In India, endemic belt of goitre and cretinism mainly lie along the slopes, foothills and plains adjacent to the Himalayas extending 2,400 kilometres. Pockets of goitre have been identified in the Aravali Hills in Rajasthan, Subvindhya hills of Madhya Pradesh, Narmada Valley in Gujarat, hilly areas of Orissa, Andhra Pradesh, tea estates of Karnataka and Kerala and the districts of Aurangabad, Pune in Maharashtra, as well. Inhabitants of most coastal areas, however, are relatively free of goitre. The overall prevalence of goitre among 6-11 years old children is 4%, below the cut-off to indicate endemicity of IDD. The proportion is higher in Maharashtra (11.9%) and West Bengal (9%) compared to elsewhere in the country. No state and/or Union Territory are free of IDD in India. About 54 million people are estimated to have goitre, 2.2 million cretinism and 6.6 million mild psycho-motor handicaps. (Dietary Guidelines for Indians, 2011; Srilakshmi, 2015)
10. Fluorosis: Fluorine is the abundantly available in the nature, and about 96% of fluoride in the human body is found in bones and teeth. Fluorine is often called as two-edged sword. Prolonged ingestion of fluoride through drinking water in excess of the daily requirement is associated with dental and skeletal fluorosis while inadequate intake of fluoride in drinking water is associated with dental caries. The World Health Organization has set the upper limit of fluoride concentration in drinking water at 1.5 mg/l while The Bureau of Indian Standards has laid down Indian standards as 1.0 mg/l as the maximum permissible limit of fluoride, with a further remark as "lesser the better." (Andezhath and Ghosh, 2000) Fluorosis

is an important public health problem in 24 countries, including India, which lies in the geographical fluoride belt that extends from Turkey to China and Japan through Iraq, Iran and Afghanistan. Of the 85 million tonnes of fluoride deposits on the earth's crust, 12 million are in India. (Saravanan *et al*., 2008) Fifteen states in India are endemic for fluorosis (fluoride level in drinking water >1.5 mg/l.) About 62 million people in India suffer from dental, skeletal and non-skeletal fluorosis including six million children below the age of 14 years. (Susheela, 2001) India was one of the worst fluorosis affected countries, with large number of people suffering. Rajasthan and Gujarat in North India and Andhra in South India are worst affected. Punjab, Haryana, Madhya Pradesh and Maharashtra are moderately affected states in India, while the states Tamil Nadu, West Bengal, Uttar Pradesh, Bihar and Assam are mildly affected. (Arlappa *et al*., 2013)

Conclusion

The birth of strong nation is not possible on a foundation of straws. India bosses a sustained rapid economic development and is on the path of becoming an economic super-power in the coming future. There is a substantial increase in the awareness among the masses regarding the importance of good health for the growth and development of an individual, and thus the family and the nation as a whole. India thus appears to be well poised in tackling the various health issues dogging the nation today. The government and health professionals are obliged to design and implement feasible health plans to tackle the health related issues at a cost acceptable and affordable to the masses and the country and in a manner which sensitive to their social, cultural and economic wellbeing. The implementation should be such that all citizens are equally benefitted. Such measures would be pivotal in ensuring health in all for every citizen of the nation.

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