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## Health services and nutritional challenges for the study of non-communicable diseases in the society

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### Abstract

The national nutrition and health surveys carried out over the last four decades have documented that there have been study at around Rewa city in the present scenario. It has been shows a slow decline graph in under- nutrition and micro-nutrient deficiencies, morbidity and mortality due to severe infections. Because of the synergistic interactions between nutrition and health due to some non-communicable diseases (NCD) and their interventions resulted in improving both health and nutritional status of the area. In the last two decades, there has been a slow graph but steady increase in the prevalence of over nutrition. The population is not fully aware of the area and adversely effected of over- nutrition. Non-communicable diseases are asymptomatic in the initial phase; only after symptoms due to complications arise do patients seek health care. It is essential to improve awareness regarding health services to the society and their nutritional challenges for non-communicable diseases. Simultaneously interventions for regaining normal nutritional status in those with non-communicable disease will have to be initiated a part of the management of NCD.

**Keywords:** Health services, nutritional challenges, non-communicable diseases, society

### Introduction

The importance of adequate nutrition for maintaining good health and normal physical efficiency among the local area of the Rewa City peoples were realised. The tremendous peoples were expansion during the above period and the anxiety of the different nations to maintain maximum development of local area of the city efficiency and output focused their attention to improving the nutrition and health of the peoples. During the last 15 years, the number of people's job for selected any industry or other organisation to employed in the local area of the Corporate area, other municipal area and in many irrigation projects in Madhya Pradesh adjacent area of Rewa district in India has increased enormously. Increasing interest has been evinced both by the Government and the employers in improving the nutrition and health of the peoples/workers with a view to achieve the maximum output of work. This research as per Balanced diets, lunches, snacks for industrial workers/other peoples and their families in rural and citizen area also develop.

### Non Communicable Diseases

A non-communicable disease (NCD) is a medical condition or disease that is not caused by infectious agents (non-infectious or non-transmissible). NCDs can refer to chronic diseases which last for long periods of time and progress slowly.

**Characteristics of NCD's** Not caused by an acute infection, have common risk factor, cause long term harm, need long term treatment, affects qually to men & women, sometime causes disability.

### Total number of deaths by cause, India

Total annual number of deaths by high-level cause category. Non-communicable diseases (NCDs) include cardiovascular disease, cancers, diabetes and respiratory disease. Injuries include road accidents, homicides and conflict, drowning fire-related accidents, natural disesters and self-harm.

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**Facts from figure**

- NCDs not only dominate mortality figures at a global level, but also account for the majority of deaths in India.
- Deaths from causes such as infectious disease, malnutrition, nutritional deficiencies, neonatal and maternal deaths in India is typically very low in relative terms.
- Death rate is decreased, but ration of NCDs over other has been increased.

In India major share of death is caused by NCDs

Disease Causing Death	Share in %	NCD/Others
Cardiovascular Diseases	28.09%	NCD
Respiratory Diseases	10.09%	NCD
Cancer	8.30%	NCD
Diarrheal Diseases	7.94%	Other
Diabetes	6.55%	NCD

About 53% share of death is caused by Major 4 NCDs.

In the dual nutrition and health burden era, assessment of nutritional status is an important component of both public health interventions and care of individuals seeking health care. Ideally, nutritional assessment should be carried out periodically in all individuals and more often in vulnerable segments of the population such as children, adolescents, pregnant and lactating women and elderly citizens. Neither nutrition and health service nor our population, are geared for such routine periodic assessment for early detection, appropriate counseling and effective management of nutritional deficiencies and excess before clinical problems

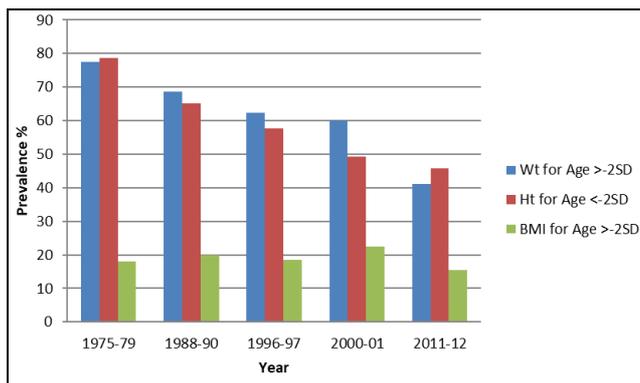
arise.

When the Madhya Pradesh district of Rewa in India became independent, the country faced two major nutritional problems : a treat of famine and the resultant acute starvation due to low food production and the lack of an appropriate food distribution system. The other was chronic under-nutrition due to poverty, food insecurity and inadequate food intake. Famine and starvation hit the headlines because they were acute, localized, caused profound suffering and fatalities. But chronic low food intake was a widespread silent problem leading to under-nutrition, ill health and many more deaths than starvation. Mutually rein for cling adverse consequences of under-nutrition and ill health resulted in high morbidity and mortality in all age groups and the longevity at birth was only 35 years. Recognizing that optimal health and nutrition were essential for human development and human resources were the engines driving national development, Article 47 of the Constitution of India states of Madhya Pradesh Rewa district "the State shall regard raising the level of nutrition and standard of living of its people and improvement in public health among its primary duties". The country adopted multi-sectoral, multi-pronged strategies to improve the nutritional and health status of the population. Successive Five-Year Plans documented the policies, strategies and intervention programmes, provided the needed funds and laid down targets to be achieved in the defined time frame. Progress was monitored through the national surveys. Here shows the Table no. 1 to Prevalence of under-nutrition in pre-school children.

**Table 1:** Prevalence of under-nutrition in pre-school children

Sr. No.	Year	Wt for Age >-2SD	Ht for Age <-2SD	BMI for Age >-2SD
1	1975-79	77.5	78.6	18.1
2	1988-90	68.6	65.1	19.9
3	1996-97	62.4	57.7	18.5
4	2000-01	60.1	49.3	22.5
5	2011-12	41.1	45.7	15.5

**Resource:** Prevalence of under-nutrition in pre-school children (NNMB Surveys) 2018



**Fig 1:** Prevalence of under-nutrition in pre-school children

Here above show table & graph also indicated that in the prevalence % from 1975-79 to 2011-12 to show the Wt. for age >-2SD, Ht for Age <-2SD, and BMI for Age >-2SD. Here analyzed the BMI for Age > 2SD slowly increase and in 2011-12 also decrease. In this type the Ht for Age < 2SD Slowly downward because the here also show the nutrition deficiency also present. Wt. for age > 2 SD It is also shows the deficiency of weight of the people.

All the national nutrition and health surveys carried out over the last four decades have documented that there have been

steady but a slow decline in under-nutrition and micro-nutrient deficiencies, morbidity and mortality due to severe infections. Because of the synergistic interactions between nutrition and health, some health interventions resulted in improving both health and nutritional status and vice versa. In the last two decades, there has been a slow but steady increase in the prevalence of over nutrition and non-communicable diseases (NCD). The population is not fully aware of the adverse health consequences of over-nutrition and tends to ignore obesity. NCDs are asymptomatic in the initial phase; only after symptoms due to complications arise do patients seek health care. It is essential to improve awareness regarding health consequences of adiposity and initiate programmes for prevention and management of adiposity. Simultaneously interventions for regaining normal nutritional status in those with NCD will have to be initiated a part of the management of NCD. This article will briefly review the role of health services in addressing the nutrition challenges in the dual nutrition burden era.

India's health system was built up with focus on early detection and effective treatment of under-nutrition, infections and maternal child health problems. Most of these health problems are symptomatic and acute. Ill persons do access health care and under-nutrition and infection can be readily treated. Over years utilization of health care had improved

and this led to sustained reduction in under-nutrition, ill health and mortality rates.

In last two decades, over-nutrition and associated non-communicable diseases are emerging as major public health problems. Majority of Indians do not worry about over-nutrition because it does not interfere with their day-to-day life. They do not realize that adiposity predisposes to non-communicable diseases. Most of the NCDs are asymptomatic in the initial phases and so the majority of persons with NCD seek care only when symptoms due to complication arise. NCD management regulars lifestyle modification and lifelong medication. In the coming years, Indians and Indian health system have to reorient and gear themselves for successfully managing the prevention, early detection and effective management of dual nutrition and disease burden.

In the dual nutrition and health burden era, assessment of nutritional status is an important component of both public health interventions and care of individuals seeking health care. Ideally, nutritional assessment should be carried out periodically in all individuals and more often in vulnerable segments of the population such as children, adolescents, pregnant and lactating women and elderly citizens. Neither nutrition and health services nor our population, are geared for such routine periodic assessment for early detection, appropriate counseling and effective management of nutritional deficiencies and excesses before clinical problems arise. Therefore we should begin with an assessment of nutritional status as when any person seeks health or nutrition care.

Once the assessment is done appropriate advice should be given depending upon their nutritional status:

1. Normally nourished person protect their current lifestyles and provide support for continued normal nutrition and health status;
2. those who are under- or over –nourished and are at risk of health problems-provide counselling regarding appropriate food intake and physical activity, if required provide nutritional supplementation and monitor for improvement;
3. those with illness-identity nutritional problems, provide appropriate health and nutrition therapy to restore normal health and nutrition and monitor response.

Nutritionists and physicians have to play a critical role in combating the dual nutrition and disease burden by appropriate nutrition and lifestyle counselling and nutrition and health care. Promoting synergy between health and nutrition services will enable the country to successfully face the nutrition challenges and achieve rapid improvement in health and nutritional status of the population.

Over the last three decades, there has been increasing mechanization of the transport, occupation and household work related activities. As a result, there has been a steep reduction in the physical activity and majority of Indian have become sedentary. There has been some reduction in food intake but this was not commensurate with the reduction in physical activity. As a result there has been a progressive rise in over nutrition. The data from surveys carried out by the NNMB had shown that there has been a progressive increase in the over-nutrition rates both in men and in women in the last four decades. The increase in over-nutrition rates was steeper between the mid-nineties and 2012. Over –nutrition rates in women were higher than over-nutrition rates in men. Data from NFHS 4 showed that with increasing age, over-nutrition rates increased age, over-nutrition rates increased.

Women ignore such weight gain and do not seek any nutrition or health advice and incur the risk of NCD and their complications. To reduce the health hazards associated with obesity, it is essential to screen men and women for over-nutrition and provide appropriate health and nutrition counseling to over-nourished persons.

Whenever data on time trends in the prevalence of under- and over-nutrition are presented some in the audience feel that changes in BMI had occurred only in a small proportion of women. But overtime BMI in most women has increased. As a result, the proportion of women whose BMI was below the cut-off for under-nutrition had decreased and proportion of women whose BMI was below cut off for over nutrition has increased. For optimal nutrition, those with BMI<18.5 should gain weight so that they become normally nourished; but normally nourished persons should not gain weight and become over nourished. Moderate physical activity is essential for optimal nutrition and health. Health education message that at least 30 minutes of sustainable discretionary physical activity per day s essential for optimal nutrition and health may go a long way in halting the rise in over nutrition and NCD rates in adults.

### Conclusion

In Madhya Pradesh Rewa district health system was built up with focus on early detection and effective treatment of under – nutrition, infections and maternal child health problems. Most of these health problems are symptomatic and acute. Ill persons do access health care and under – nutrition and infections can be readily treated. Over years utilization of health care had improved and this led to sustained reduction in under nutrition, ill health and mortality rates.

In last two decades, over-nutrition and associated non-communicable diseases are emerging as major public health problems. Majority of Indians do not worry about over-nutrition because it does not interfere with their day-to-day life. They do not realize that adiposity predisposes to non-communicable diseases. Most of the non-communicable diseases are asymptomatic in the initial phases and so the majority of persons with NCD seek care only when symptoms due to complications arise.

Non-communicable disease management requires lifestyle modification and lifelong medication. In the coming years, Indians and Indian health system have to reorient and gear themselves for successfully managing the prevention, early detection and effective management of dual nutrition and disease burden.

### Suggestion

Eating a healthy diet, increasing physical activity and avoiding tobacco use can prevent:

- 80% of premature heart disease,
- 80% of type 2 diabetes cases, and
- 40% of cancers.

To reduce the risk of these diseases, the WHO Global strategy on Diet, Physical Activity and Health recommends developing and implementing national policies which aim to facilitate the:

- Reduction of salt consumption.
- Elimination of industrially produced trans fatty acids.
- Reduction of saturated fat consumption.
- Limit intake of free sugars.
- Increase consumption of fruits and vegetables.
- Achievement of a healthy weight.

- Practice of adequate levels of physical activity.

#### **Breastfeeding and NCDs**

- The simple act of breastfeeding has numerous health advantages to both mothers and their babies.
- In terms of NCD prevention, breastfeeding has long-term benefits in the form of reduced risk of chronic illness.
- The World Health Organization recommends early initiation of breastfeeding (within the first hour of birth).
- Exclusive breastfeeding (no water, other fluids or foods) for 6 months, followed by continued breastfeeding.
- For 2 years or more with appropriate addition of complementary foods.

#### **Benefits for the breastfed baby**

- As adults, breastfed baby
- As adults, breastfed infants have lower blood pressure, serum cholesterol, and type-2 diabetes.
- Many-though not all-studies show a reduced risk of overweight and obesity in adults who were breastfed as infants.

#### **Benefits for breastfeeding mothers :**

- Reduce their risks of ovarian and premenopausal breast cancers.
- Reduces their risk of type 2 diabetes. This could be due to improving glucose hormones.
- Helps them to lose weight, especially while their infants are being exclusively breastfed.

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