

EDITORIAL**Non-Communicable Diseases: A challenge**Kumar S¹, Kaushik A²,¹Associate Professor, ²Lecturer, Community Medicine, UP RIMS & R, Saifai, Etawah.

After completion of 65 years of independence, our country has witnessed remarkable progress in the health status of its population. However, over the past few decades, there has been major transitions in the country that have serious impact on health. Changes have been seen in economic development, nutritional status, fertility and mortality rates and consequently, the disease profile has changed considerably. Though there have been substantial achievements in controlling communicable diseases, still they contribute significantly to disease burden of the country. Decline in morbidity and mortality from communicable diseases have been accompanied by a gradual shift to, and accelerated rise in the prevalence of, chronic non-communicable diseases (NCDs) such as cardiovascular disease (CVD), diabetes, chronic obstructive pulmonary disease (COPD), cancers, mental health disorders and injuries¹. Researchers and policy makers around the world have been increasingly recognizing NCDs (Non communicable diseases) as a health and developmental emergency. NCDs are the leading cause of death in the South-East Asia Region, killing 7.9 million annually (55% of the total deaths in the Region). NCD deaths in region are expected to increase by 21% over the next decade.

A combination of genetic predisposition and rapidly increasing prosperity means that India may be at unique risk of non-communicable diseases such as hypertension and diabetes. Cardiovascular ailments have displaced communicable diseases as the biggest killer in India and the leading cause of death in middle aged men is heart disease, even in poorer states such as Uttar Pradesh and Bihar. According to the report published by the WHO, India ranks very high among the nations struck by the rising wave of "premature deaths" caused by non-communicable diseases, mainly heart and blood ailments.

Almost 2.6 million Indians are predicted to die due to coronary heart disease (CHD), which will constitute 54.1% of all CVD deaths in India by 2020. Additionally, CHD in Indians has been shown to occur prematurely,

that is, at least a decade or two earlier than their counterparts in developed countries.

India is experiencing a rapid health transition with a rising burden of Non Communicable Diseases (NCDs). Overall, NCDs are emerging as the leading causes of death in the country accounting for over 42% of all deaths (Registrar General of India). NCDs cause significant morbidity and mortality both in urban and rural population, with considerable loss in potentially productive years (aged 35–64 years) of life. It is estimated that the overall prevalence of diabetes, hypertension, ischemic heart diseases (IHD) and stroke is 62.47, 159.46, 37.00 and 1.54 respectively per 1000 population of India. There are estimated 25 lakh cancer cases in India.

National Programme on Prevention & Control of Cancer, Diabetes, CVD & Stroke

Considering the rising burden of NCDs and common risk factors to major chronic non –communicable diseases, Government of India initiated an integrated National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS). The focus of the programme is on health promotion and prevention, strengthening of infrastructure including human resources, early diagnosis and management and integration with the primary health care system through NCD cells at different levels for optimal operational synergies.

The programme is being implemented in 100 districts spread over 21 States during 2010-11 & 2011-12) at an estimated outlay of Rs.1230.90 crore (Rs.499.38 crore for interventions on diabetes and cardiovascular diseases & stroke and Rs.731.52 crore for cancer control) on a cost sharing basis between the Centre and the States at the rate of 80:20. These districts have been selected keeping into account their backwardness, inaccessibility & poor health indicators.

Services offered under NPCDCS

Major risk factors for these NCDs are raised blood pressure, cholesterol, tobacco use, unhealthy diet,

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physical inactivity, alcohol consumption, and obesity which are modifiable. Hence a majority of cancers and CVDs can be prevented and treated if diagnosed at an early stage. Health promotion and prevention of chronic NCDs are yet to be adequately addressed in the country's health system. Presently, clinical services, too, are not adequately equipped to provide the required level of care for these diseases in primary and secondary health-care settings. Therefore, the appropriate strategies have been devised to be implemented under NPCDCS to ensure that the NCDs can be prevented and managed in an effective manner.

A. Cardiovascular Diseases (CVD), Diabetes & Stroke

- A Cardiac care unit at each of the 100 district hospitals.
- NCD clinic at 100 district hospitals and 700 community health centres (CHCs) for diagnosis and management of cardiovascular diseases (CVD), diabetes & stroke.
- Provision for availability of life saving drugs, to each district hospital in 100 districts.
- Opportunistic screening for diabetes and high blood pressure to all persons above 30 years including pregnant women of all age groups at 20,000 Sub Centres.
- Home based care for bed ridden cases in 100 districts.
- Support for contractual manpower and equipments at the 100 district hospitals & 700 CHCs for management of NCDs including health promotion activities.

B. Cancer:

- Common diagnostic services, basic surgery, chemotherapy and palliative care for cancer cases at 100 district hospitals.
- Support for chemotherapy drugs at each district hospital
- Day care chemotherapy facilities at 100 district hospitals.
- Facility for laboratory investigations including mammography at 100 district hospitals
- Home based palliative care for chronic, debilitating and progressive cancer patients at 100 districts.
- Support for contractual manpower and equipment for management of cancer cases at the 100 district hospitals.
- Strengthening of 65 centre tertiary cancer centres (TCCs)

Coronary Heart Disease & Stroke:

The prevalence of coronary heart disease (CHD) ranges from 6.6% to 12.7% in urban and 2.1% to 4.3% in rural India, among those aged 20 years or older. Prevalence has increased almost four times in rural areas and six times in urban areas over the last 40 years². It is estimated that there are currently 30 million CHD patients, with 14 million residing in rural and 16 million in urban areas. But these are likely underestimates given that epidemiological surveys do not include those with asymptomatic CHD². The age-adjusted, stroke prevalence is reported to be between 334 and 424 per 1,000,00 population in urban India and between 244 and 262 per 1,000,00 population in rural India and has increased in both, during the past few decades³. Population-based stroke data are limited and most estimates are largely from small hospital-based studies, making assessment of secular trends difficult. The age-adjusted incidence rate of stroke in urban studies has increased from 13 per 1,000,00 persons per year in 1970 to 105 in 2001 and 145 in 2005, indicating an upward trend which is in consonance with the increased burden of its major risk factors like hypertension and smoking. In addition, the thirty-day case fatality rate is reported to be 41%, which is much higher than that in developed countries (17% to 33%)^{4,5}. In comparison to other countries, CVD in India is distinguished by earlier onset and premature mortality, higher case fatality rate of CVD-related complications, and manifestation of clinical disease at lower risk factor thresholds, particularly with overweight and obesity. CVD disproportionately affects the young in India with 52% of deaths occurring under the age of 70 years compared to just 23% in Western countries⁶.

The most recent data from a rural setting which is in an advanced stage of the epidemiological transition reveal that 60% and 40% of CHD deaths and 40% and 20% of stroke deaths, in men and women respectively, occurred in those under 65 years, underlining how devastating CVD is from a societal perspective⁷. Consequently, the country suffers a very high loss in potential productive years of life because of premature CVD deaths among those aged 35 to 64 years: 9.2 million years lost in 2000 and 17.9 million years expected to be lost in 2030⁸.

High blood pressure

India has a large number of hypertensives with projections indicating nearly a doubling from 118 million in 2000 to 213 million by 2025. Hypertension prevalence in adults is between 20% and 40% in urban areas and 12% and 17% in rural areas².

An earlier meta-analysis reported 25% prevalence among urban adults and 10% among rural adults⁷. The Indian Council of Medical Research (ICMR) estimates that 16% of ischemic heart disease (IHD), 21% of peripheral vascular disease, 24% of acute myocardial infarctions and 29% of strokes in India could be attributable to high blood pressure⁹. National data are unavailable, but many 38 sub-national studies have reported increase in hypertension across the country over the past two decades¹⁰. It is worth noting that between 1942 and 1997, the mean systolic blood pressure (SBP) has increased from 120 mmHg to 130 mmHg, particularly among 40 to 49 year old urban men¹¹. During 1993-2005, a significant increase was observed both among men and women. Age-adjusted prevalence increased in men from 29% to 45% and in women from 22% to 38%. Studies from other regions also point to an increasing burden of hypertension^{3,12}. Further more, detection, management and control rates are below desired levels. Various reports indicate that only about 30% of people with hypertension are detected, less than half of those diagnosed take anti-hypertensives and only half of them have their blood pressure treated and controlled. Notably, once hypertension-related CVD occurs, the use of evidence- 1 based, secondary prevention therapies is also low in primary and secondary care, leading to a large and increasing burden of avoidable and premature mortality¹³⁻¹⁵.

At this point of time it would be most appropriate to say that the time has come when the policy makers of our country need to focus on more serious efforts towards the prevention of non communicable diseases.

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