



Non-communicable diseases (NCDs) in India, Kyrgyzstan, USA and other countries

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Abstract

The NCDs are now almost a pandemic for many populations worldwide. The double burden of disease has taken a new shape in which NCDs are now afflicting low- and middle-income countries, those primarily suffering from communicable or infectious diseases. The global burden of both non-communicable disorders and rare diseases represents a contemporary and future public health challenge in pediatrics. Growth and development at childhood practically affect one's future health and quality of life in adulthood. Childhood serves as a focal point for life-course approaches to the prevention, management, and treatment of NCDs, and rare diseases which represent a golden window of opportunity to improve and promote every patient's right to health. According to the World Health Organization, they account for 86% of deaths and 77% of the disease burden in WHO European Regions. If nothing changes, NCDs are projected to account for 55 million deaths by 2030. Around 35% of deaths due to NCDs in the WHO regions arise from four main causes of premature mortality-CVDs, cancers, chronic respiratory diseases, and diabetes. While, however, the cause of reduced premature mortality may have different implications for chronic diseases, people tend to live longer but with chronic disabilities. Multimorbidity involved 65% of individuals over the age of 65 and called for much more patient-centered and complicated models of care.

By definition, NCDs are a group of chronic medical disorders of non-transmissible origin, prolonged duration, progressive evolution and not commonly able to be completely cured; all of these attributes constitute a considerable burden to their individuals, societies, and economic resources. The main NCDs include cardiovascular diseases, cancers, respiratory diseases, and diabetes. However, the term "NCD" has been extended to cover a wide array of medical conditions affecting organ systems such as the liver, kidney, and gastrointestinal; the endocrine, hematological, and neurological systems; dermatological disorders; genetic conditions; trauma; mental disorders; and disabilities.

Keywords: Non-communicable diseases (NCDs), global health, pediatrics, public health challenge, childhood development

Introduction

The NCDs are now almost a pandemic for many populations worldwide. The double burden of disease has taken a new shape in which NCDs are now afflicting low- and middle-income countries, those primarily suffering from communicable or infectious diseases. The global burden of both non-communicable disorders and rare diseases represents a contemporary and future public health challenge in pediatrics. Growth and development at childhood practically affect one's future health and quality of life in adulthood. Childhood serves as a focal point for life-course approaches to the prevention, management, and treatment of NCDs, and rare diseases which represent a golden window of opportunity to improve and promote every patient's right to health. According to the World Health Organization, they account for 86% of deaths and 77% of the disease burden in WHO European Regions. If nothing changes, NCDs are projected to account for 55 million deaths by 2030. Around 35% of deaths due to NCDs in the WHO regions arise from four main causes of premature mortality-CVDs, cancers, chronic respiratory diseases, and diabetes. While, however, the cause of reduced premature mortality may have different implications for chronic diseases, people tend to live longer but with chronic disabilities. Multimorbidity involved 65% of individuals over the age of 65 and called for much more patient-centered and complicated models of care.

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None of the challenges posed by NCDs can be adequately dealt with within the health sector alone. Hence new health policies are required to define national integrated, multisectoral strategies to the prevention and control of NCDs. In the international arena of documents that exist for NCD prevention and management, the most prominent one is WHO's Global Action Plan for the Prevention and Control of NCDs, together with the Action Plan for the Prevention and Control of NCDs in the WHO European Region 2016-2025. Furthermore, various nations also devise multisectoral and comprehensive policies for the prevention and control of NCDs. Briggs *et al.* carried out a systematic policy analysis that evaluated health policies for the integrated prevention and management of NCDs among the OECD member states by focusing on the objectives set and strategies to achieve these objectives, and included a critical evaluation of the integration of musculoskeletal conditions. It was concluded that with the study of 44 policies from 30 OECD member states, usually policies from the majority of countries covered cancer (83%), diabetes and endocrine disorders (77%), cardiovascular diseases (77%), mental

health conditions (63%), respiratory conditions (63%), and musculoskeletal health and pain (50%). Even though, general strategies were described in most of these policies (96%). Therefore, it is likely that climate-change, environmental factors, and NCD collectively put great

threats to global health. It puts emphasis on the need for ongoing collaboration to lessen the detrimental effects of NCDs on health, with an emphasis on the promotion of healthier lifestyles, access to healthcare, and application of evidence-based policies

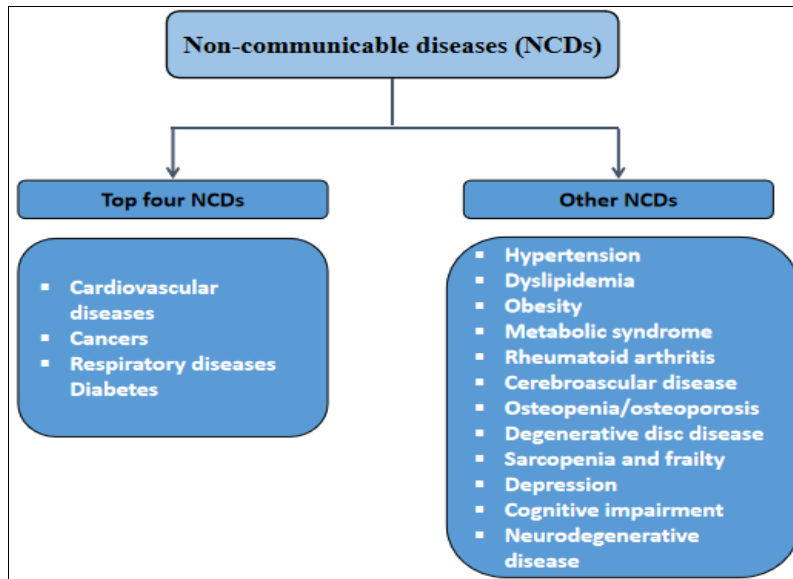


Fig 1: List of non-communicable diseases (NCDs)

Major Risk Factors of NCDs:

There are various risk factors for developing NCDs that may be classified in a variety of ways. One such method has classified these risk factors into modifiable or non-modifiable. Modifiable risk factors include hypertension, smoking, diabetes mellitus, physical inactivity, obesity, and hypercholesterolemia; non-modifiable ones include age, sex, hereditary problems, and race. Although age and sex are rather non-modifiable factors, most of the factors affecting

these are modifiable. The non-modifiable risk factors can be classified into three categories, i.e. biological, behavioral, and societal.

1. **Biological:** Being overweight, dyslipidemia, hyperinsulinemia, and hypertension;
2. **Behavioral:** Diet, lack of exercise, tobacco use, and alcohol consumption; and
3. **Societal:** Complex combinations of interacting socioeconomic, cultural, and environmental parameters.

Table 1: Key Risk Factors of NCDs

Disease	Key Risk Factors
Cardiovascular diseases	<ul style="list-style-type: none"> • High blood pressure (hypertension) • High cholesterol levels • Smoking and tobacco use • Obesity and physical inactivity • Diabetes • Excessive alcohol consumption
Diabetes (Type 2)	<ul style="list-style-type: none"> • Overweight and obesity • Unhealthy diet (high-calorie, low-fiber foods) • Family history of diabetes • Age (higher risk for individuals over 45 years)
Chronic Respiratory Diseases (e.g., Asthma, COPD)	<ul style="list-style-type: none"> • Tobacco smoking • Air pollution • Allergens and genetic predisposition
Cancers	<ul style="list-style-type: none"> • Tobacco use (linked to lung, oral, and bladder cancers) • Alcohol consumption and inactivity • Infections (e.g., HPV for cervical cancer, Hepatitis B/C) • Exposure to ultraviolet radiation (linked to skin cancer)
Mental Health Disorders	<ul style="list-style-type: none"> • Chronic stress • Genetic predisposition • Substance abuse (alcohol and drugs) • Social isolation and lack of support systems • Traumatic experiences
Obesity	<ul style="list-style-type: none"> • Excess calorie intake and low physical activity • Genetic predisposition • Sedentary lifestyle • Poor sleep patterns
Neurological Disorders	<ul style="list-style-type: none"> • Aging (Alzheimer’s and Parkinson’s diseases)

	<ul style="list-style-type: none"> • High blood pressure and diabetes (stroke risk) • Head injuries (linked to epilepsy and dementia) • Genetic predisposition • Smoking and alcohol abuse
Musculoskeletal Disorders (e.g., Osteoarthritis, Osteoporosis)	<ul style="list-style-type: none"> • Aging (weakened bone density and cartilage) • Obesity (excess stress on joints) • Sedentary lifestyle • Vitamin D and calcium deficiency • Repeated joint injuries

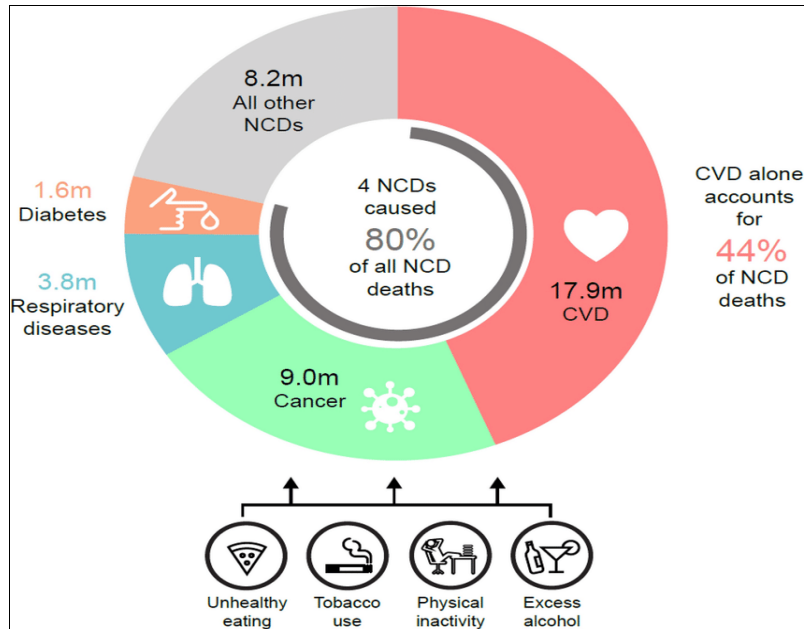


Fig 2: Global annual deaths by key NCDs:: source: World Health Organizations (WHO 2018)

Non-Communicable Diseases (NCDS) – India

Hypertension:

Prevalence: Approximately 29% of adults suffer from hypertension. Urban prevalence is significantly higher because those residing in urban areas have rates exceeding 33% in cities like Delhi, while the rates are around 25% in rural areas.

Demographics: Prevalence increases with age, affecting more than 50% of individuals aged over 60.

Control and treatment: Only 12% of hypertensive patients receive adequate treatment.

Awareness: Poor awareness and limited healthcare access in rural areas need to be addressed.

Wealthier, educated people may be more aware of hypertension, but they tend to have lifestyle factors such as stress and sedentary habits that tend to increase the risk.

Diabetes: Prevalence: The prevalence rate across the country is approximately 8.9%, predicted to be more than 12% in urban centers like Mumbai and Delhi. In the rural areas, prevalence remains lower (around 6%) but increasing fast due to changing dietary and physical lifestyle patterns.

Socioeconomic Trends: Urban richer – communities with a prevalence of over 15% for the richest quintile. There are limited facilities available in rural areas regarding access to insulin and early diagnosis for much younger age groups of patients suffering from complications.

Impact of Youth and Lifestyle: Younger people, as a result of dietary changes, sedentary lifestyle, and obesity, are increasingly affected; hence, this is seen as a significant public health issue.

Cancers:

Breast Cancer: The most commonly occurring cancer among women, it accounts for about 25% of all cancer cases. Awareness and screening rates are noticeably low; rural women are the least likely to get a diagnosis. Delay in diagnosis leads to most women presenting in advanced stages of the disease.

Cervical Cancer: Declining rate of incidence from urban areas due to mass vaccination programs and improved access. One of the most prevalent causes of cancer death in rural India due to limited awareness and unavailability of screening.

Cardiovascular Diseases:

Prevalence: Cardiovascular diseases alone account for a whopping 28% of India's mortality, making them the leading cause of mortality.

Ischemic heart disease's U.S. prevalence is predicted to be 14-17% in urban regions compared with 7-9% in rural areas.

Risk Factors: The very high prevalence of risk factors such as hypertension, diabetes, high cholesterol, smoking, and sedentary lifestyle. Urban residents were the most affected, but rural areas are closing the gap because of lifestyle changes.

Youth Impact: The onset of heart disease is occurring at a younger age in high-income regions than the currently prevailing global averages. Indians are getting afflicted with heart attacks almost five to ten years earlier than their counterparts in the West.

Asthma, chronic obstructive pulmonary disease (COPD), and interstitial lung diseases:

Prevalence: Around 6% of the Indian population is afflicted with CRD.

Great emphasis is paid to lung disease caused by COPD since it may contribute to 13% of all deaths and therefore become a serious public health issue. More than 17-30 million people suffer from asthma in India with a higher prevalence of illness in urban areas owing to air pollution.

Causes: Indoor air pollution, especially from the use of biomass fuels for cooking, in rural households; outdoor air pollution in urban agglomerations such as Delhi, which many times records hazardous air quality levels; tobacco smoking and occupational exposure.

Obesity and metabolic disorders:

prevalence of obesity: Between 11% to 15% in urban centres. More women are affected.

More than 30% of urban adults are thought to suffer from abdominal obesity (central obesity) which is a key risk factor for diabetes and CVDs.

Urban-Rural Divide: Sedentary lifestyles and dietary shifts towards processed food cannot help the urban population, but the increased income in rural areas leads to an increased proportion of overweight individuals.

Obesity in Childhood: Obesity in childhood has been increasing at an alarming rate with around 14.4 million obese (the highest in the world during the Sri China).

Mental Health Disorders:

Burden: About 14% of the Indian burden of disease is made up of mental disorders, with depression and anxiety as the major incidences. A survey indicated that 10.6% of the population suffers from mental health problems, with depression still affecting around 6.5% of the adult population.

Suicide: Second, suicides are reported at very high rates in India, standing at 16.5 per 100,000 people. Among the high-prevalence groups correspond the youth and farmers.

Challenges: Social stigma against mental health and the acute shortage of mental health professionals have been responsible for hindering diagnosis and effective treatment: India averages about only 0.75 psychiatrists to every 100,000 of its people.

Neurological Disorders:

Common Conditions: Stroke, epilepsy, Parkinson's disease, and Alzheimer's disease.

Stroke: Stroke incidence per annum in the relative incidence rate over 100,000 people has been around 150-200 on average, with a rising rate even within rural populations.

Major risk factors are hypertension and diabetes.

Epilepsy: Around 12 million Indians are reported to suffer from epilepsy, constituting nearly one-sixth of the global burden. Underreporting and poor treatment outcomes are a result of social stigma.

Alzheimer's Disease and Dementia: The increase owing to the aging population gives an estimate of about 4 million dementia patients in the Indian population.

National strategies and policies:

According to a statement issued by the Ministry of Health and Family Welfare, a total of 770 District NCD Clinics, 372 district day-care centers, 233 cardiac care units, and 6410 Community Wellbeing Middle NCD Clinics have been built up beneath the National Program for Avoidance and Control of Non-Communicable Infections over the nation. The Ministry has added 2047 medicines and 300 surgical devices to the list of medicinal products available under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana. The Department of Health and Family Welfare, Ministry of Health, government of India, extends its technical and financial support to the states and union territories under the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD) being implemented under the National Health Mission (NHM). This programme consists of strengthening infrastructure, building human resources for early diagnosis, providing appropriate referrals of patients for treatment and management, and promoting health awareness for the prevention of non-communicable diseases (NCDs), including making efforts to control cervical cancer. Under primary healthcare on NHM, a population-based initiative to screen, manage and prevent prevalent NCDs has been implemented. Screening for these most common NCDs is an integral part of service delivery. NCDs are treated and diagnosed at different levels of healthcare facilities. Treatment is free or heavily subsidized by the government for most people in need. For all major NCDs, treatment is also provided with health cover of 5 lakh per year for secondary and tertiary care hospitalization under the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (PM-JAY). This covers nearly 55 crore beneficiaries or 12.37 crore families which includes the bottom 40% of India's population. The central government has presently endorsed wellbeing scope beneath PM-JAY for all senior citizens over 70 a long time of age independent of pay.

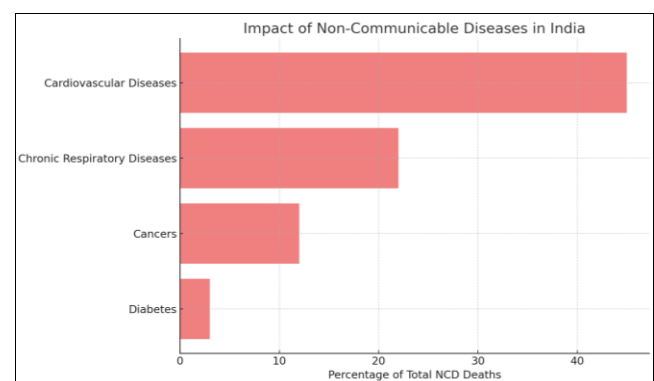


Fig 3: Impact of NCDs in INDIA

Non-Communicable Diseases (NCDs) –KYRGYZSTAN Hypertension

Prevalence: 8.5% among women and 4.9% among men aged 15-49. Rates increase significantly in older populations, particularly in rural areas.

Urban-Rural Divide: Rural residents have slightly higher prevalence due to limited access to healthcare and lifestyle disparities. Awareness campaigns and healthcare infrastructure are insufficient, particularly outside urban centers.

Diabetes

Prevalence: Estimated at 4.5%, with urban populations showing higher rates due to increased exposure to processed foods and sedentary behaviors.

Challenges: Education and wealth correlate with better awareness, yet access to diagnostic and treatment facilities remains a hurdle.

Rising urbanization has led to an increase in diabetes cases, mirroring global trends in LMICs.

Cancers

Screening: Only ~12% of women report undergoing breast or cervical cancer screening. Rural women are particularly underserved due to healthcare limitations and lack of awareness.

Mortality: High due to late-stage detection and limited access to oncological care.

Chronic Respiratory Diseases (CRDs)

Key Conditions: Chronic Obstructive Pulmonary Disease (COPD) and asthma.

Prevalence is found mostly among older adults, especially those living in rural areas, where solid fuel sources are predominantly used for cooking and heating. Asthma cases are rising as a result of air pollution from urbanization and traffic.

Risk Factors: Indoor air pollution from solid fuel use is a major concern, as it accounts for more than 60% of households, particularly in rural areas. The burden of CRD is heightened by the high rate of smoking; up to 25% of adult populations are known to smoke.

Obesity and Related Metabolic Conditions

Prevalence: Obesity is seen to be increasing in Kyrgyzstan, mainly in urban populations.

Among adults, around 20-25% are categorized as overweight or obese; however, there are far more cases among women as compared to men.

Obesity may cause a multiplicity of NCDs, including cardiovascular diseases and type 2 diabetes.

Dietary Factors: An epidemic of obesity is driven by the high level of consumption of salt, fats, sugars, and a low level of physical activity.

Mental Illness

Key Conditions: Depression, anxiety, and stress-related disorders.

Prevalence: Yet, mental health issues remain largely hidden; an estimated 10-15% of the populace being afflicted by mental illness.

Suicide: Kyrgyzstan appears to have one of the highest rates of suicide in Central Asia, particularly with young adults and the rural populace.

Challenges: Limited availability of mental health services, in combination with stigma allied to mental disorders, hampers diagnosis and treatment.

Musculoskeletal Disorders

Key Conditions: Osteoarthritis and chronic back pain.

Prevalence: Musculoskeletal conditions are leading causes of disability, particularly among the elderly and among those in manual employment.

Contributing Factors: These disorders are further worsened by the limited availability of ergonomic tools within the workplaces and healthcare services.

Chronic kidney disease (CKD)

Prevalence: CKD is increasing due to high prevalence attacks of diabetes and hypertension being the main drivers responsible for kidney damage.

Access to Treatment: Access to treatment involves a concentration of hemodialysis facilities in urban areas; hence, they are not available to rural patients.

To meet the growing burden of NCDs that include cardiovascular diseases, diabetes, cancers, and chronic respiratory diseases, Kyrgyzstan has developed several policies and strategies.

National strategies and policies:

National Strategy on Control of NCDs (2013-2020): With the support of WHO and other partners, this strategy aims at reducing the prevalence and impact of NCDs through a comprehensive approach involving multiple sectors.

Strategy for Health Protection and Promotion: This initiative targets enhancement in public health through preventive measures, health education, and the advancement of healthy lifestyles in confronting NCDs.

The "Healthy Person-Prosperous Country" Programme (2019-2030): The current health reform program aiming for universal health coverage by 2030 emphasizes health services integration and increased interaction with public health agencies for better NCD care.

Implementation and interventions:

WHO PEN: Kyrgyzstan piloted the WHO PEN as it works to strengthen primary health care systems toward better NCD management.

School Nutrition Policies: To tackle the dietary risk factors of NCDs, Kyrgyzstan has instituted the school nutrition policies related to assigning meals in compliance with specific nutritional standards.

Salt Reduction Programs: Given the high salt consumption in the population, Kyrgyzstan has conducted cost-effective interventions for salt reduction to curtail the prevalence of hypertension and cardiovascular diseases.

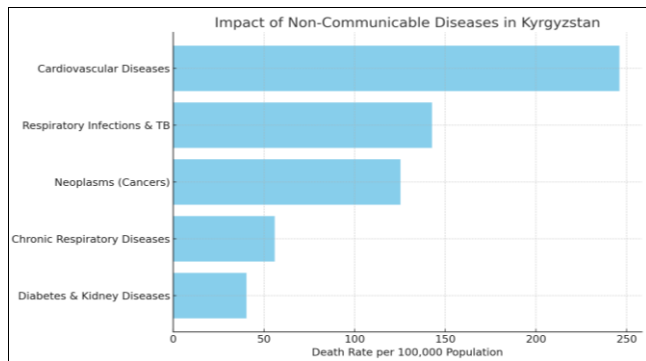


Fig 4

Non-Communicable Diseases (NCDS) – United states of America

Hypertension

Prevalence: 29.3% of adults are hypertensive with a notable increment among African Americans (46%). Among other causes, obesity (40% of adults), high sodium intake, and sedentary lifestyle contribute.

Control: Advanced healthcare systems ensure high-quality diagnosis and management, with widespread use of antihypertensive medications.

Diabetes:

Prevalence: Diabetes is 10.2% nationwide, with ethnic minorities being the most affected: South Asians (~15%) present more cases as a trend from India. Non-Hispanic Whites (~8%) report the lowest among all major ethnic groups.

Healthcare Impact: Comprehensive insurance coverage and early intercepting programs provide reasonable management for diabetes, and obesity raises the ground for expanding cases.

Cancer:

Cancers Screening: More than 70% of eligible adults get screened for cancer (i.e., mammograms, Pap smears), providing early detection and lower mortality rates.

Outcomes: Besides, the developed healthcare system and public awareness campaigns reduce cancer mortality rates compared to LMICs.

Chronic Respiratory Disease (CRD).

This encompasses: Asthma, Chronic Obstructive Pulmonary Disease (COPD), and others.

Prevalence: Asthma affects 25 million Americans (7.7% among adults and 8.4% among children). There are approximately 16 million people suffering from COPD, with millions more undiagnosed. Smoking is the principal cause of COPD. Air pollution and occupational exposure have further worsen the CRDs. Impact: CRDs contribute hugely to disability-adjusted life years (DALYs) and healthcare costs.

Mental Health Disorders: Depression, anxiety disorders; bipolar disorder; schizophrenia.

Prevalence: Approximately 50 million adults suffer from mental illness each year, or 21% of the population. Major depressive disorder is the leading cause of disability aged 15-44.

Suicide: Suicide is the 10th major cause of death in the U.S. at more than 48,000 deaths yearly. Suicide rates have increased by nearly 30% since the year 1999. Barriers to treatment: Stigma, lack of access to mental health care, and high treatment costs impede effective care.

Neurological Disorders: Alzheimer's disease, Parkinson's disease: Epilepsy, and Strokes.

Prevalence: Around 6.7 million and above Americans aged 65 and older are inflicted with Alzheimer's disease. Today, an estimated 1 million people are living with Parkinson's disease. An estimated 3.4 million adults and children are finally diagnosed with Epilepsy.

Impact: Alzheimer's disease is the 6th-leading cause of death, costing more than \$345 billion a year. Neurological diseases are among the leading causes of disability in the U.S.

Obesity and related metabolic diseases

Prevalence: Over 42% of adults and 20% of children are in the obesity spectrum, with rising levels. 9.2% of adults face severe obesity. Impact: Obesity is one of the principal risk factors for a suite of diseases including cardiovascular disease, type 2 diabetes, and certain cancers.

Disparities: Higher prevalence in Black and Hispanic population groups as compared to non-Hispanic Whites. Poor socio-economic conditions are another contributing factor to the wide gap in terms of both prevalence and death rate across defined demographic populations.

Musculoskeletal Disorders

The key conditions: osteoarthritis, osteoporosis, and chronic back pain.

Prevalence: more than 58 million adults (24% of the population) are afflicted with arthritis.

Osteoporosis in 10 million people in the U.S.: 44 million additional people are at risk for the disease related to their low bone mass.

Impact: musculoskeletal disorders account for a vast contribution towards disability and an equally large amount for loss of productivity. Chronic back pain is one of the most common reasons for absence from work.

Alcohol and Substance Use Disorders

Alcohol Use: Approximately 14.5 million adults have alcohol use disorder (AUD), with another 400,000 young adolescents under the age of 18.

Excessive alcohol use contributes to 140,000 deaths a year.

Substance Use: Opioid use disorder remains a major concern, resulting in more than 80,000 overdose deaths in 2021.

Methamphetamine and cocaine use disorders are also on the rise.

Liver Diseases

Key conditions: including but not limited to: nonalcoholic fatty liver disease (NAFLD), cirrhosis, and hepatitis-related complications. NAFLD affects 25% of the U.S. population, but the prominent risk factor reverts to obesity. Liver disease accounts for more than 50,000 deaths each year.

National Strategies for NCDs in USA

Healthy People Initiative

A flagship public health initiative of the United States Department of Health and Human Services (HHS), receiving an update every decade. Healthy People 2030 includes more than 350 measurable objectives that guide local, state, and national health programs on the prevention, management, and equity of noncommunicable diseases (NCDs).

Goals Related to NCDs:

Reduction in diabetes, hypertension, and obesity.

Increased screenings for cancers (e.g., colonoscopies, mammograms).

Increased cessation and decreased rate of smoking.

Improvements in mental healthcare and decreases in the suicide rate.

National Diabetes Prevention Program (NDPP)

Administered by the Centers for Disease Control and Prevention, the program seeks to prevent type 2 diabetes through lifestyle interventions. The NDPP promotes community-based programs aimed at weight loss, physical activity, and healthy eating.

Million Hearts Initiative

The initiative led by the CDC and the Centers for Medicare & Medicaid Services (CMS) aims to prevent from today to 2027 a million heart attacks and strokes.

Strategies: Aspirin use for people at risk., Controlling blood pressure., Cholesterol management., Smoking cessation.

National Comprehensive Cancer Control Program

Further funding of coalitions in all 50 states to reduce the incidence of cancer and the cancer mortality rate. Focus on prevention, early detection, and survivorship care.

Federal Legislation and Policies

Affordable Care Act

Forbids insurance for a vital array of preventive services from charging cost-sharing, including screenings for diabetes, hypertension, and cancers, and protecting citizens from such payments.

Community Health Programs: Funding programs aimed at reducing the risks of chronic diseases, including CDC Chronic Disease Prevention and Health Promotion initiatives.

Tobacco Control Policies

The Family Smoking Prevention and Tobacco Control Act (2009):

Gave the Food and Drug Administration (FDA) authority to regulate tobacco products.

National Tobacco Control Program (NTCP): Provides funding to states for anti-smoking campaigns and quitline services.

Nutrition and Food Labeling Policies

Calorie labeling requirements: Restaurants and food establishments are required to post calorie counts to foster informed dietary choices.

National Salt Reduction Initiative: Encourages the food industry to cut levels of sodium in processed foods.

Mental Health Policies

Mental Health Parity and Addiction Equity Act (MHPAEA): Requires health plans to provide equal coverage for mental health and substance use disorder treatment to those provided for physical health.

988 Suicide & Crisis Lifeline: A national hotline that was initiated in 2022 to provide on-the-spot support to people during mental health crises.

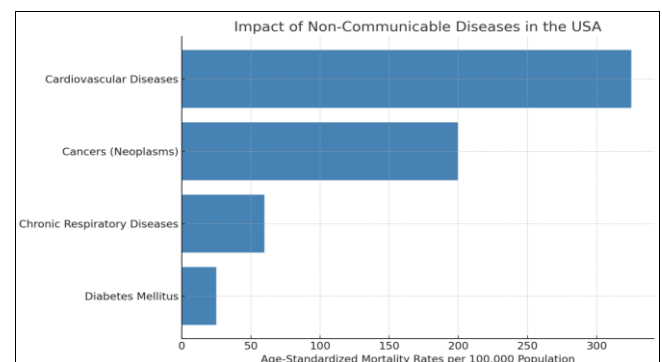


Fig 5: impact of NCDs in USA

Non-Communicable Diseases (NCDs) – OTHER COUNTRIES

India, with an estimated population of 1.3 billion, is responsible for more than two-thirds of deaths arising from NCDs in the South-East Asia Region (SEAR), according to WHO (2014). THIS report on NCD status in SEAR (2011) identifies raised BP, raised blood glucose and tobacco as major risk factors of mortality annually in this region. Raised BP had a higher prevalence in Myanmar (with the highest - 42%), Indonesia, Sri Lanka, Bhutan, and Thailand as opposed to the prevalence in India, which is about 35%, while Nepal, Maldives, Bangladesh, and Democratic In the Republic of Korea, there was a notably low prevalence of certain health issues, estimated at around -19%. With regard to diabetes and elevated blood glucose levels, Bhutan presented the highest rates within the South-East Asia Region (SEAR), reaching between 12% and 13%, followed closely by India with an approximate rate of 11%. An analysis of tobacco consumption reveals that the use of smoked products is comparatively lower in Sri Lanka at 14.1%, contrasting sharply with much higher prevalence rates in Thailand (24%), Bangladesh (24%), Myanmar (24%), Maldives (27%), Nepal (32%), and Indonesia which recorded the highest usage among these countries at 33%. In comparison, India stands at a rate of approximately 15%. ON another note, when evaluating smokeless tobacco product usage, India's prevalence is substantial at 25.9%, significantly exceeding those reported in Thailand (1.3%), Sri Lanka (15.8%), Nepal (18.6%), and Bhutan (19.4%). Conversely, both Bangladesh and Myanmar lead in this category with respective rates of 27.2% and an alarming 51.4%. In May 2008, during its World Health Assembly

convening, WHO introduced a Global Strategy Action Plan aimed at combating non-communicable diseases (NCDs). As a member state committed to these initiatives, India has undertaken various actions necessary to fulfill these objectives while gradually rolling out numerous national public health programs aligned with this strategy. To effectively monitor progress related to NCDs, India has conducted several periodic surveys on both national and subnational levels which focus on understanding risk factors

associated with NCDs; examples include the National Family Health Survey (NFHS) and the Global Adult Tobacco Survey (GATS). Unfortunately, these surveys face several limitations that must be addressed for better control over NCDs in India. Notably, a study released by Raban *et al.*, published in 2012 further explored available data concerning NCD risk factors but lacked comprehensive representation or analysis.

Table: Non-Communicable Diseases (NCDs) – in other countries

Country	Cardiovascular Diseases	Diabetes	Chronic Respiratory Diseases	Cancers	Obesity	Mental Health Disorders
South Africa	~35% of adult deaths due to CVDs	~9% prevalence	~6% asthma prevalence	Breast cancer: ~22% of cases	~20% adults obese	~12% depression prevalence
Bangladesh	~30% of adult deaths	11.3% (women), 10.7% (men)	~10% asthma prevalence	Breast cancer: ~15% of cases	~8% adults obese	~8% depression prevalence
China	~40% hypertension prevalence	~12% prevalence	~6% COPD prevalence	Lung cancer: highest global rate	~16% adults obese	~6% prevalence of depression
Brazil	~35% of adult deaths	~11% prevalence	~8% prevalence of asthma	Breast cancer: ~23% of cases	~22% adults obese	~9% prevalence of mental illness
UK	~28% hypertension prevalence	~6% prevalence	~12% asthma prevalence	>75% screening rates (breast/cervical)	27% adults obese	~15% depression and anxiety prevalence
Australia	~30% of adult deaths	5.6% prevalence	~10% asthma prevalence	~80% screening rates (breast/cervical)	31% adults obese	~20% experience mental health issues annually
Russia	~47% hypertension prevalence	~5% prevalence	~7% asthma prevalence	High rates of stomach cancer	~23% adults obese	~8-12% depression prevalence
Pakistan	~34% of adult deaths	~8.5% prevalence	High prevalence of COPD and asthma	Breast cancer: ~21% of cases	~10% obesity prevalence	Limited data, high stigma
Japan	~25% of deaths due to CVDs	~6% prevalence	~5% COPD prevalence	Stomach cancer: leading cancer type	~4.5% obesity prevalence	~3% depression prevalence
Germany	~27% hypertension prevalence	~8% prevalence	~9% asthma prevalence	~70% cancer screening rates	~24% adults obese	~10-15% mental health prevalence
Saudi Arabia	~33% hypertension prevalence	~18.3% prevalence	Low prevalence of CRDs	Breast cancer: ~12% of cases	~36% adults obese	~7-10% depression prevalence
Mexico	~27% hypertension prevalence	~14.8% prevalence	~8% asthma prevalence	Breast cancer: ~18% of cases	~28% adults obese	~10-12% depression prevalence
Indonesia	~25% hypertension prevalence	~6.3% prevalence	~10% asthma prevalence	Low cancer screening rates	~6% obesity prevalence	~6% depression prevalence

Conclusion

Non-communicable diseases therefore emerge as major and arguably growing global health challenges, affecting individuals, families, and economies worldwide. Major NCDs like cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes have common risk factors such as unhealthy diets, physical inactivity, tobacco use, and harmful use of alcohol. Controlling these risk factors constitutes the most effective way to prevent and control NCDs, which requires multi-sectoral approaches.

An early diagnosis, timely treatment, and palliative care can potentially offer considerable relief from a suffering illness and increase the quality of life of the afflicted. Other components for tackling the burden are strengthening healthcare systems, promoting healthy living, and universal access to healthcare services.

Final takeaways:

- NCDs are an alarming global health issue.
- Risk patterns, including unhealthy lifestyles, are interrelated.
- Collaboration through multi-sectoral approaches is required for control and prevention.

- Intensive capacity building strategies directed towards early detection and arrive treatment should be in place for enhanced prognosis.
- Healthcare access must be equitable to the world's populations.

In conclusion, this affirms the fact that the NCD challenge is indeed daunting. Nevertheless, it highlights the embracing of multifaceted solutions for their prevention, treatment, and management.

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