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IMA Health Manifesto 2024

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IMA Health Manifesto

2024

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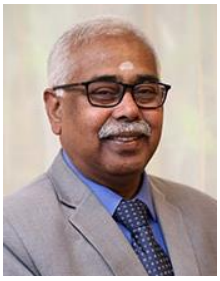
ABOUT THIS DOCUMENT

This Health Manifesto was generated during the Tharang-IMA National Conference held in Thiruvananthapuram, Kerala, on the 26th, 27th and 28th of December 2023. The drafting committee operated as a sub-committee of the national conference's organising committee. The drafting committee worked continuously for two months to develop this document. The organising committee held several meetings with the drafting committee in November and December to assess the progress. A preworkshop meeting was held on 10th December 2023, which was attended by prominent socio-political leaders in addition to large number of public health and medical experts. The health policy workshop at the national conference that took place on 27th December 2023 at KTDC Samudra and attended by various global health leaders endorsed the document. The draft Manifesto was released in the public function on 28th of December 2023 where Dr RV Asokan took charge as the National President of IMA.

IMA'S CONCERNS IN HEALTH AND POLICY POSITIONS



Universal Health Care (UHC)

IMA recognizes Universal Health Care (UHC) as an entitlement to Health security. The state has an obligation to provide appropriate medical care but also to address all the health determinants including drinking water and sanitation. The entitlement should be for a basic Health package for every citizen in primary, secondary and tertiary care. Universal Health care should be ensured primarily by the public sector supplemented with strategic purchase from the private sector. Universal Health Care should move from an aspirational goal to an entitled provision.

Health Financing

IMA advocates a tax-based system of Health financing. Contributory Health insurance offers incomplete coverage and restricted services. General revenues should be the source of UHC. Increased allocation of financial resources for Health is the most important component. The allocation varying from 1.1 to 1.6 % GDP together by the various Governments is one of the lowest in the world. Moreover, the expenditure incurred on Health determinants like drinking water, sanitation should be provided for separately. Thus, the minimum allocation for Health alone should be around 2.5% of the GDP. Despite numerous policy pronouncements prioritizing health, the governments in India at the Centre and state levels have historically underfunded the public health sector, resulting in poor health outcomes and rising inequity in access to health care. India's overall health spending (public and private) is currently estimated to be 3.8% of its GDP, lower than the LMIC average of health spending share of GDP of around 5.2%. India's health system is overwhelmingly financed by out-of-pocket (OOP) expenditures incurred by households (around 63% of all health spending) (NHSRC, 2018b; RBI, 2019). Government funding, provided by both the Central and state governments, currently constitutes approximately one-third of all health spending, with states accounting for nearly two-thirds of total government health expenditure. Sustained underfunding of public sector facilities, and the rapid growth of private sector has contributed to rising OOP costs on health care for households. Of this, a significant share, almost two-thirds of OOP expenses, are for

purchasing outpatient care, especially medicines. Because households bear the burden of the high OOP health expenses in India, more than 55 million people are impoverished each year on account of expenses for ill health.

Accreditation is better option

The advice of the Planning commission committee to choose accreditation for healthcare institutions as the choice for regulation was ignored. The Clinical Establishment Act in the current form is proving to be a burden on small and medium hospitals. Cases of misuse of power are being reported. If registration and quality are the aims the goals will be better served by insisting on accreditation rather than regulation. There is a strong case for exemption of small and medium hospitals from the clutches of the current CEA.

Anti-Microbial Resistance

AMR is emerging as a major threat in the communicable diseases front and has to be tackled with urgency. Anti-Microbial resistance (AMR) is global, regional, and national priority. It increases morbidity and mortality, and results in economic losses. The rates of AMR in the 3 sectors – human, food animal, and environment - have been rising disproportionately in India in the past decades.

The responsible use of antibiotics is a fundamental and effective strategy in containing AMR; however, misuse, overuse, and inappropriate use of these medications contribute significantly to the development and spread of antibiotic-resistant bacteria. AMR containment needs a multi-stakeholder response to raise AMR awareness, training, and capacity development of health professionals, strengthening of infection prevention and control, operational research, and surveillance of AMR, as well as antimicrobial consumption/use and healthcare associated infections.

IMA can play a pivotal role in promoting behavioral change through continuous medical education, peer support, and fostering of responsible anti-microbial use within the healthcare community, and reduction of spread of infections in health care settings.

Quality of Drugs and related issues

The Mashelkar Report of 2003 noted, “The problems in the regulatory system in the country were primarily due to inadequate or weak drug control infrastructure at the State and Central level, inadequate testing facilities, shortage of drug inspectors, non-uniformity of enforcement, lack of specially trained cadres for specific regulatory areas, non-existence of data bank and non-availability of accurate Information. There is much less quality control on the manufacture of medication except perhaps among those recognized as GMP (Good Manufacturing Practice) companies. Quality assurance of the drugs manufactured in the country is a top priority. Similarly, GST on drugs and medical

equipment levied at 5% to 18% needs a reconsideration considering the fact drugs form the substantial portion of out-of-pocket expenditure.

IMS - Indian Medical Services

The COVID pandemic has exposed the vulnerability of the healthcare system in our country. It has also brought to fore the grave paucity of professionalism in health management right from the Sub-District Office level. As such, this mandates towards an acute need for change in the health administration of the country. IMA has proposed to the Government to revive the Indian Medical Services discontinued in 1948. An All-India cadre of doctors would be more sensitive to the needs of the patients and clinicians. It is pertinent to note that 'Law and Order' is a state subject in the schedule appended to the Constitution of India but there is an All India Indian Police Service which is in vogue.

National Medical Commission

1,08,915 MBBS graduates come out of 706 medical colleges of India posing huge challenge for quality maintenance in our medical colleges. IMA desires that NMC should rise to the expectations and trust invested in it. NMC should be sensitive to the issues of young doctors, their career and unemployment. Moreover, the National Medical Commission Act, 2019 needs to be amended to suitably incorporate a provision thereunder for supporting medical education through accruable developmental funds in tune with the provision included at Section 12(B) of the University Grants Commission Act, 1956 governing Higher Education so as to make National Medical Commission a Commission in the truest and realistic sense by vesting it with financial disbursement authority.

In order to invoke quality centricity in all levels of medical education a robust and outcome based analytical accreditation system through Autonomous Accreditation and Ranking Board of the NMC needs to be rolled out immediately in the teeth of recognition granted to it by World Federation of Medical Education vide its Notification dated 20th September, 2023 for a period of 10 prospective years and avail much desired Global parity in the context of the material reality that India turns out to be the largest producer of trained health manpower.

It is also mandated that institutionalized mechanism in the form of Academic Staff Colleges for full time faculty development programme through structured refresher courses for medical education needs to be evoked for fulfilling international parlance on the said count.

Healthcare violence

Violence on Doctors and Hospitals is a national shame. 23 State legislations have been ineffective due to absence of a Central Law.

The Central Government deemed it fit to bring amendments to the Epidemic Diseases Act 1897 during Covid period. Airport and Airline staff are protected by a Central Law. Hospitals should be declared as safe zone. Doctors and nurses deserve to be protected during normal times as well and certainly deserve to be treated as equivalent to airline staff.

Health Manifesto

In a Parliamentary democracy the only way to raise our concerns is to sensitise the common man and create a public opinion. Health of the nation deserves to be an important election issue and IMA strives to streamline its concerns into a Health Manifesto. IMA rededicates itself to the health of our people and to work with the Government to achieve affordable Universal Health Care for everyone.

Priorities

- Tax funded universal healthcare with basic package for all citizens.
- Direct funding of Government Hospitals and human resources with strategic purchase from private sector.
- 5% GDP resources to be allotted by the Governments to Health.
- Re-envision PMJAY to cover outpatient care and cost of drugs.
- Direct patients transfer, copayment and reimbursement models will sustain Health insurance model.

Dr. R V Asokan
National President

Dr. Anilkumar J. Nayak
Honorary Secretary General

07/02/2024
New Delhi

ABBREVIATIONS

ABDM	Ayushman Bharat Digital Mission
ABHA	Ayushman Bharath Health Account
ACTIVE	Advanced Cognitive Training Independent Vital Elderly
AI	Artificial Intelligence
AIDS	Acquired Immunodeficiency Syndrome
AMR	Anti-Microbial Resistance
AMS	Antimicrobial Stewardship
ANC	Antenatal Care
AWaRe	Access, Watch and Reserve
BLS	Basic Life Support
BV	Bacterial Vaginosis
CAD	Coronary Artery Disease
CDC	Centers for Disease Control and Prevention
CHEST	Clinical Health Education Studies Training
COHEART	Center for One Health Education, Advocacy, Research and Training
COPD	Chronic Obstructive Pulmonary Disease
COTPA	Cigarette and Other Tobacco Product Act
CVD	Cardiovascular Diseases
DALY	Disability Adjusted Life Years
EVOC	Emergency Vehicle Operators Course
GAP	Global Action Plan
GDM	Gestational Diabetes Mellitus
GDP	Gross Domestic Product
GISRS	Global Influenza Surveillance and Response System
HBV	Hepatitis B Virus
HCV	Hepatitis C Virus
HFSS	High Frequency Structure Stimulator
HIV	Human Immunodeficiency Virus
HIVST	Human Immunodeficiency Virus Self Testing
HPV	Human Papilloma Virus
HSV	Herpes Simplex Virus
HWC	Health and Wellness Centres
ICARS	International Center for Antimicrobial Resistance Solutions
ICMR	Indian Council of Medical Research
ICMR-NIP	Indian Council of Medical Research-National Institute of Pathology
IDSP	Integrated Disease Surveillance Program
IPAQT	Initiative for Promoting and Affordable and Quality TB Tests
IPC	Infection, Prevention and Control
JE	Japanese Encephalitis
KFC	Kyasanur Forest Disease
LDL	Low Density Lipoprotein
LGBTQIA+	Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersexual, Asexual
MDR	Multi Drug Resistance
MERS	Middle East Respiratory Syndrome
MoHFW	Ministry of Health and Family Welfare
NACP	National AIDS Control Program
NAP-AMR	National Action Plan on Antimicrobial Resistance
NCD	Non-Communicable Diseases
NCDC	National Centre for Disease Control
NCVBDCP	National Centre for Vector Borne Disease Control Programme

NHA	National Health Authority
NHP	National Health Policy
NIV	National Institute of Virology
NMHP	National Mental Health Program
NOHP-PCZ	National One Health Program for Prevention and Control of
ZoonosesNPHCE	National Program for Health Care of the Elderly
NP-NCD	National Program for Prevention and Control of NCDs
NPPC	National Programme for Palliative Care
NTD	Neglected Tropical Disease
NVBDCP	National Vector Borne Diseases Control Program
OHASA	One Health Alliance of South Asia
OOPE	Out of Pocket Expenditure
PDS	Public Distribution System
PHC	Primary Health Center
PLHIV	People Living with HIV
PM-STIAC	Prime Minister's Science, Technology, and Innovation Advisory Council
POC	Point of Care
RDT	Raid Diagnostic Tools
REPLACE	Review of Publication on Lifestyle and Ageing with Chemicals in Environments
RR-TB	Rifampicin Resistance Tuberculosis
SAFER	Strategic Actions for Emergency Response
SARS	Severe Acute Respiratory Syndrome
SDG	Sustainable Development Goals
SHAKE	Structural Health Assessment and Knowledge Extraction
SSH	Sentinel Surveillance Hospital
STD/ STI	Sexually Transmitted Disease/ Sexually Transmitted Infection
UHC	Universal Health Coverage
UNAIDS	United Nations Programme on AIDS
UNHLM	United Nations High-Level Meeting
WHO	World Health Organization
WHOCC	World Health Organization Collaborating Center
WHO-NIC	World Health Organization -National Influenza Center

PREAMBLE

The Indian Medical Association (IMA) proudly presents its Health Manifesto, a comprehensive and ambitious blueprint that recommends practical and innovative solutions to substantially overcome the current and ever-growing critical health challenges faced by the country. IMA, the sole representative voluntary organization of doctors practicing Modern Medicine in India stands as one of the largest professional organizations in the world, with a current membership of 367774 doctors. IMA aims for healthcare providers to attain the highest levels of latest scientific knowledge and most desired attitudes while they ensure the best quality in the care, they provide by following evidence-based scientific practices.

While acknowledging all the great achievements made so far by the country in healthcare, this manifesto endeavors to identify the major shortcomings in the health policies of India and to search for remedial actions against the backdrop of the current and emerging challenges in healthcare. It is further intended to add value to the successful policies. The recommendations are in line with the World Health Organization's concept of Universal Health Coverage and broadly aligned with the spirit of the UN Sustainable Development Goals (SDGs). IMA expects lawmakers and decision-makers to use this Manifesto to ensure the best solutions are delivered in healthcare.

IMA's priorities, identified through extensive consultation with experts, reflect the experiences of frontline healthcare workers, academicians, researchers, activists, and policymakers in dealing with suboptimal health services and inequalities in care. Given the resource scarcities and health system challenges of the country, this Manifesto has tried to strike a balance between being visionary and pragmatic. IMA focuses on positive impacts on health in the short and medium terms, alongside sustained approaches to combat long-term challenges.

IMA aspires this Manifesto to be instrumental in enacting policies that would promote better health for all by recognizing the current and future healthcare needs of the country. Though not exhaustive, the Manifesto highlights the priority areas requiring specific and urgent actions to improve health and wellbeing, save lives, and offer future generations the best opportunity for a healthy life. IMA does realize the need for the government to address the public health impacts of the widening gaps between the rich and the poor. Therefore, this Manifesto is built on the commitment to providing equitable, accessible, and affordable healthcare in modern medicine for every segment of the population. It would also serve as a set of guiding principles emphasizing the need for an updated and responsive health policy.

Through this manifesto, IMA reaffirms its dedication to the highest standards of physical and mental health and well-being for our children, youth, women, communities, and society at large. A healthier society becomes achievable only when the right health approaches are prioritized in public health actions. Therefore, IMA urges the Government to prioritize health as a fundamental human right and to develop a robust and compelling public health plan, equally prioritizing physical, mental and social well-being. IMA is committed to creating institutional structures like thematic empowered action groups (EAG) consisting of expert pools in the respective thematic areas. EAG will interface with IMA leadership, and private and public institutions to shape policies and provide technical guidance to the relevant stakeholders.

IMA AS A KEY STAKEHOLDER IN HEALTH

IMA has a record of providing precious contributions to the health of the country many of which have become models in public health. The latest example is the nationwide voluntary services IMA provided during the COVID-19 pandemic. IMA COVID-19 helpline across the country received over 2 million calls. Through its 1700 branches, IMA distributed essential health equipment and food materials to the needy. IMA also launched helpline services for doctors. Sadly, IMA lost over 2000 lives of doctors who succumbed to COVID-19.

In 1993, when HIV/AIDS was a big challenge for society as well as the medical fraternity mainly due to limited knowledge of the disease, lack of treatment, and fear and discrimination in the communities, IMA took the initiative to sensitize and train and played a major role in creating awareness in society about preventing HIV. IMA's HIV sensitization program with assistance from the Clinton Foundation covered nearly 400,000 health personnel. IMA partnered with NACO in the area of early diagnosis, and prevention of infection from mother to child. Since 1997, IMA's active engagement in tuberculosis elimination, especially in engaging the private health sector, is quoted internationally as an innovative, cost-effective, and successful model. Under a Global Fund-aided programmes, IMA Conducted over 10,000 CME programmes and over 100 workshops nationwide in which 234377 doctors were sensitized/trained in TB elimination. IMA has always been heavily engaged in organizing medical camps, vaccination campaigns and other campaigns like Anemia-free India. In 2003, IMA adopted 1040 villages as part of a village adoption programme.

State level and local branches of IMA run about 160 blood banks and over 2500 blood donation camps were organized in 2022. IMA organized campaigns to sensitize all sections of society, through the 'Mission Pink Health Project' for women's empowerment to 'save the girl child'. In this programme, IMA sensitized over 400,000 doctors across India on 'Say No to Pre-Natal Sex Determination'. IMA along with its women doctors and medico-legal experts prepared a comprehensive examination programme of a victim child of sexual abuse/rape for which IMA, UNICEF, and other partners came together with a standardized protocol for medical examination and evidence collection.

IMA has been an active and dominant participant in the antimicrobial-resistance containment program at the national level since 2011. IMA is continuously sensitizing doctors and healthcare workers through regular online and offline meetings on the rational use of antibiotics to reduce AMR. IMA, through its members and branches has worked with the Government to make the pulse polio immunization programme successful. IMA National Initiative for Safe Sound has organized several pilot projects to educate the community about the problem of sound pollution. IMA has active organ donation committees across the country. IMA also has an active road safety program which encompasses training the public on road safety measures, campaigns, training on first aid, safe transport and basic life support, and training to medical personnel. IMA has taken a strong position against the unscientific mixing of different systems of medicines. IMA expects the Government to be more proactive in engaging IMA in all relevant health programmes.

It has been evident that the engagement of IMA in national health policymaking and the implementation of health programmes will benefit the Government and the public. IMA will continue to extend its voluntary services across the nation to strengthen the efforts of the governments to provide scientific, quality-assured, and equitable healthcare services to the people.

1. INTRODUCTION

The Indian health landscape has been witnessing significant transformations since the launch of the last national health policy in 2017. This transformation is driven by dynamic evolutions in epidemiology, healthcare systems, scientific advancements, and the impact of the COVID-19 pandemic. The Manifesto predominantly covers key areas such as communicable diseases, non-communicable diseases, One Health, and digital health, and selected other key areas reflecting a comprehensive strategy towards drastically improving public health outcomes.

Central to this Manifesto is the recommendation to significantly increase the share of GDP allocation for healthcare. Enhanced funding is crucial for prioritizing primary and preventive health, addressing social determinants of health effectively, and strengthening medical education and research. Such fundamental financial decisions are essential for building a resilient and efficient healthcare infrastructure. This Manifesto advocates for a funding model that directly corresponds to the contextual disease burdens and patients' needs across different healthcare delivery systems under the services of modern medicine. This approach would ensure that the allocation of funds is proportionate to the volume of patients and guarantees equitable and needs-based resource distribution, thus ensuring efforts to achieve universal health coverage. Reduction of out-of-pocket expenditures is key to eliminating catastrophic health expenditures for Indian families.

The manifesto also emphasizes disease prevention, health education and health promotion, moving beyond the current trend of disproportionately prioritizing curative approaches, especially in the public health sector. In alignment with this, there should be additional programs to address the health issues of the underserved and marginalized communities. This would include decentralizing healthcare systems and expanding coverage of technology through telehealth, digital health, and other innovative solutions. Special attention should be directed towards gender-specific health disparities, with targeted initiatives to bridge the healthcare gaps for women. The Manifesto also points out the psychosocial and other health challenges faced by adolescents, and the need for interventions for stress management, substance abuse prevention, and mitigation of life-threatening behaviours.

Recognizing the critical and rapidly growing role of technology in healthcare, the manifesto strongly advocates for the integration of advanced technology in healthcare delivery. The Manifesto advocates for further enhancing the medical education standards to ensure high-quality training and practice and addressing the retraining needs of the healthcare workforce. This approach focuses on improving medical education to align with advancing scientific knowledge while ensuring the well-being of healthcare providers. Key measures would include reasonable compensation, better working conditions, and mental health support, especially for those healthcare personnel facing stress and burnout due to excess workload and unfavorable work environments. The Manifesto encourages the need for incentivizing recruitment and retention of personnel to ensure equitable distribution of healthcare workers. Nevertheless, the Manifesto strongly opposes any efforts in the direction of unscientific mixing up of modern medicine with other systems of healing that pose direct dangers to the health of the common man. At the same time, IMA would urge for promoting scientific research across all medical disciplines so that all systems of healing are restricted to practicing evidence-based medicine and thereby people of all sections are protected from the dangers of being subjected to non-standard treatment modalities. IMA urges the governments to strictly prohibit unscientific and unethical practices in healthcare delivery to safeguard the health and well-being of the Indian populace. IMA has strong reservation against the current Clinical Establishment Act and the more than 50 regulatory laws on the hospitals that need amendments or revisions.

IMA firmly believes and affirms that this Manifesto would stand as a comprehensive package to guide and complement a transformative journey towards a healthier, more equitable, and scientifically advanced public healthcare system in India.

2. GLOBAL HEALTH SCENARIO

Since the onset of the 21st century, the world has witnessed remarkable transformations in the landscape of global health. As the incidence of many infectious diseases including HIV, TB and malaria dropped, the risks of dying prematurely from NCDs and injuries declined, child mortality rates halved, and maternal mortality rate fell by a third, and the global life expectancy at birth increased from 67 years in 2000 to 73 years in 2019. These advances are attributed mainly to better access to healthcare services and reduced exposure to risks like tobacco use, alcohol consumption, and child undernutrition. However, progress has slowed since 2015, affecting the timely attainment of the Sustainable Development Goals (SDGs) targets by 2030. This is evidenced by the falling annual rate of reduction in indicators such as the maternal mortality ratio, under-five and neonatal mortality rates, premature mortality from major NCDs, suicides and road traffic mortality rates. The United Nations predicts a nearly 90% increase in the number of people who will die from NCDs by 2048 compared to 2019.

The adverse impact of the COVID-19 pandemic on the health systems and important health programmes is yet to be accurately estimated. The COVID-19 pandemic has severely hampered the performance of countries in many healthcare-related areas thereby reversing the achievements against important health indicators. Healthcare service disruptions have halted the increasing trend in immunization coverage and reversed the declining trends in the incidence of major killer diseases like TB, HIV, and malaria. Moreover, fewer people have received treatment for neglected tropical diseases (NTDs). The COVID-19 pandemic underscores the threat of infectious diseases, which can emerge or re-emerge at any time and affect anyone.

According to the Global Sustainable Development Report 2023, globally, only 12 per cent of the SDGs are currently on track, due to multiple crises including wars, the COVID-19 pandemic, and the increasingly tangible climate crisis. Despite reductions in exposure to numerous health risks, progress has been inadequate in many areas. Exposure remains high, particularly for factors like alcohol consumption and hypertension, with declines only beginning in recent years. The prevalence of obesity is moving in the wrong direction, with no immediate signs of reversal. In addition, the expansion of access to essential health services has slowed after 2015, and there has been negligible progress in reducing the financial burden associated with healthcare costs. Persistent inequalities in access to healthcare, and exposure to health risks continue to affect disadvantaged populations disproportionately, further hindering the efforts towards achieving health equity.

Antimicrobial resistance (AMR) may cause a resurgence of infectious diseases that were previously under control, undermining the achievements. Climate change also erodes the environmental and social determinants of physical and mental health, exposing everyone to enormous risks.

These challenges require scaling up efforts and accelerating progress towards the SDG targets for 2030. Global, regional, and national priorities and interventions should aim to eliminate deaths from preventable injuries, maternal and child mortality, and infectious diseases, as well as to delay NCD deaths by reducing their underlying risk factors. Equitable access to essential health services should be increased while minimizing the risks of catastrophic costs. Timely, reliable and disaggregated data, estimates, and forecasts are essential to inform policy and guide actions at all levels for maximizing health gains and eliminating inequalities. Enhanced technical assistance from the global UN agencies like WHO and other technical partners, and increased financial assistance from international donors will be the key to success in revamping the global efforts to achieve universal health care.

3. INDIAN HEALTH SCENARIO

Over recent decades, India's health sector has made steady and significant progress. The average life expectancy has surpassed 70 years, and there is a noticeable decrease in infant and under-five mortality rates, as well as overall disease incidence. Major achievements in recent years include the eradication of diseases like polio, guinea worm disease, yaws, and tetanus. Despite various programs and initiatives run by the government, private sector, NGOs, and other healthcare organizations to address healthcare challenges, India, as of 2023, ranks 112th out of 162 countries in the SDG Index, according to the United Nations' Sustainable Development Solutions Network. India's health sector faces significant challenges due to one of the lowest allocations of health funding as a percentage of GDP globally. India's healthcare system faces numerous challenges, including a large population (1.4 billion estimated in 2023), social and gender disparities, geographical gaps, and a shortage of resources.

Communicable diseases continue to be a major public health concern in the country, posing significant threats to both national and international health security. The COVID-19 pandemic has highlighted the vulnerabilities in the health systems of the country and the need for robust infectious disease surveillance and response mechanisms. Older diseases, such as HIV/AIDS, TB, malaria, and neglected tropical diseases, continue to challenge the country's public health efforts. Additionally, vector-borne diseases, such as dengue and acute encephalitis syndrome, remain areas of concern. Moreover, the growing problem of antimicrobial resistance poses a significant global health challenge, necessitating immediate and comprehensive action.

India is undergoing a significant health transition marked by an increasing burden of non-communicable diseases (NCDs) that account for 66% of all deaths in the country. Cardiovascular diseases, cancers, diabetes, and chronic respiratory diseases constitute approximately 80 per cent of these NCD-related deaths. These conditions are primarily driven by lifestyle factors such as tobacco use, harmful alcohol consumption, unhealthy diets, and physical inactivity, each of which plays a significant role in the development and progression of these diseases. India is also facing a significant demographic change, with the number of individuals aged 60 years or older expected to increase to almost 20% of the total Indian population by 2050, which will be equivalent to 319 million people. This change is likely to result in a rise in the prevalence of conditions like dementia. At present, approximately 8.8 million Indians aged 60 years or older are living with dementia, which is considered an emerging epidemic. Non-Alcoholic Fatty Liver Disease has emerged as one of the leading causes of cirrhosis, hepatocellular carcinoma, and Liver transplant in India. The burden of liver disease is significant because it alone contributes to 18.3% of the two million world liver disease-related death.

The country continues to experience high maternal and infant mortality rates, largely due to inadequate access to healthcare, prevalent malnutrition, and limited awareness of maternal and child health practices. Nutritional issues, manifesting as undernutrition, micronutrient deficiencies, and obesity, variably affect different population segments across regions. Mental health issues are increasingly recognized as critical public health concerns, aggravated by stigma, a lack of awareness, and inadequate mental health care infrastructure. Moreover, significant disparities in healthcare access and infrastructure persist between urban and rural areas, resulting in unequal healthcare services and outcomes. Environmental factors, notably air and water pollution, further contribute to a range of health issues, including respiratory and waterborne diseases.

The private healthcare sector in India caters to a considerable share of healthcare needs. However, this sector is highly diverse, consisting of healthcare providers ranging from state-of-the-art urban hospitals to quacks in many rural areas. The lack of consistent and uniform application of regulations has led to the emergence and flourishing of self-proclaimed healers, unscientific mixing of different systems of healing by a large number of practitioners, and unauthorized and irrational prescriptions of life-saving medicines, including antibiotics, that further muddle the already complex health systems, resulting in people receiving widely variable quality of care across healthcare facilities. Despite this, the authorized private health sector with qualified healthcare providers plays a substantial role in the country, while major issues related to accessibility, affordability, and standardization persist.

4. MAJOR HEALTH PROBLEMS IN INDIA: CHALLENGES AND RECOMMENDATIONS

4.1 COMMUNICABLE DISEASES

Global Scenario

According to the WHO, communicable diseases such as tuberculosis (TB), HIV/AIDS, malaria, viral hepatitis, sexually transmitted infections, and neglected tropical diseases (NTD) are the leading causes of death and disability in low-income countries and marginalized populations. In 2019, 13.7 million people worldwide died from communicable diseases. Globally, an estimated 10.6 million individuals contracted TB worldwide and 1.3 million people lost their lives to this disease in 2022, making the disease the world's second leading cause of death from a single infectious agent after coronavirus disease (COVID-19). TB caused almost twice as many deaths as HIV/AIDS (0.63 million in 2022). Theglobal TB incidence rate rose by 3.6% between 2020 and 2022, reversing the previous trend of about 2% annual decline observed over the previous two decades, possibly due to the disruptions in TB services caused by the pandemic. As of 2020 data, 296 million people globally had hepatitis B, and 58million had hepatitis C, causing 1.1 million deaths. Global coverage of the hepatitis B vaccine was 83%, with 42% of children receiving a birth dose to prevent mother-to-child transmission. In 2022, there were 249 million cases of malaria globally, 5 million more cases as compared to 2021. There are emerging and re-emerging diseases such as SARS, Nipah, Zika, Ebola, MERS, H1N1, Measles, Dengue, Cholera,and Lyme disease. Diseases of zoonotic origin and growing threats of antimicrobial resistance (AMR)are making the scenario worse; AMR alone was directly responsible for 1.27 million deaths in 2019. NTDs like Schistosomiasis, Onchocerciasis (River Blindness), Lymphatic Filariasis, Trachoma, Soil- Transmitted Helminthiasis, Dengue Fever, Chagas Disease, and Leishmaniasis, primarily affect tropical and subtropical regions, often in low-income countries. STDs like HIV/AIDS, Gonorrhea, Chlamydia, Syphilis, Herpes Simplex Virus (HSV), Human Papillomavirus (HPV), Hepatitis B and C, Trichomoniasis, Mycoplasma dentalium, Bacterial vaginosis (BV) have significant global impact. Theprevalence and distribution of STDs vary across regions and the efforts to control and prevent these diseases such as research focusing on developing vaccines, improving diagnosis, and understanding the epidemiological dynamics of these infections to devise effective control strategies are ongoing. 'Disease X' is a term used by the World Health Organization (WHO) to denote a hypothetical, unknown, or unexpected disease that could potentially cause a future epidemic or pandemic. In the remaining six years of the sustainable development goals (SDG) of the UN, there must be accelerated efforts globally and in high-burden countries to address the burden of major communicable diseases tosignificantly progress towards SDG targets.

Indian Scenario

In India, the landscape of communicable diseases presents formidable challenges. Tuberculosis (TB) stands out, with 2.8 million cases in 2022, contributing to 27% of the global burden, and 600,000 cases went unreported to the National TB Elimination Programme (NTEP). COVID-19 has significantly impacted the nation, recording 45 million confirmed cases and 533,295 deaths. Estimated 2.4 million people are living with HIV/AIDS, primarily in the 15-49 age group, with women constituting 42% of cases. An estimated 40 million people are infected with Hepatitis B virus, with 21 million annual infections due to unsafe injections. India reports 1.4% of global Malaria cases and 0.9% of deaths, Plasmodium vivax malaria contributes to 66% of cases. Vector-borne diseases like dengue (94,198 cases, 91 deaths), chikungunya, and Zika remain prevalent. As per NVBDCP, the active Indian cases of dengue increased by 23.21 % in 6 years from 2015 to 2022. Nipah virus caused over 100 deaths since the first outbreak in 2001 and the last case was reported in Kerala in 2023. Communicable diseases like dengue (188,366 cases, 247 deaths), Acute Encephalitis Syndrome (5,946 cases, 216 deaths), Kala-Azar (1,353 cases, 28 deaths), and Japanese Encephalitis (754 cases, 66 deaths) pose ongoing health threats, emphasizing the complex public health scenario in India. In India, 550,000 cases of lymphedema and 150,000 cases of hydrocele were reported in 2022 across 339 districts in 20 states/Union Territories. As of 2022, over 336 million children in India require preventive chemotherapy for soil-transmitted helminthiasis is caused

by soil contamination from human waste, leading to nutritional and physical impairments. Intestinal worm infestations contribute to iron deficiency anemia, increasing the risks of maternal and infant mortality, as well as low birth weight. In India, the latest cholera outbreak in July 2023 impacted over 400 people. In 2019, H1N1 cases numbered 28,798 cases, resulting in 1218 deaths, adding to the multifaceted challenges faced by the country's healthcare system. Due to COVID-19 pandemic, these numbers have drastically reduced to 2752 confirmed cases and 44 deaths in 2020 and 778 confirmed cases and 10 deaths in 2021.

Actions so far in India

The National Strategic Plan (NSP) for tuberculosis (2017-25) has a goal of ending TB by 2025. The National AIDS and STD Control Program (NACP) aims to reduce annual new HIV infections and AIDS-related mortalities by 80% by 2025-26 from the baseline value of 2010. The National Frameworkfor Malaria Elimination in India 2016–2030 was initiated with the goal to eliminate malaria (zero indigenous cases) throughout the entire country by 2030 and maintain malaria-free status in areas where malaria transmission has been interrupted and prevent re-introduction of malaria. The Government of India provides IgM MAC ELISA test kits free of cost through NIV Pune to maintain uniformity and standard of diagnostics for dengue. In 2023, India launched a nationwide Mass Drug Administration campaign, employing door-to-door anti-filarial drug distribution, particularly in high-burden districts of 10 states, with the goal of eliminating lymphatic filariasis by 2027. The influenza surveillance is conducted through structured influenza surveillance network of DHR-ICMR Virus Research and Diagnostic Laboratories (VRDLs), and its National Influenza Centre (WHO-NIC) housed at ICMR- NIV Pune (also a WHO CC for GISRS) since July 2021. Under surveillance, a network of 29 sites is collecting the data and monitoring the influenza activity round the year.

Major Issues Considered

India's dense urban population accelerates communicable disease spread due to overcrowded living conditions, poor waste management, and stagnant water fostering vectors. Inadequate sanitation, diminishing access to clean water, and social determinants like poverty and limited healthcare exacerbate the prevalence of water and vector-borne diseases.

The prevention and control of communicable diseases face new challenges, including climate change, emerging zoonotic diseases, and antibiotic resistance. Increased human-animal interactions heighten the risk of zoonotic diseases, emphasizing the importance of a comprehensive one health action plan. Climate change is anticipated to elevate vector-borne diseases like malaria and dengue, altering vector dynamics. Rising temperatures expedite the lifecycle of vectors, potentially enhancing the transmission of disease-causing pathogens. Antimicrobial resistance (AMR) is exacerbated by the misuse of antibiotics, anti-malarial drugs, and anti-retroviral drugs, fueled by unrestricted access without qualified prescriptions and inadequate drug resistance surveillance. In India, timely disease reporting and surveillance, particularly in remote areas, pose challenges. To address this, there's a need to investin technology for real-time reporting, online dashboards, and collaboration between public and private healthcare providers. Challenges include a shortage of trained human resources, insufficient healthcare workers, and the need for equitable access to testing and diagnostic services, especially in underserved regions. Additionally, disparities in health outcomes persist due to social determinants like poverty, education, and unequal access to healthcare, highlighting the necessity for uniform integration of disease control programs into the general health system nationwide.

Tuberculosis (TB), Malaria, and HIV/AIDS are the major disease contributing to India's morbidity and mortality. The COVID-19 pandemic disrupted TB management services, resulting in a backlog of undetected cases globally. The reported increase in TB cases post-pandemic, both globally and in India, reveals the impact of resuming health services and addressing backlogged cases. Challenges include poor coverage of WHO-recommended testing, inadequate private sector engagement, and the escalating

threat of multidrug-resistant TB (MDR-TB). TB prevention efforts face obstacles such as insufficient preventive treatment coverage, absence of an effective adult vaccine, and prolonged antibiotic regimens leading to non-adherence. Inadequate financial support and the absence of services like nutritional supplementation during and after treatment impose significant socioeconomic burdens. Societal stigma surrounding TB hinders community cooperation and engagement, complicating disease control initiatives. COVID-19 surveillance faces challenges due to the absence of continuous clinical and genomic surveillance systems, hindering professional analysis and scientific research. The lack of online dashboards detailing genetic data on newer variants further impedes independent assessments. India doesn't have upgraded COVID-19 vaccines, creating the need for booster shots, particularly for vulnerable populations. Development of a subunit vaccine, considered safer than mRNA vaccines, is crucial to meet the evolving needs of COVID-19 cycles. HIV/AIDS has varying prevalence across regions and populations. Despite progress, the UNAIDS 95-95-95 targets for ending the HIV epidemicby 2030 stand off track with an interim target of 80-87-87 against the achieved target of 77-84-85. The latest data on India shows that out of the individuals who are affected by HIV, only a mere 79% of themare aware of their status, only 68% are receiving the necessary treatment, and only a mere 63% have achieved viral suppression. Stigma and discrimination faced by patients prevent appropriate care seeking and disclosure of diagnosis in critical situations putting themselves and others at risk. Engaging adolescents and young adults in testing and treatment is hindered by misconceptions and lack of awareness.

In the group of eleven High Burden to High Impact (HBHI) countries, India has witnessed a decrease in malaria-related deaths, yet it remains a significant contributor to the overall malaria burden among these nations. The emergence of drug resistance poses a substantial challenge to effective malaria management, while insecticide resistance hampers vector control efforts. Mutations like PfHRP2/3 gene deletions further complicate diagnosis using rapid diagnostic test kits. Malaria's prevalence among migrant populations raises health concerns due to tracking difficulties and the potential for spreading the disease. The government's reduced emphasis on leprosy as a top public health priority has impeded progress, particularly with the cessation of active case finding. Limited engagement of stakeholders, including private providers, further hampers meaningful involvement in leprosy control efforts. Growing resistance to anti-leprosy drugs and high relapse rates pose significant challenges. Insufficient awareness, diagnostic skills, and commitment among general health personnel, coupled with community ignorance, contribute to delayed diagnosis and patient self-reporting, perpetuating the challenges in leprosy eradication. Rabies encephalitis disproportionately affects the impoverished in rural areas. The absence of a coordinated national program hinders efficient reporting and tracking efforts. Widespread lack of awareness about pre- and post-exposure prophylaxis contributes to preventable cases and deaths. Addressing breakthrough infections post-vaccination poses a significant challenge.

India faces challenges in timely disease reporting and surveillance, especially in remote areas. Hence it is recommended to enhance disease surveillance systems, by investing in technology for real- time reporting, including maintenance of online dashboards, strengthening collaboration between public and private healthcare providers.

Recommendations General

Recommendations

1. Strengthen the primary healthcare infrastructure by ensuring appropriate focus on early diagnosis and treatment of communicable disease.
2. Establish a simple and unified digital portal for reporting communicable diseases of public health importance for surveillance.
3. Develop integrated evaluation frameworks for the implementation of vertical programmes on communicable diseases at district and subdistrict levels.

4. Engage IMA at all levels to facilitate intersectoral coordination and for establishing effective and long-term partnership with Private sector.
5. Establish a multi-sectoral accountability framework for disease elimination at national and subnational levels.
6. Introduce fast-track prevention efforts (vaccines and preventive treatment) for multiple diseases that could move towards elimination.
7. Recruit dedicated focal points both at national and state levels with responsibilities for antimicrobial stewardship.
8. Constitute committees to review the challenges and actions of major health programmes and to recommend focused action including redesigning and integrating disease control programs.
9. Expand international collaboration to strengthen global health security measures.

Disease-specific Recommendations

TUBERCULOSIS

- **Enhance Detection and Surveillance:**
  - Improve community-based active case finding and household contact investigations.
  - Strengthen disease surveillance systems, integrating digital tools for simplified notifications and follow up of treatment.
- **Testing Modalities and Private Sector Engagement:**
  - Increase the coverage of WHO-recommended testing modalities for early diagnosis of TB disease and newer skin tests for TB infection to ensure easy access of these to people seeking care from private sector.
  - Enhance partnerships for TB elimination through quadrilateral partnerships among TB programme, private TB care providers, intermediary agencies and civil society ensuring accountability of each stakeholder.
- **Preventive Measures and Financial Assistance:**
  - Expand coverage of TB preventive treatment for vulnerable populations and individuals using shorter regimens.
  - Provide financial assistance to alleviate the economic burden on TB affected families.
  - Establish systems to roll out new vaccines.
- **Nutritional Support and Technology Integration:**
  - Offer nutritional support through rations and subsidies for TB affected families.
  - Incorporate technological advancements like Video-Observed Treatment for treatment adherence.
- **Research and Awareness:**
  - Support research for newer vaccines, leveraging India's role as a vaccine manufacturing hub.
  - Conduct research for shorter drug regimens, especially for MDR/RR TB.
  - Implement awareness programs to dispel misconceptions and address knowledge gaps.
- **Surveillance and Logistical Management:**
  - Establish molecular or genomic surveillance systems for accurate prediction and actions. Establish a robust surveillance mechanism for quality assured TB treatment including peer audit of prescriptions and health facility based antibiotic stewardship.
  - Improve logistical and supply chain management to prevent shortages and stockouts of TB drugs.

COVID-19

- **Genomic Sequencing and Surveillance:**
  - Conduct genomic sequencing for identifying new variants.
  - Implement comprehensive surveillance of pathogens.
- **Real-Time Data and Rapid Response:**
  - Develop online portals for real-time data accessibility.
  - Establish mobile testing centers for early detection and confirmation of new variants.
  - Deploy rapid response teams to contain outbreaks.
- **Public Health Platforms:**
  - Develop country-wide platforms offering public health data on COVID-19.

HIV

- **Tailored Care and Training:**
  - Provide tailored care services, including community-based testing for high-risk groups.
  - Implement a comprehensive healthcare training curriculum for providers.
- **Universal Sexual History Inclusion:**
  - Mandate the inclusion of sexual history in healthcare inquiries.
  - Establish a National Condom Bank for free distribution.
- **Enhanced Clinic Services and ANC Screening:**
  - Enhance clinic services with sexual wellness offerings.
  - Screen for HIV during the first trimester of pregnancy.
- **Migrant Population Tracking and Awareness:**
  - Facilitate migrant population tracking through unique IDs.
  - Increase awareness among youth through educational campaigns.

Malaria

- **Biological Vector Control and Research:**
  - Expand biological vector control methods for sustainable strategies.
  - Earmark funding for intensifying research on newer drugs to overcome parasite resistance.
- **Cross-Border Collaboration and Diagnostic Modalities:**
  - Establish programmes to collaborate with neighboring countries for cross-border malaria control addressing malaria transmission.
  - Establish mechanisms to control malaria transmission due to interstate migration.
  - Scale up RDT-based testing and introduce newer diagnostic modalities.

Leprosy

- **Targeted Case Detection and Community Awareness:**
  - Set up projects to accelerate new case detection in high-endemic areas.
  - Asses the community awareness and start campaigns to reduce stigma.
- **Digitalization and Research:**
  - Incorporate digital tools in leprosy diagnosis and treatment methods.
  - Allocate additional funding for research to study the current trends in transmission.

Rabies

- **Vaccination Coverage and Public Awareness:**
  - Increase vaccination coverage, especially among stray dogs.
  - Raise public awareness on pre- and post-exposure prophylaxis.
- **Quality Control and Gene Therapy:**
  - Implement quality control measures for vaccine standards.
  - Explore newer treatment regimens, including gene therapy.

Zoonotic Diseases

- **High-Level Suspicion and Public Awareness:**
  - Orient medical professionals to identify zoonotic outbreaks.
  - Create public awareness on potential sources of zoonotic diseases.
- **Source Animal Monitoring and Research:**
  - Monitor source animal colonies for early outbreak warnings.
  - Encourage research on preventing zoonotic spillovers.

Mosquito-Borne Diseases

- **Meticulous Vector Control and Legal Measures:**
  - Implement regular vector control measures for mosquito-borne diseases.
  - Consider legal measures, including fines, during outbreak seasons.

Water and Food-Borne Diseases

- **Deworming and Health Education:**
  - Strengthen periodic deworming initiatives.
  - Enhance health education to prevent re-infection.
- **Sanitation Facilities and Vaccination:**
  - Improve sanitation facilities to reduce soil contamination.
  - Increase the use and availability of vaccines during outbreaks.

4.2 NONCOMMUNICABLE DISEASES

Global Scenario

Non-communicable diseases (NCDs) account for 74% of total deaths, leading to a loss of 41 million lives each year. More than three-fourths of these deaths occur in low- and middle-income countries. The Sustainable Development Goals (SDGs) envisage a reduction in NCD-related deaths by one-thirdthrough targeted prevention and treatment. Over 80% of premature NCD deaths are attributed to cardiovascular diseases (CVDs), cancers, chronic respiratory diseases, and diabetes. CVDs are the leading cause of death globally, taking an estimated 17.9 million lives each year. More than four out of five CVD deaths are due to heart attacks and strokes, and one third of these deaths occur prematurely in people under 70 years of age. Out of nearly 10 million cancer-related deaths worldwide in 2020,70% were in low-and-middle-income countries. In all, 537 million adults were living with diabetes in 2021, with expected rise to 643 million by 2030 and 783 million by 2045. An estimated 1.28 billion adults aged 30–79 years worldwide have hypertension. In 2019, 545 million people globally had chronic respiratory conditions, with chronic obstructive pulmonary disease (COPD) causing 3.23 million deaths, representing 90% of respiratory-related fatalities.

Indian Scenario

In India, nearly 6 million people die from NCDs every year, which accounts for 66% of total deaths. CVDs are the leading cause of death accounting for 28% followed by COPD (12%), cancer (10%), anddiabetes (4%). The national prevalence rates for various health conditions are as follows: diabetes at 11.4%, prediabetes at 15.3%, hypertension at 35.5%, generalized obesity at 28.6%, abdominal obesityat 39.5%, hypercholesterolemia at 24%, and high LDL cholesterol at 20.9%. Changing consumption patterns, rapid urbanization and increasing longevity have contributed to the rise in NCDs which account for about 55% of DALY loss in the country. Based on current estimates, 101 million individuals have diabetes, which is expected to rise to over 134 million by 2045. Only about 15.7% people with diabetes in India have their diabetes under control. In approximately 57% of these individuals with diabetes, the condition remains undiagnosed. An estimated 33% of urban and 25% of rural Indians arehypertensive. Of these, only 25% of rural and 42% of urban are aware of their hypertensive status. Only about 12% of people with hypertension have their blood pressure under control. India witnesses over 1.3 million new cancer cases annually and one in nine people are likely to develop cancer in their lifetime.Lung and breast cancers were the leading sites of cancer in males and females, respectively. According to the Global Burden of Disease project, there were about 1.2 million new cases of stroke in India in 2016. The annual incidence rate of stroke ranges from 105 to 152 per 100,000 individuals. India has a severe shortage of mental health professionals, with only 0.7 professionals for every 100,000 people, and far below the recommended ratio of three psychiatrists per 100,000 population.

Actions so far in India

Recognizing the rising burden of NCDs, India started its comprehensive NCD program in 2010. The current program is the National Program for Prevention and Control of NCDs (NP-NCD) which was launched in 2023. NP-NCD focuses on strengthening infrastructure, human resource development, health promotion and awareness generation for the prevention, early diagnosis, management, and referral to an appropriate level of healthcare facility. The NCD program is implemented through the primary healthcare system, especially by delivering services through Health and Wellness Centre's (HWC) and by engaging ASHA workers for delivery at the last mile. The National Action Plan has a specific target to reduce premature deaths from NCDs by 25% by 2025. The 75/25 initiative aims to help 75 million people with hypertension and diabetes to be put in standard care by 2025.

Major Issues Considered

There are gaps in the access to care, barriers to early detection, initiation of treatment, continuum of care and palliative care. Similarly, there are implementation and operational challenges in NP-NCD like difficulties in access to essential medicines, shortages in human resources and inadequate levels of dedicated staff. Addressing the differentials in NCD prevalence and outcomes among vulnerable populations, including rural communities, tribal groups, and marginalized urban populations is important. Governments' recognition and meaningful involvement of civil societies and professional bodies including people living with NCDs, organizations and communities in the NCD response has been too slow and suboptimal.

Lack of standardized services, particularly within the private health sectors, contributes to significant challenges in addressing NCDs. Even though 50-70% of NCD patients seek treatment from the private health sector, they are still not systematically integrated into the national surveillance system. This lack of inclusion hinders comprehensive tracking and analysis of NCD trends, thereby limiting the efficacyof public health interventions. There is a lack of common data standards to facilitate interoperability between public and private health systems. Heavy reliance on the private sector is accompanied by a concerning trend of out-of-pocket spending, resulting in catastrophic health expenditures for individuals. The prevalence of modifiable risk factors such as tobacco smoking, excessive alcohol consumption, unhealthy diet, and poor physical activity is notably high among the younger population. Despite the higher prevalence among older individuals, these behaviors often originate in young adulthood. This underscores the significance of School Health Promotion activities to address and

modify these behaviors early on. The suboptimal integration between programs like the National Program for Health Care of the Elderly (NPHCE) and the National Mental Health Program (NMHP) poses a barrier to effectively controlling NCDs. For example, depression, linked to behaviors like alcohol consumption and tobacco dependence contributes to increased NCD risk. Half of the low-income population of rural India cannot afford a balanced diet. India has also been undergoing a nutritional transition owing to rapid economic growth and urbanization, characterized by a decrease in intake of healthy foods such as whole grain cereals, pulses, fruits and vegetables, and a corresponding increase in processed meat and ready-to-eat energy dense and high salt foods.

There is a pressing need to shift health systems from being disease-centric to people-specific, providing continuous support throughout individuals' life courses. The current gap in the continuum of care for those with chronic diseases, especially older adults, and bed-ridden patients during extreme climatic events, exacerbates health challenges.

The widespread prevalence of hypertension and diabetes is primarily attributed to a lack of awareness and education regarding the disease's risk factors, combined with urbanization, unhealthy diet, obesity and sedentary lifestyle. Limited access to screening, early detection, and affordable, high-quality healthcare services exacerbates the burden of hypertension and diabetes, leading to significant out-of-pocket expenditures for disease management. Co-morbidities and complications associated with hypertension and diabetes further contribute to the overall disease burden. Inadequate community mobilization and weak coordination between civil societies, private sectors and government agencies hinder effective disease management. Additionally, suboptimal access to basic prevention and management of hypertension and diabetes in primary healthcare settings, including affordable medicines, diagnostics and consumables results in premature deaths.

Multiple factors contribute to a significant number of individuals not seeking medical assistance for stroke. These include a lack of awareness about stroke symptoms and urgency, considerable distances to the nearest hospitals equipped to provide diagnosis and management of stroke, inadequate ambulance services and transportation options. Additionally, the perception of alternative therapies as effective post-stroke care, and financial constraints also hinders access to necessary care.

In many of the peripheral hospitals physicians facing challenges in identifying fewer common causes of stroke, lack of skilled health workforce combined with limitations in diagnostic facilities and inadequate ambulance services hampers timely diagnosis and management of stroke. Patients face increased agony due to the unavailability and inaccessibility of rehabilitation and palliative care, resulting in a significant reduction in their quality of life and DALYs. The suboptimal availability of real-time data updates in the nationwide stroke register impairs the timely utilization of crucial information on stroke incidence and prevalence.

Hospital data on cardiovascular morbidity and deaths may not fully capture the entire burden of cardiovascular diseases. Structured data collection methods for cardiac mortality and morbidity are not in place, with most deaths occurring at home without knowing the exact cause of death. Alarmingly, up to three-fourths of patients with coronary artery disease (CAD) do not receive guideline-recommended basic therapy drugs, contributing to increased morbidity and mortality. This complex interplay of factors underscores the multifaceted challenges in addressing cardiovascular health in the Indian scenario.

India faces significant challenges in the spectrum of cancer care, necessitating urgent attention. There is a low rate of cancer registration which only covers 16% of total cases. The lack of screening guidelines tailored to the Indian context for early detection and treatment of common cancers, coupledwith insufficient infrastructure development for implementation, poses a significant challenge.

In India, one among every two people with chronic respiratory illness is suffering from COPD, resultingin

a loss of 70% of their potential healthy years. COPD stands as the second-leading cause of death and disability-adjusted life years (DALYs) in the country. Several challenges faced by public and healthcare professionals hamper early diagnosis, exacerbated by restricted access to gold-standard diagnostic like spirometry. Even after diagnosis individuals face challenges with insufficient infrastructure for specialized care, medication cost barriers, and continued exposure to risk factors like tobacco smoke, indoor air pollution, and urban smog.

Social stigma and discrimination impede help-seeking by the people with NCDs and mental health diseases. It also curbs their accessibility to healthcare and often exacerbates the existing disparities. Particularly in rural areas, there is a scarcity of qualified mental health professionals which leads to a significant knowledge gap that hinders early identification and intervention, potentially leading to chronicity and adverse outcomes. Stigma and negativity around mental health in India leave countless young people struggling in silence, despite widespread mental health challenges. These challenges restrict the ambitious goals of the NMHP.

Lack of robust planning and implementation of health policies for building healthcare facilities in rural, semi urban India has resulted in missed opportunities to strengthen primary care and establishseamless referral pathways for combating NCDs. This lapse has a significant effect on the increasedburden on tertiary care facilities and in turn compromised the quality of services they delivered.

General Recommendations

1. Create platforms within the NPCDCS national programme for collaboration among government agencies, civil society, healthcare providers, and private sector stakeholders, for comprehensive and effective implementation of strategies for NCD management.
2. Develop a comprehensive framework for public-private cooperation and a roadmap for coordination through the National Multisectoral Action Plan for prevention and control of NCDs.
3. Establish a project under the NPCDCS to build the capacity of the private sector to manage complications of diabetes and hypertension.
4. Engage the private and other non-public healthcare providers in the NCDs program to ensure protocol-based management of hypertension, diabetes, cancer and other NCDs.
5. Using IMA as an interface agency, engage the private sector in setting up/expanding NCD surveillance systems and support the private sector in notifying the diseases and their outcomes.
6. Formally designate focal points from the private sector for a geographical area like a block or a district to aid in the engagement of the private sector.
7. Create formal mechanisms for facilitating private sector linkage to the NCD portal in a phased manner.
8. Make the diagnostics and medicines under the NCD program free of cost and available for private-sector patients by adhering to national protocols and data-sharing policies with provisions for incentives to private providers.
9. Link the private sector to a telemedicine platform to provide teleconsultation services and to ensure seamless care using ABHA ID.
10. Introduce programmes targeting behavior-change interventions among the youth against rising NCD risk factors.
11. Establish and incentivize employers of restaurants to implement comprehensive wellness programs at workplaces which shall include health screenings, fitness activities and stress management.
12. Expand the roles of healthcare workers by implementing task-shifting strategies. Empower nurses, pharmacists, and community health workers to provide basic NCD care and education, under the.

Supervision of qualified personnel, thereby increasing access to services, especially in rural and underserved areas.

13. To control the widespread availability of unhealthy food items high in fat, salt, and sugar, the government shall take steps such as higher tax rates, elimination of subsidies, and exclusion from start-up benefits to restrict their production, distribution, and sale.
14. Promote production and consumption of healthy food like fruits and vegetables.
15. Develop Health Insurance policies, specifically tailored to address NCDs among the elderly population, including geriatric care services, regular health check-ups, and support for caregivers.
16. The provisions of Cigarettes and Other Tobacco Products Act – 2003 (COTPA) should be enforced strictly to reduce tobacco use further. WHO guidelines for restriction of alcohol consumption shall be implemented.
17. Age-friendly and disability-friendly infrastructure should be incorporated into urban planning and public transport. Pedestrian-friendly infrastructure should also be integrated ensuring that sidewalks are included and accessible in all areas, especially near busy roads and intersections.
18. Environmental policies have to be revised to reduce NCD risk factors which would include measures to reduce air pollution, promote green spaces, regulate industrial emissions, and improve water quality, all of which impact NCD prevalence.
19. Meaningful involvement of people lived with NCD for prevention and control of NCD to be encouraged

Recommendations on Cancer

- Strengthen national prevention policies and establish screening guidelines relevant to the Indian context.
- Develop a common platform for addressing risk factors for breast, prostate, and colorectal cancers.
- Build a comprehensive cancer care workforce, including training for nurses, social workers, genetic counselors, surgeons, and oncologists. Provide mid-level service providers with hands-on training for early detection of breast and cervical cancers.
- Regulate and standardize the highly specialized field of cancer treatment, incorporating genomic information and personalized care. Develop guidelines, quality control measures, and standardization.
- Advocate for policy changes, substantial investment, and infrastructure development in cancer careacross the country.
- Address challenges such as limited availability of comprehensive multimodality treatment emphasizing life-threatening illnesses and promoting palliative care.
- Streamline regulatory processes for swift approval of diagnostic tools. Encourage international cooperation to amplify efforts in molecular diagnostics.
- Implement discounted rates for diagnostic tests to make them financially accessible. Negotiate cost-effective pricing models with laboratories and diagnostic facilities.
- Recognize the need for innovation in medical research within the educational system. Advocate for increased investment in basic medical research, especially for cancer, to ensure relevance to the Indian population. Emphasize the importance of not solely relying on data generated in Western labs for applicability to Indian medical scenarios.
- Strengthen clinical and basic research. Increased funding for clinical and basic medical research, emphasizing its relevance to the Indian population.
- Public Education on evils of Alcohol, Tobacco and Junk food to be actively promoted

Increasing Availability and Financial Support for Molecular Cancer Diagnostics:

- Develop collaborations between research institutions, healthcare providers, and pharmaceutical companies.

- Allocate dedicated government funding to support molecular diagnostic advancements.
- Conduct public awareness campaigns to emphasize the importance of early cancer detection.
- Streamline regulatory processes for swift approval of diagnostic tools.
- Encourage international cooperation to amplify efforts in molecular diagnostics.

Discounted Rates and Expansion of Molecular Labs:

- Implement discounted rates for diagnostic tests to make them financially accessible.
- Negotiate cost-effective pricing models with laboratories and diagnostic facilities.
- Invest in infrastructure and personnel training to establish more molecular labs.
- Decentralize diagnostic services, bringing them closer to communities.
- Address capacity constraints by expanding the network of molecular testing facilities.

Recommendations on Hypertension and Diabetes

- Implement a mandatory, standardized, and comprehensive nutrition labeling system for all food establishments, from street vendors to high-end hotels.
- Adapt and implement the WHO HEARTS package in the national context and develop a service delivery model, including guidelines and standard operating procedures in both public and private health sectors.
- Mandate and facilitate protocol-based management for hypertension and diabetes in public and private health care facilities.
- Establish clinical care pathways for hypertension and diabetes within primary care with referral linkages to higher levels of care for specialized services.
- Invest in decentralized screening and testing in rural areas and resource-limited settings -Prioritize individuals with risk factors like obesity, family history, gestational diabetes, and hypertension.
- Mandatory Gestational Diabetes Registry-Make GDM screening compulsory for all pregnant women and require healthcare providers to report data to the national registry.
- The Public Distribution Systems (PDS) should provide diversified food baskets containing adequate protein sources while promoting healthy carbohydrate choices through educational campaigns. Public health initiatives addressing diabetes prevention and healthy lifestyle choices should be strengthened in conjunction with PDS modifications.
- Physical activities should be an important part of the school curriculum and should be made mandatory inaccordance with WHO guidelines.
- Measures to promote physical activity in general public should also be included.
- Policies to reduce the cost of essential drugs and ensuring reasonable access to care.

Recommendations on Stroke

- Enhance screening of cardiovascular risk factors and increase awareness among public about the risk factorsand strengthen screening services.
- Make primary and secondary stroke prevention services freely accessible and supported by universal health coverage.
- Create mechanisms for educating the public on the availability of diagnostic and treatment services to increase care-seeking.
- Increase the availability of neurologists, stroke nurses and physicians to decrease incorrect workups, misdiagnoses, and follow-ups. Provision of multidisciplinary team approach in secondary and tertiary care hospitals.

- Augment the health system by establishing appropriately staffed and equipped stroke clinics.
- Increase the availability of diagnostic tests for detection of rare causes of stroke including vasculitis, coagulation disorders, and infections especially in younger patients.
- Enhance the availability of key therapeutic agents for strokes such as statins, antithrombotic agents,recombinant TPA, steroids, and anti-hypertensives, anti-diabetic medications.
- Create mechanisms to strengthen rehabilitation services for post-stroke care.
- Facilitate reintegration into professional and societal settings.
- Implement stroke registers and online platforms providing real-time data access.

Recommendations on CVD

- Implementing all key policies to combat CVDs, such as taxation of tobacco and unhealthy foods, labeling of packaged foods, and provision of quality and affordable health care.
- Ensuring CVD health interventions are adequately funded and prioritized in the national health budget.
- Continuing efforts to improve data on CVDs and their risk factors.
- Developing and validating context-specific tools for cardiovascular risk prediction and management, such as the Framingham model recalibrated for an Indian urban population.
- Promoting community-based programs and campaigns that raise awareness and prevention ofCVDs, especially among newly diagnosed type 2 diabetes patients who have a high CVD risk.

Recommendations on Mental Health

- Integrating mental health education into school curriculums and community outreach programs to break down stigma and mental health literacy programs are crucial to encourage help-seeking behavior.
- Invest in training and recruitment of mental health professionals, expand accessible facilities, and prioritize rural areas.
- Increase government and private sector investment in mental health, ensuring budget allocation aligns with NMHP goals.
- Train primary care providers to identify and manage mental health concerns, and develop referral pathways to specialist services (screening of depression, and anxiety)
- Offering subsidized or free mental health services specifically for unemployed individuals can address the unique challenges they face. It aims to increase access to psychiatric care across the country, including in hard-to-reach areas.
- Formation of Mental Health Review Board (MHRB) in every districts. IMA members should be included as NGO representative in the said board. Suicide prevention: IMA can offer services, train manpower and effectively implementing Suicide helpline. In liaison with MoHFW & MoSJE, IMA can assist the project Nasha Mukt Bharat Abhijan (NMBA) and spread ATF (Addiction Treatment Facilities) across the nation.

Recommendations on COPD

- Launch nationwide awareness campaigns on COPD, emphasizing symptoms, risk factors, and importance of early diagnosis.
- Invest in training and deployment of healthcare professionals, including specialized COPD nurses and respiratory therapists.
- Establish dedicated COPD clinics and integrate COPD management into existing primary care infrastructure.
- Expand insurance coverage for COPD medications and devices, prioritizing essential drugs for

affordable access.

- Implement stricter tobacco control measures, including raising taxes, restricting public smoking,and supporting smoking cessation programs.
- Promote cleaner cooking fuels and technologies through subsidies and awareness campaigns.

Recommendations on Palliative Care

- Strengthening the implementation and monitoring of the National Program for Palliative CareNPPC at the state level with adequate funding, human resources, infrastructure etc.
- Developing and implementing national standards and guidelines for palliative care services andquality assurance.
- Enhancing the education and training of palliative care professionals and volunteers at various levels and settings.
- There should be a palliative care policy at national level in decentralized manner.
- The focus to be largely centered around home-based care and involvement of the family. Develop a "community-led" service capable of offering comprehensive long-term and palliative care through trained neighbors.

Recommendations on modifying NCD Risk Factors

- Implementation of WHO Technical Packages (MOWER, SHAKE, REPLACE, SAFER, ACTIVE and CHEST) to reduce NCD risk factors.
- Offer help to quit tobacco use through the provision of cost-covered effective population-wide support(including brief advice, national toll-free Quitline services and m Cessation) and use of the WHO Quit Tobacco app for tobacco cessation to all tobacco users.
- Encourage individuals to undergo regular health check-ups to identify risk factors early.
- Encourage and promote healthy eating habits by promoting a diet that is high in fruits, vegetables,and whole grains, and low in processed foods and sugar-sweetened beverages.
- Encourage individuals to engage in regular physical activity, such as walking, cycling, and swimming.
- Create supportive environments by creating environments that promote healthy eating and physicalactivity, such as parks and walking trails.
- The government should mandate clear and accurate nutrition labeling on packaged foods andbeverages to help individuals make informed choices.
- Policies should be implemented to reduce the availability and marketing of unhealthy foods, such as fast food and sugary drinks.

4.3 ONE HEALTH

Global Scenario

About 60% of the known infectious diseases in humans and 75% of all emerging infectious diseases are caused by pathogens that originate in animals. Since 2003, diseases and pandemics, including those related to One Health threats, have resulted in over 15 million human deaths and economic losses exceeding US$ 4 trillion. The COVID-19 pandemic has highlighted the urgent need for a global framework to improve surveillance and establish a more integrated system, besides systematically strengthening health systems to address such threats. The World Bank estimates a potential annual benefit of at least US$ 37 billion in 2022 through a One Health approach. The cost of inaction is expected to be catastrophic to the economy, especially for Low-Middle Income Countries.

Indian Scenario

India is currently confronting numerous health threats, including antimicrobial resistance (AMR), environmental hazards, food safety issues, and a range of zoonotic diseases such as Nipah, Avian Influenza, Scrub typhus, Congo fever, Kyasanur forest disease, COVID-19, and leptospirosis. In the Global Health Security Index 2021, India was ranked 66th, a measure reflecting the country's preparedness and response capabilities for public health emergencies. The country faces escalating zoonotic disease threats, driven by the exponential growth in human and livestock population, rapid urbanization, rapidly changing farming practices, closer interaction between livestock and wildlife, encroachment on forests, changes in ecosystems, and the globalization of trade of animal products. The lack of interdisciplinary collaboration, which often leads to isolated efforts, has not only facilitated thespread and endemicity of zoonotic diseases in several regions but also contributed to the escalation of AMR challenges in India. Addressing these challenges requires a concerted effort to integrate the OneHealth approach and allocate more resources towards strengthening India's public health infrastructure.

Actions so far in India

In 2009, India initiated regional collaboration in One Health by joining the One Health network of South Asia (OHASA). This was followed by the establishment of the Global Disease Detection – India Centrein 2010, a collaborative effort between India and the US CDC, marking a significant advancement in global health cooperation. The Kerala Veterinary and Animal Science University established COHEART (Centre for One Health Education, Advocacy, Research and Training) in 2014, and launched specialized One Health courses, and in 2015, India began recruiting cross-sectoral professionals for IDSP state surveillance units, integrating various health sectors. The National Action Plan on Antimicrobial Resistance (NAP-AMR), adopted in 2017, advocates a one-health approach andclose coordination between the sectors to tackle the rising threat of AMR. In 2018, the Integrated Health Information Platform was launched by the union health secretary, enhancing public health surveillance with near-real-time data. The establishment of the One Health Centre in Maharashtra in 2020, in collaboration with the Maharashtra Animal and Fishery Sciences University and ICMR-National Institute of Virology, Pune, marked another significant step. In the same year, the central government announced the formation of a national institutional platform for One Health as part of the COVID-19 recovery plans under the Atma Nirbhar Bharat economic stimulus package. This initiative was further strengthened by the constitution of a national expert group on One Health to promote multisectoral, transdisciplinary collaboration, and cooperation to achieve OH framework in India. Moreover, the National One Health Program for Prevention and Control of Zoonoses (NOHP-PCZ) was launched by the National Centre for Disease Control (NCDC). The Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) also played a crucial role, approving the establishment of aNational One Health Mission in its 21st meeting, aimed at coordinating and integrating all One Healthactivities across the country. Elimination of dog-bite mediated human rabies should be attempted in India through One Heath approach.

Major Issues Considered

One Health challenges in India are multifaceted, reflecting the complexity of integrating human, animal, and environmental health strategies in a developing country context. A major challenge is the widespread lack of awareness about zoonotic diseases among animal handlers and the public. This gap in knowledge is compounded by the absence of a clear and compelling narrative that effectively communicates the benefits of the One Health approach to communities. Data sharing mechanisms across different sectors are limited, which hinders a comprehensive understanding of health risks and the development of effective responses to outbreaks. This challenge is further intensified by inadequate coordination between public and private entities across multiple sectors, including healthcare, agriculture, and environmental management, despite the significant role of the private sector in these areas. Another critical issue is the lack of availability of prescriptions and hospital records with medical professionals and institutions, impeding effective health management and data analysis. In animal healthcare, there is a noticeable absence of regular health services, such as check- ups and

immunizations, for animals. This oversight can lead to the failure of adequate and timely diagnosis and treatment. Additionally, growing antibiotic resistance among animals, rodents, and insects, which persists in the skin and gut and circulates in the ecosystem, presents a significant challenge. Research efforts dedicated to multidisciplinary One Health studies are scarce, highlighting a gap in understanding and addressing interconnected health issues. Furthermore, there are limited capacity-building programs and training opportunities available for health workers in the country. There are not many comprehensive, long-term education programs for graduates in One Health, indicating a need for more specialized training in this area. Finally, a critical challenge is the significant lack of resources and funding for One Health programs. This scarcity of support hampers the development of effective pandemic preparedness and response systems, which are essential for tackling complex health challenges that span human, animal, and environmental spheres. Addressing these issues requires a concerted effort to enhance awareness, improve coordination, and increase investment in One Health initiatives.

Recommendations

1. Establish a dedicated One Health task force to enhance cross-sectoral coordination, involving both governmental and private agencies, responsible for overseeing and coordinating One Health initiatives.
2. Facilitate states to create a One Health roadmap and implementation plan with defined timelines and budgets, which should be jointly owned by state and federal governments to ensure accountability and resource allocation.
3. Strengthen integrated surveillance platforms to facilitate cross-sector collaboration and data sharing, enabling a more efficient and coordinated approach to decision-making processes.
4. Develop and strengthen integrated facility-based and community-based surveillance systems for human-animal disease environments.
5. Allocate ring-fenced funding for research projects that focus on the prevention and mitigation of zoonotic diseases and AMR pathogens with epidemic or pandemic potential through a one-health approach.
6. Invest in research to identify potential disease threats and advocate for the creation of a joint body to facilitate this research.
7. Enhance the capacity for health economics and implementation research capacity to evaluate the efficiency and feasibility of interventions based on a one-health approach.
8. Develop Centre's of Excellence in One Health at state medical and veterinary universities, with active support from national agencies like the ICMR and ICAR, which would serve as hubs for research, training, and education in One Health.
9. Government shall support the establishment of a One Health professional network led by the IMA, in collaboration with the Indian Veterinary Association and similar organizations, to strengthen interdisciplinary and knowledge sharing.
10. Adopt a bottom-up One Health approach for effective local health governance, emphasizing the empowerment of local governments through public health devolution and capacity building.
11. Encourage public participation and behavior change in comprehensive local health plans to facilitate cross-sectoral, interdisciplinary, and community collaboration.
12. Implement community awareness programs to educate the public about the one health approach, the risks of zoonotic diseases, and the importance of their role in preventing disease spread.

Antimicrobial Resistance (AMR)

Global Scenario

Antimicrobial resistance (AMR) poses a significant threat to global public health and development. In 2019, bacterial AMR was directly linked to 1.27 million deaths and indirectly contributed to an additional

4.95 million fatalities. The resurgence of AMR could potentially revert us to a pre-antibiotic era, making common infections and minor surgeries life-threatening once again. It threatens years of medical advancements, disrupts healthcare delivery, and poses challenges to achieving several Sustainable Development Goals. In addition to death and disability, AMR carries substantial economicimplications. The World Bank projects that by 2050, AMR could incur an additional US$ 1 trillion in healthcare expenses and cause annual GDP losses ranging from US$ 1 trillion to US$ 3.4 trillion by 2030. The Global Action Plan (GAP) on AMR was introduced at the 2015 World Health Assembly, emphasizing the need for multisectoral national AMR action plans. The WHO's GAP for AMR provided a framework for countries to establish National Action Plans on Antimicrobial Resistance (NAP-AMR) within two years. While 170 countries have developed their NAPs, only 25% of the countries report having costed and budgeted NAPs in operation, with a mere 10% allocating financial provisions for NAPs in their budgets. This highlights the need for more robust implementation and funding strategies to effectively tackle AMR.

Indian Scenario

India faces a high burden of drug-resistant infections mostly due to inappropriate antibiotic consumption. In 2019, 297,000 deaths were attributed to AMR, with 1,042,500 deaths associated with AMR. India's National Action Plan for the containment of Antimicrobial Resistance (NAP-AMR) was launched in 2017, aligning with the Global Action Plan (GAP-AMR) while also tailored to meet national needs and priorities. As of now, only three states have functional State Action Plans on AMRthat are currently at its implementation phase. India, often labeled as the 'AMR capital of the world', confronts escalating challenges with the emergence of multi-drug resistant (MDR) organisms, complicating diagnostics, and treatment. Simultaneously, India continues to battle persistent threats like tuberculosis, malaria, and cholera, with these pathogens increasingly developing drug resistance. Socioeconomic factors including poverty, illiteracy, high population density, and malnutrition exacerbate the situation, underscoring the need for a multifaceted approach to address this complex issue.

Challenges

- Misuse and overuse of antibiotics across all sectors have emerged as one of the most significant drivers of AMR in India, largely due to a lack of awareness, inadequate diagnostics, and poor prescribing practices.
- Easy availability of antibiotics without a prescription, leading to their widespread and often unnecessary use, combined with poorly enforced antibiotic regulations hinder India's response to AMR.
- Prevalent use of antibiotics as growth promoters and disease preventives in animal agriculture leadsto residues in meat and animal products, which contributes to the development of antibiotic resistance in humans.
- Lack of separate financial allocations for AMR initiatives across different states in India poses a significant barrier to achieving national progress in combating AMR.
- Limited access to affordable, high-quality antibiotics and diagnostic tools in rural and marginalized communities impedes effective treatment and AMR management.
- Lack of a robust AMR surveillance system due to weak laboratory capacity, lack of health information systems, quality assurance gaps, shortage of skilled personnel, and limited resources.
- Suboptimal infection control measures in Indian healthcare facilities results in high rates ofhospital-acquired infections, frequently involving drug-resistant organisms.
- Poverty, limited access to clean water and sanitation, and malnutrition create conditions conduciveto the spread of infections and the emergence of resistant strains.
- Lack of regulatory oversight of antibiotic production and disposal in India poses risks of environmental contamination and AMR spread.

Recommendations

- Prioritize the strengthening of NAP implementation efforts in India, focusing on One Health approach and addressing the three critical barriers: adequate financing, technical capacity, and multisectoral governance.
- Increase financing for India's NAP on AMR by raising awareness among policymakers about the AMR implications and reinforcing this effort with evidence-based advocacy.
- Encourage every state to develop costed and well-financed state action plans on AMR, with active participation of all sectors.
- Implement public education campaigns to raise awareness of AMR and promote the appropriate use of antibiotics across all sectors.
- Utilize the IMA network to facilitate the strengthening of Antimicrobial Stewardship (AMS) efforts and Infection Prevention and Control (IPC) practices across all public and private healthcare facilities in the country.
- Focus on and allocate resources towards ensuring the provision of clean water, basic sanitation, and hygiene services as a priority.
- Enhance focus on other sectors by improving biosecurity in farms, enforcing waste management guidelines more strictly, and reducing pollution from pharmaceutical waste for effectively addressing AMR.
- Strengthen regulatory oversight to ensure optimal use of antibiotics in both humans and animals, aswell as in the production and disposal of antibiotics.
- Enhance the surveillance of AMR across public and private healthcare systems and improve monitoring of antibiotic consumption patterns.
- Enhance access to point-of-care (POC) or rapid diagnostic tests (RDTs), especially those that include detection of antimicrobial sensitivities, to strengthen health systems and effectively combatAMR.
- Establish a One Health nodal center to enhance intersectoral coordination, crucial for effectively addressing AMR across different sectors in India.
- Promote the research and development of new antibiotics and alternative treatments for bacterial infections, while enhancing innovation through the repurposing of existing medicines and the exploration of alternative strategies.
- Incorporate the AWaRe (Access, Watch and Reserve) classification into the national Essential Medicines List and reduce the use of Watch Group and Reserve Group antibiotics.
- Over-the-counter sale of veterinary drugs should be banned which will effectively bring down the overuse/abuse of antibiotics in the animal husbandry sector.
- Integrate AMR strategies into existing health programmes to enhance surveillance, stewardship, and infection control, thereby strengthening the response to the AMR crisis.
- Harness data and digital technologies, such as artificial intelligence and machine learning, in surveillance, prevention, diagnosis, and treatment to reinforce the efforts to combat AMR.

Zoonoses

Global Scenario

Zoonoses, those diseases and infections which are naturally transmitted between vertebrate animals and humans, pose a significant global health challenge. They burden healthcare systems worldwide, particularly in underdeveloped nations. Various vertebrate animals, such as birds, mammals, and reptiles, can act as hosts or reservoirs for these diseases. The spread of zoonotic diseases is influenced by environmental factors, climate change, animal health, and human activities like globalization, urbanization, and travel. Diseases at the intersection of human, animal, and environmental health (e.g., zoonotic diseases, vector-borne diseases, food/waterborne diseases) continue to pose significant risks, causing substantial mortality and morbidity. It’s estimated that out of the 1400 known infectious diseases affecting humans, 60% originate from animals. Furthermore, 75% of emerging infectious

diseases are zoonotic. The One Health concept, which integrates animal, human, and environmental health, plays a crucial role in controlling and preventing zoonoses. This approach encourages collaboration and communication among various professionals, including osteopaths, wildlife physicians, veterinarians, public health and environmental experts, nurses, dentists, physicists, biomedical engineers, plant pathologists, biochemists, and others.

Indian Scenario

The major public health zoonotic diseases in India include rabies, brucellosis, toxoplasmosis, cysticercosis, echinococcosis, Japanese Encephalitis (JE), plague, leptospirosis, Scrub typhus, Nipah, trypanosomiasis, Kyasanur Forest Disease (KFD), and Crimean-Congo hemorrhagic fever. Rabies, a significant concern with 17.4 million dog bites reported annually leading to 18,000–20,000 human cases each year, accounts for 36% of global deaths due to rabies. The plague, which has claimed the lives of 12 million Indians, continues to resurface in different parts of the country. Brucellosis alone has resulted in the loss of 30 million man-days and an economic loss of Rs. 24 crores per year. Japanese Encephalitis is endemic in many districts in Bihar and Uttar Pradesh. India reports 70% of the global 58,200 cases of Kala-azar. According to a study by the International Livestock Research Institute, 13 zoonoses cause

2.4 billion cases of human disease and 2.2 million deaths per year in India. Vector-borne diseases like Dengue, Malaria, and Zika, which involve both human and animal hosts, continue to pose a significant health threat. Climate change further complicates the dynamics of these vector-borne diseases. The country's diverse population, varied ecosystems, and complex socio-economic factors add to the complexity of managing and preventing zoonotic diseases.

Challenges

- India's high population density of 1.43 billion humans and 536.7 million livestock increases the likelihood of zoonotic disease transmission due to frequent human-animal contact.
- Over 80% of livestock farmers are small scale or marginal farmers who live in close proximity to their animals, resulting in high human-animal interaction.
- Poor hygiene and sanitary practices in India contribute to the spread of zoonotic diseases.
- India's rapid urbanization and encroachment into animal habitats escalate the risk of zoonoticdiseases.
- The animal health sector in India lags in diagnostic, surveillance, and reporting capabilities for zoonotic diseases.
- Many zoonotic diseases in India go undetected due to minor symptoms, leading to a lack ofcomprehensive data on zoonotic diseases.
- Climate change in India leads to an increase in disease vectors, facilitating the risk of zoonotic diseases.
- Inadequate coordination among various stakeholders across different sectors in India hinderseffective management of zoonotic diseases.
- Limited visibility of policies on zoonotic diseases, especially those with a high burden that disproportionately affect rural populations in India, along with a lack of clear guidelines for cross-sectoral engagement in practice.

Recommendations

- Establish a National One Health platform with supporting groups at all levels of administration, to promote a multidisciplinary approach for improved surveillance and monitoring of zoonotic diseases, with active involvement of training and research institutions.
- Enhance animal surveillance for early zoonotic disease detection and establish interoperable surveillance systems between human and animal sectors for sharing real-time surveillance data onzoonotic diseases.

- Develop the capacity of the workforce in surveillance and management of zoonosis through targeted training programs.
- Improve awareness about zoonotic diseases among communities and encourage reporting of outbreaks to the nearest veterinary clinics or primary health centers to reduce the time between an outbreak and response.
- Implement prevention-focused activities such as vaccination campaigns to control the spread ofzoonotic diseases.
- Promote enhanced biosafety and biosecurity practices in animal farming to prevent the transmission of zoonotic diseases.
- Provide adequate compensation to farmers rearing food animals during the recommended period of withdrawal after antibiotic administration which will incentivize farmers for compliance.
- Incorporate climate change resilient strategies, including early warning systems, into diseasecontrol planning to manage climate change impact on zoonotic disease spread.
- Promote research on zoonotic diseases, including the identification and mapping of disease hotspots within the country, and conducting risk assessments for potential disease spillovers.

4.4 DIGITAL HEALTH

Global Scenario

In 2019, the Global Strategy on Digital Health was endorsed with the aim of harnessing digital technologies to promote universal health and well-being. The success of this strategy is contingent upon national and regional initiatives, which must be guided by a comprehensive strategy encompassing financial, organizational, human, and technological resources. Despite the widespread integration of digital technologies in everyday life, their full potential to enhance global health is not yet fully realized.

Indian Scenario

The COVID-19 pandemic has driven India to swiftly adopt digital health, leading to digital interventions becoming foundational in many crucial health programs. In India, numerous organizations and institutions have developed cutting-edge digital innovations to meet the evolving needs of the health data ecosystem. Despite substantial growth in the private sector's digital health landscape, challenges remain. This has led the Indian government to initiate the National Digital Health Ecosystem, aligned with the WHO's Global Strategy on Digital Health.

Actions so far in India

In 2015, the "Digital India Campaign" was launched with the vision of transforming India into a digitally empowered society and a knowledge-based economy. The Ministry of Health and Family Welfare (MoHFW) proposed the establishment of the National eHealth Authority in the same year. In 2017, the National Health Policy (NHP) advocates extensive deployment of digital tools for improving the efficiency of the healthcare system and promote better patient outcomes. In 2020, the National Digital Health Mission (NDHM) was launched, subsequently renamed as the Ayushman Bharat DigitalMission (ABDM). Implemented by the National Health Authority, ABDM serves as the operational arm of this digital transformation, aiming to support the development of an integrated digital health infrastructure.

Major Issues Considered

Disparities in infrastructure and digital literacy across regions pose challenges to the implementation of digital health initiatives. A comprehensive landscape analysis is crucial to understand the current state of IT infrastructure, ethical digital and AI applications, and existing operational hurdles. Despite the introduction of ABDM, interoperability remains a major obstacle which is further complicated by fragmented electronic health records and inconsistent patient information. For healthcare providers, data security, preserving provider and patient privacy remains a concern. Insufficient digital skills andAI

literacy among healthcare professionals necessitate comprehensive training programs. Access to digital tools and infrastructure limitations, particularly in rural areas, exacerbate equitable distribution. Additionally, dynamicity, and rapid evolution in digital space poses the need for dynamic dataprotection policies, and updation of policies to align with international and regional policies. To bridge these gaps, effective research and development focused on digital innovations tailored to the Indian context is essential. Effectively addressing these diverse challenges is crucial for the optimal integration of digital health, thereby transforming healthcare in India.

Recommendations

The recommendations are grounded on the overarching principle of improving the quality-of-care delivery, by the means of digital and AI tools, pivoted on interoperability preserving providers autonomy and patient privacy.

1. Conduct a landscape analysis, with assistance from IMA, to develop state-specific digital health strategies and roadmap in India, focusing on regional health challenges, technological capabilities, and cultural aspects.
2. Develop a standardized framework for digital health practices in India that promotes innovation, integrates emerging technologies, and adapts to evolving healthcare needs.
3. Establish a clear focus on digital technology being an enabler for achieving comprehensive primary healthcare and UHC, through end-to-end digitization across the care continuum, with a backbone of the ABDM framework and adoption of frugal digital health technologies.
4. Adopt Phygital health models that combine physical and digital aspects of healthcare delivery, to bridge the urban-rural healthcare gap, ensuring that rural communities gain better access to primary, preventive, and specialty healthcare services.
5. Create an inventory of digital health initiatives across public, private, and multi-sector levels. Establish continuous evaluation mechanisms to assess their impact and gather stakeholder feedback. Promote synthesizing scientific knowledge through peer-reviewed publications.
6. Engage IMA to utilize its network for offering specialized training programs, focusing on enhancing digital literacy, educating about data privacy and security, and assisting healthcare professionals in digitizing their clinical practices through continuous education and capacity building.
7. Design and deploy digital and AI certification programs to incorporate digital health modules systematically into medical education curricula, ensuring future healthcare professionals are well-versed in emerging digital technologies and practices.
8. Conduct public awareness campaigns and targeted digital health initiatives, especially in rural areas, emphasizing telemedicine, mobile health applications, and digital literacy programs.
9. Authorize IMA in creating collaborations with the digital and AI start-up ecosystems to promote patient-centric innovation. IMA experts shall contribute to the design of products, facilitate early implementation of viable products through its providers and facilities, and provide technical assistance for productization and implementation.
10. To improve health communication in India, develop culturally sensitive health communication materials, involve local communities in the development of health campaigns, leverage mobile technology, utilize visual aids and infographics, and develop robust communication plans for public health emergencies.
11. Urban planning with green focus should receive priority. Data-based planning is at the core of healthcare activities and future progress.
12. Emerging future technologies will substantially impact health and should receive due attention.
13. Data security act to be in place actively.

4.5 OTHER AREAS OF PRIORITY

Adolescent Health

The development of adolescent pediatrics in India can be divided into three stages. For development of Adolescent Pediatrics, the focus in the first phase was on understanding adolescents, family life/life skill education, teen clubs, adolescent clinics, teenage screening questionnaire, physical growth issues, reproductive/sexual health, premarital/newlywed counselling, mental health/counselling, adolescent office practice, etc. In the second phase the focus should be on Adolescent Medicine that deals with the common medical problems that an Adolescent physician/pediatrician is likely to encounter. The various components needed to implement adolescent programs would involve the following:

1. Family Life Education (FLE).
2. Formation of teen clubs at Panchayath/Municipality ward levels by LSGs.
3. Adolescent Friendly Health Services (AFHS).

4 Adolescent health clinics in PHCs and Private hospitals on Saturdays.

5. Providing adolescent counselling services in Taluk Hospitals.
6. School health care counselling.
7. Adolescent sexual and reproductive health (ARSH) clinics at District/Taluk Hospitals.

Ageing

India is undergoing a demographic shift towards an ageing population. As of July 2022, one tenth of its population is aged 60 years and above, which is estimated to be one fifth by 2050. Nearly 40% of the elderly population belong to the poorest wealth quintile, while two-thirds of older people live in rural areas. The older women have higher life expectancy at 60 and 80 compared to older men. Following are the health care challenges posed by ageing in India.

- Access to healthcare is a challenge.
- Increased prevalence of chronic conditions requiring long term care.
- Financial constraints since the ageing population comes under the dependent category (economically also).
- Mental health problems are often underreported and stigmatized among the elderly population. Suicide ranks in the top 10 causes of death among them.

Recommendations

- Increase awareness campaigns among the public for early identification and initiation of interventions to address mental health issues among the older generation.
- Revisit existing laws, revise them if required and strengthen the implementation process to address elderly abuse and neglect.
- Create platforms in schools and colleges for greater inter-generational dialogue to establish an age integrated society.
- Specialized units for geriatric care in tertiary centers and integrate geriatric medicine into medical curriculum.

Alcohol

Alcohol use should receive the due priority in the NCD Action Plan for India, based on the National report on the magnitude of substance (ab)use in India and Article 47 of the directive principles of the constitution of India. The Allocation of business rules, 196, shall be strictly adhered in the demand and

harm reduction of alcohol and substance use in India. The WHO global strategy for reducing the harmful use of alcohol should be adhered in letter and spirit. Global scientific reports have categorically dismissed the notion of 'Harmful Use' (since there are no safe limits). Regarding alcohol, the term 'Alcohol Use' shall be replaced, which was already there in the first WHO- India National Plan adoptedin 2013. Alcohol at present being a state subject shall be brought under the central list for the uniform implementation at alcohol policy guidelines in India.

Anaemia

Anaemia remains the major public health concern in India, with 57% of women aged 15-49 and 67.1% of children under 5 suffering, according to NFHS-5. While iron deficiency reigns supreme, recent scientific findings like DABS-I and studies highlighting non-iron deficiencies demand a broader approach. Embracing this, India's "Anaemia Mukt Bharat" program employs a 6X6X6 strategy targeting beneficiaries, interventions, and institutions. Challenges persist in program reach, root cause solutions, and data accuracy, but the future requires a multi-pronged approach: diversified dietary interventions, targeted supplementation, and tackling the underlying social and economic factors that perpetuate this widespread health challenge.

Catastrophic Health Expenditure

According to International Journal for Equity in Health and catastrophic health spending, catastrophic health expenditure (CHE) is defined as out-of-pocket spending exceeding 10% of total consumption or income by the budget-share approach with two thresholds, as well as out-of-pocket spending exceeding 40% of nonfood consumption. Even though most countries are striving to enable their citizens to obtain the healthcare they need without financial barriers, more than 90% of the people experiencing CHE live in low-income countries. With out-of-pocket health expenditures constituting around 62.6% of total health expenditures, India ranks third in the Southeast Asia region. Improving and expanding the current health insurance coverage through Ayushman Bharat and moving toward universal health insurance coverage are the most effective ways of shielding the population from the impoverishing effects of CHE. It is also suggested to provide free treatment to the vulnerable segment of the population for the treatment of heart diseases, which was already done for treatment of tuberculosis in India. The expansion of the NPCDCS to all the districts may be helpful in preventing many households from falling into the medical poverty trap. Regulating the prices and quality of drugs, implants, equipment's and consumables by restructuring the taxes, import duties by proper implementation of laws can protect the population from CHE. Government should bring in uniform pricing of drugs and consumables by legislation assuring quality.

Climate Change

Climate change affects health in many ways both through acute weather changes and chronic deterioration of environmental elements. Climate change also damages the social determinants of health and reverses the developmental progress of mankind. Climate change creates new challenges and amplifies existing hurdles in actualizing SDGs and UHC. 3.6 billion people live in areas highly susceptible to climate change. Approximately 250, 000 additional deaths per year, from undernutrition, malaria, diarrhea and heat stress alone between 2030 and 2050. Inaccessibility to clean water and sanitation also creates challenges to public health. US$ 2–4 billion per year by 2030 as direct damage costs to health is estimated to be caused by climate change globally. Injury and mortality from extreme weather conditions, heat-related illness, respiratory illnesses, water-borne illnesses, food-borne illnesses, zoonoses, vector-borne illnesses, mental health issues and other non-communicable diseases are the direct health outcomes of climate change. Impact on healthcare facilities and health systems are indirect effects of climate change. It is imperative to promote actions that reduce carbon emissions to decrease climate change and temperature rise. Environmentally sustainable and climate-resilient heathsystems should be built through multisectoral collaboration, and the systems should be protected fromthe impacts of

climate change. Community awareness should be cultivated, and monitoring and evaluation of activities should be done to strengthen active feedback and improvement. Capacity building, and support from experts and organizations must be sought to strengthen the system.

Community-based Health Insurance

As per WHO, Community-based health insurance (CBHI) schemes are usually voluntary and characterized by community members pooling funds to offset the cost of healthcare. CBHI fosters encouraging values of community development and local accountability but often has low participation and underprivileged people remain excluded. In India, out-of-pocket (OOP) spending remains the major way of health financing. India relies heavily on OOP spending and only 20% of the total health expenditure comes from general revenue. Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY), India's national health protection scheme must be strengthened and awareness and accessibility in communities, particularly in rural and underserved areas must be ensured. The integration of digital health technologies, telemedicine, and health information systems should be emphasized to enhance the efficiency and reach of community health insurance programs, especially in remote areas. Partnership with non-governmental organizations (NGOs) and community-based organizations to facilitate community engagement, health education, and program implementation should be fostered. Primary healthcare infrastructure should be strengthened, and incentives should be offered for healthcare providers. Innovative financing models, such as microinsurance, to make community health insurance more accessible to those in the informal sector can be explored. Risk pooling mechanisms to ensure equitable distribution of financial burden and quality assurance standards and accreditation processes must be established to ensure high-quality care delivery. Disaster preparedness and response strategies can be integrated into community health insurance policies to address the challenges posed by natural disasters. Insurance must cover primary care and outpatient care too. Cost must definitely meet the expenses of healthcare leading to positive cost-effective insurance.

Disability

According to WHO 1.3 billion people globally have significant disability which is 1 in 6 people. In India out of the 121 Cr population, 2.68 Cr persons are 'disabled' which is 2.21% of the total population. Among the disabled population 56% (1.5 Cr) are males and 44% (1.18 Cr) are females. Challenges include lack of accessibility in public spaces such as restaurants, hotels, theaters, doctors' offices, pharmacies, retail stores, museums, libraries, parks, private schools, and day care centers. According to WHO Persons with disabilities find inaccessible and unaffordable transportation 15 times more difficult than for those without disabilities. Public transport is currently, for the most part, difficult to access for people with any form of disability in India.

Recommendation:

- Enhance employment opportunities.
- Improve accessibility and infrastructure facilities.
- Strengthen legal and policy support.
- Ensuring health equity for persons with disabilities.
- Monitor and evaluate the extent to which health sector actions lead to Increasing governmentinvolvement in community-based rehabilitation programmes for disabled persons.
- Government portals to screen children with disabilities for preparatory schools, school enrollment and retention support.

Environment and Health

More than one in four deaths in the most seriously afflicted countries are attributable to diseases linked to pollution. According to the World Health Organization (WHO), the global burden of environmental risks in terms of mortality is 24.3 % (13.7 million deaths in 2016) and in terms of DALYs it is 23.1% (602 million DALYs). In this context of an ever-changing climate and deluge of chemical pollution, doctors are in the right position to educate the public about healthy practices that are relevant to both individual and planetary health since people turn to them for leadership on health-related matters.

Recommendations

There is a need to invest in "green hospitals" and bring in environmental sustainability as the SDGs suggest. Private and public health care systems can change to using renewable sources of energy, eliminate mercury use, and reduce waste generation especially plastic waste by adapting to circular economies. Chemical-free, sustainable food production and consumption should be promoted and supported by doctors, along with the current practice of promoting healthy diets and lifestyles. Demand from the doctor community for safer, less toxic alternatives for medical equipment like Vinyl-free latex-safe gloves can induce the industry to bring in the much-needed change for toxic chemical-free medical products. Engage and support research scientists, NGOs as well as communities who raise their voices for a better, environmentally friendly public health sector.

Gender

The World Health Organization recommended gender-sensitivity, i.e. knowledge and skills to address gender differentials as a core competency of healthcare professionals. Further, healthcare providers have limited understanding of the issues faced by transgender, intersex persons and persons of non-heterosexual sexual orientation. Training needs to be provided to overcome any unconscious bias resulting from this limitation.

Challenges:

- Lack of gender-based knowledge in healthcare.
- Integrating gender considerations in medical education.
- Increased prevalence of Gestational Diabetes Mellitus (GDM) in women of the reproductive age group.
- Although the MTP Act (1971) has been established, access to safe abortion services at affordable prices remains a challenge even in states with good health infrastructure.
- Gender-based violence on women, including intimate partner violence (IPV) and domestic violence, is emerging as an important public health concern.

Recommendations:

- Gender sensitization and capacitation building training for healthcare providers.
- Ensure inclusivity of health issues for all individuals across the gender spectrum.
- Ensure gender equity and gender-specific perspectives on generic and specific health issues.
- Avoid conflation of women empowerment with gender-specific requirements in healthcare settings.
- Systematic training and skill coordination to integrate the perspective of gender in to healthcare facilities.
- Need for professional support during the process of gender transition (HRT and SRS) to combat mental health issues and body dysphoria.

- Updating the medical education curriculum to integrate gender and related aspects, as implemented by the Maharashtra University for Health and Allied Sciences.
- Regular screening of women, with previous history of Gestational Diabetes Mellitus (GDM) during postpartum period, to decrease chances of succumbing to Type-2 diabetes mellitus.
- Establishing government health facilitation centers such as Bhoomika (Kerala Govt.) to provide physical and psychological support to victims/survivors of gender-based violence.

Additionally, there are a couple of major challenges in medical care which disproportionately affects women. One is the escalating prevalence of breast cancer amongst women in the reproductive age, as early as their early thirties. Although women detected with Stage-I breast cancer is detected with five-year survival rates of almost 90%, in India early detection rates are very low. Due to limitations in public awareness, detection occurs during Stages-III and IV which presents higher rates of fatality anddeath rates. To overcome this, there is urgent need for a Breast-Cancer Screening Policy to encourage coverage of all women above 45 years as well as younger women belonging to high-risk categories.

Another important issue is the high levels of medical negligence and avoidable medical interventions in women. This presents as a shift in trend towards adopting c-sections and hysterectomy as routine treatments, when simpler procedures could be performed to treat issues such as dysfunctional uterine bleeding. To curb this trend, government protocols for such procedures should be strictly enforced by conducting regular audits carried out to discourage these practices.

There is now considerable evidence of the sex and gender-based differentials between the genders (predominantly between women and men) in the incidence, prevalence, manifestations, severity, health-seeking behaviour utilization of health services, adherence to treatment as well as social consequences of many communicable and non-communicable diseases. This is true in the case of mental health and injuries as well. WHO has also recommended gender-sensitivity, i.e. knowledge and skills to address these gender differentials, as a core-competency of healthcare professionals. Further, healthcare providers have limited understanding of the issues faced by transgender, intersex persons and individuals of various gender identities and sexual orientations.

Universal Health Coverage

Universal health coverage (UHC) means that all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care. Sustainable Development Goals (SDGs) target 3.8 is to achieve universal health coverage. With out-of-pocket health expenditures constituting around 62.6% of total health expenditures, India ranks third in the Southeast Asia region among countries with high out of pocket health expenditure. While the initiation of PM-JAY represents a significant step, its incomplete reach as it focuses on certain socio-economic groups challenges its claim of universality and leads to out of pocket expenses for individuals. Appropriate program must be devised to cover the whole population especially regarding preventive and primary health care. The public expenditure on health care should progressively increase to above 2.5% of GDP to reach the SDG goal of UHC. Strengthening primary health care is the path towards UHC. For health care and coverage to be truly universal, it calls for a shift from health systems designed around diseases and health institutions towards prevention and health promotion.

Health Research

Health research faces challenges in data collection and management due to complexity, ethical concerns like informed consent and privacy, financial constraints limiting research scope, and difficulties in securing funding from those who may not fully appreciate its importance. Additionally, translating research findings into practical applications within healthcare systems encounters obstacles, slowing the integration of advancements into patient care.

To overcome issues in health research, it is critical to prioritize long term funding, develop collaboration among stakeholders, and enforce established ethical principles. Furthermore, utilizing technological breakthroughs such as data analytics and artificial intelligence can improve research efficiency while providing complete insights into complicated health concerns and contributing to overall public well-being. Medical grants commission to be set up for funding medical education, co-coordinating medical universities and ensuring advanced research in medicine.

Health Financing

Overview of Key Issues

- India fares poorly on health financing when compared to other BRICS 1countries or its peers in Southeast Asia.
- Government expenditure on health is low resulting in relatively high levels of out-of-pocket spending on health.
- As per the latest National Health Accounts 2 for the fiscal year 2019-20, current government expenditure on health 3 was 1.1% of the GDP and 3.9% of overall government expenditure, compared to SEARO average of 2.9% and 8.4%, respectively.
- Inclusive of capital expenditure, government spending on health was 1.35% of the GDP in 2019-20, significantly lower than the National Health Policy (NHP) 4 goal of 2.5%. Only 4 States (Delhi, Goa, Kerala, and Meghalaya) have reached the NHP goal of spending more than8% of their budget on health.
- Out of pocket expenditure accounted for more than half of the current health expenditure (52%) in 2019-20, with government accounting for 35%.
- Reliance on out- of out-of-pocket expenditures results in high catastrophic health expenditures, impoverishment, and imposes a substantial economic burden on households.
- Data from the latest round of the National Sample Survey (75 th Round) show that About 30% of those seeking outpatient care and 42% of hospitalized avail services from publicfacilities, with the major share of services accounted by the private sector. Out of pocket expenditures (OOPE) and associated financial burdens were higher among households where members sought care in private healthcare facilities compared with those treated in public Facilities.
- Expenditures on medicines and diagnostic tests account for a major share of OOPE.
- Cancer, genitourinary disorders, psychiatric and neurological disorders, obstetric conditions, and injuries imposed a substantial economic burden on households.
- Recent studies based on the 75 th Round of the NSS estimate that 49% of households that sought hospitalization and/or outpatient care experienced catastrophic health expenditures and15% of households fell below the poverty line due to OOPE. Catastrophic health expenditures and impoverishment are higher for outpatient care than hospitalization. In addition, in presence of two or more co-existent NCDs (multimorbidity), the number of households reporting catastrophic OOP expenditure increased.
- In addition to low government spending on health, allocative inefficiencies in government spending, insufficient prepayment, and lack of coverage of outpatient care by existing financialrisk protection mechanisms, exclusion of predominant middle-income households from government insurance, ineffective pooling, and inadequately structured provider payment mechanisms are major health financing barriers for Universal Health Coverage (UHC).

Potential Areas of Focus for Policy

- Urgently increase government expenditures on health to 2.5% of the GDP as envisaged by the National Health Policy.
- Effective use of budgetary resources to strengthen primary health care services, improve access to medicines and provide a guaranteed package of services in line with the evolving health needs of

the population.

- Increase coverage of financial risk protection schemes to include:
    - outpatient care services and medicines, OOPE on which is a major contributor to catastrophic health expenditures and impoverishment.
    - a sub-set of middle-income households who are currently excluded but are getting impoverished due to OOPE.
- Move away from fee for service at point of care, which increases the risk of catastrophic and impoverishing health expenses, often leading to foregone or delayed care for a substantial proportion of the Indian population.
- Reforms of provider payment mechanisms to improve efficiency of the public sector and address price gouging and irrational and unnecessary interventions in the private sectors.
- Include IMA in the stakeholder consultation in health technology assessment to bring in empirical or evidence-based policy decisions.

Immunization

India's Universal Immunization Programme is one of the largest and cost-effective public health programs targeting close of 2.67 crore newborns and 2.9 crore pregnant women annually and largely responsible for reduction of vaccine preventable under-5 mortality rate. Under this immunization is providing free of cost against 12 vaccine preventable disease covering 12 million immunization sessions. Introduction of new vaccines, including the Pneumococcal Conjugate Vaccine (PCV) and Rotavirus Vaccine (RVV) and Measles Rubella Campaign aiming to reach every child wherever they live. Despite all this, only 76 per cent of children in India receive full immunization during the first year of their life**.** Infectious diseases continue to contribute to a significant proportion of child mortality and morbidity in India. Differences in uptake are geographical, regional, rural-urban, poor-rich and gender- related. On average, girls receive fewer vaccinations than boys and higher birth order infants have lowervaccination coverage. IMA can join hands with the government by participating and providing technical and policy inputs into key meetings and plannings at district, state and national levels. Along with this,the government can take guidance in various areas of pandemic preparedness, adult immunization andresearch. They can also act as a liaison between and other policy makers and end users of vaccine. Paediatric vaccines should be made available to private doctors at affordable rates by the vaccine industry.

HPV Vaccination of the Girls in age group between 9-15 years should be included in the Universal Immunisation Programme.

Maternal and Child Health

Sustainable Development Goals (SDG) set by the United Nations in 2015 demands to reduce the global Maternal Mortality Ratio (MMR) to less than 70 per 100,000 live births and infant mortality ratio (IMR) to at least as low as 12 deaths per 1000 live births and under-5 mortality to at least as low as 25 deathsper 1000 live births by 2030. India is steadily advancing on the track to achieve this goal ahead of timewith its policies for women and child health and wellbeing. India has many interstate differences as well as we can see. In 2019, the national IMR was 30 but the same for Kerala was 6 and for Madhya Pradesh it was 46. In the case of MMR, the national average was 113 in 2016-18, whereas for Kerala itwas 43 and 215 for Assam.

Medical Education

India has the largest number of medical colleges in the world. Out of the total 706 Medical colleges 390 are in the Government sector. Enhancing modern medicine education in India necessitates a comprehensive strategy. A key focus should be on maintaining syllabus consistency throughout a course

for a specific batch, ensuring students receive a standardized and thorough education. Any modifications in guidelines should only apply to incoming batches, promoting stability and preventing disruptions for existing students.

Additionally, reform should extend to government medical colleges, where an increase in faculty posts is essential. Improved facilities for residence, research, and skills training can attract and retain qualified educators, developing a conducive learning environment. Ending the redeployment of faculty and addressing the issue of ghost faculty will optimize teaching quality. Strict enforcement of availability of clinical materials in medical colleges is vital for recognition, ensuring practical, hands-on training aligns with international standards, ultimately producing competent and well-prepared medical professionals.

Recommendations:

- State based health manpower assessment to ensure equitable distribution of teaching centers.
- No dilution of scientific concept in mainstream modern medicine.
- Capping the fees of private medical colleges to make them affordable to all.
- Maintain Autonomy & democratic & federal structure of regulatory bodies and academic institutions to be maintained.
- Self-governance of medical and allied professionals to be ensured and representation of all states in decision making.
- Continuous quality improvement and advancement in knowledge to be provided to all health providers.
- Maintain syllabus consistency for a specific batch to ensure standardized education.
- Guidelines modifications apply only to incoming batches, preventing disruptions for existing students.
- Increase faculty posts in government medical colleges.
- Enhance facilities for residence, research, and skills training to attract and retain qualified educators.
- End faculty redeployment and address ghost faculty issues to optimize teaching quality.
- Strictly enforce availability of clinical materials for recognition, aligning with international standards for practical training.

Medical Termination of Pregnancy

According to Guttmacher and United Nations Report, 48 out of 1000 women seeking abortions in India on an average. Although India has a Medical Termination of Pregnancy Act since 1971, it excludes a sizeable population of the LGBTQIA+ community. The entire MTP Act and its amendment specifically states pregnant 'women', which leaves out all transgender, non-binary, and gender diverse persons for whom the abortion and other sexual and reproductive health access is critical. The word 'women' should be replaced by 'person'. Anyone who can get pregnant should have access to sexual and reproductive health services and equal protection under the law, not just women.

Although India has a Medical Termination of Pregnancy Act since 1971, access to safe abortions services at affordable prices remains a challenge even in states with good health infrastructure. There is confusion regarding the legal provisions of various laws such as the PCPNDT Act for prevention of prenatal sex determination, and the POCSO Act on Child sexual abuse and their implications for the provision of abortion. It is important for all health providers, and not only Ob-Gyns, to have clarity on these issues, since medical abortions may now be legally provided even at the PHC level.

Migration

India is a country with a long history of migration. Internal migration, driven by factors such as economic opportunities, education, and family ties, is prevalent. International migration, primarily to the Gulf countries, has also increased in recent years. This movement of people has had a significant impact on

the health of the migrant population and their families, both in their places of origin and destination.

Challenges

- Access to healthcare: Migrants often face challenges accessing healthcare due to language barriers, lack of knowledge about the healthcare system, and affordability issues.
- Prevention and control of communicable diseases: Migrants are at a higher risk of contracting communicable diseases due to crowded living conditions, limited access to clean water and sanitation, and exposure to different pathogens.
- Mental health care: Migrants may experience mental health challenges due to the stress of migration, adaptation to new environments, separation from family and friends, and loss of social support networks.
- Maternal and child health: Migrant women and children are often at a higher risk of maternal and child health problems due to inadequate prenatal care, poor nutrition, and limited access to appropriate child healthcare services.
- Occupational health and safety: Migrant workers are often employed in hazardous occupations with inadequate safety measures, increasing their risk of occupational injuries and illnesses.

Recommendations

- Strengthen access to healthcare: Implement targeted outreach programs, provide multilingual healthcare providers, and establish migrant-friendly healthcare facilities.
- Prevent and control communicable diseases: Implement targeted vaccination programs, promote healthy living habits, and strengthen surveillance systems.
- Address mental health needs: Provide culturally sensitive mental health services, promote mental well-being, and address stigma associated with mental illness.
- Improve maternal and child health: Strengthen maternal and child health services, promote safe childbirth practices, and provide essential nutrition supplements.
- Promote occupational health and safety: Promote occupational safety and health awareness, provide training on safe work practices, and enforce labor laws.
- Foster community engagement: Encourage participation in community activities, provide language and cultural training, and foster social connections.
- Collect data and conduct research: Strengthen data c data collection systems, conduct regular health surveys, and support research on migrant health.

<u>Noise Pollution</u>

Despite the awareness of the dangers caused by noise pollution, effectively addressing this threat remains a complex and multifaceted challenge in India. One significant hurdle lies in the limitations of current research. While the immediate health impacts are concerning, a comprehensive understanding of the long-term consequences, particularly on vulnerable populations, is still evolving. Apart from hearing loss, noise pollution has effect on central nervous system (stress, memory loss, insomnia, emotional changes etc.) cardiovascular (hypertension, arrythmias, ischemic heart disease, stroke etc.) and metabolic disorders (diabetes, acid peptic disease etc.). Additionally, conflicting viewpoints regarding acceptable noise levels and the effectiveness of specific mitigation strategies create confusion and hinder progress. Further complicating the issue are the social and economic disparities that exist within our cities, with certain communities disproportionately bearing the burden of noise exposure due to their location or lack of access to noise-reducing measures.

Recommendations

- Awareness on Noise Pollution (Hearing Loss and other health issues) should be included in the

National Deafness Control Program as an important Strategy.

- Encourage noise-reduction practices like using earplugs in noisy environments and turning down TVs and music.
- Partner with schools and community organizations to educate children and adults about noise pollution.
- Invest in research and development of innovative noise mitigation technologies and conduct further research on the long-term health impacts of noise pollution.
- Develop and implement noise monitoring.
- Set clear decibel limits for different zones (residential, commercial, industrial) and times of day.
- Enforce regulations through regular monitoring and penalties for violators.
- Consider noise permits for industries and construction activities.

Nutrition

The past decade has seen India's remarkable progress in achieving better results on several key nutrition indicators. As we inch closer towards the deadline for the Global Nutrition Targets 2025, however, India still finds itself short of reaching targeted numbers for some indicators, notably anemia. India has

shown no progress or is worsening in achieving stipulated anemia targets, with 53.1% of non-pregnant women of reproductive age in the country is estimated to be anemic. India also faces the triple burden of malnutrition- under, over and micronutrient malnutrition. Obesity among children and adolescents is an area of concern.

Recommendations:

- Behavior Change Communication: Strengthen measures to disseminate nutrition information to vulnerable populations through existing platforms such as the ICDS. Also, to promote exclusive breastfeeding and age-appropriate complementary feeding practices must be initiated at all levels.
- Introducing robust, efficient methods to measure iron status: Currently, major surveys in India, such as the NFHS, use capillary methods to measure iron status. With this method under scrutiny, it is important that better methods of measurement be Introduced.
- We need to invest in research on iron nutrition, iron physiology and iron infection interactions in the Indian context. Also ensure adequate iron stores in women and appropriate BMI well before pregnancy
- Advocacy to include waist for height measurements at all wellness visits in clinics and in school screening is needed.

Occupational Health

Informal work often operates in the shadows, beyond the reach of safety regulations and social security. According to data from the Director General Factory Advice and Labour Institutes (DGFASLI) Report, 3 workers die daily in Indian factories. There were 32,413 accidents reported from different factories, resulting in 1,050 fatalities and 3,882 injuries. Even if notification is mandatory by law, occupational diseases are often underreported. Also, their lack of awareness compounds the risks. To address this, stringent regulations must be forced, holding employers accountable for their workers & their well-being. Awareness campaigns, conducted in local languages, need to reach informal workplaces, educating workers about safety practices and their rights. Affordable healthcare, accessible even in remote areas, can provide early diagnosis and treatment for many occupational diseases. Also, there is no actual data on notifiable and compensable occupational diseases. Several challenges prevail to diagnose and notify OD as the causal relationship between exposure to hazardous substances and the outcome is not linear. Doctors are not trained to ask questions regarding occupational history, often miss the actual diagnosis, and only do symptomatic treatment. It has been found that many silicosis

patients are receiving treatment for tuberculosis, but the actual problems remain unaddressed. Similarly, Parkinson's patients have not been asked about the occupational exposure history of manganese, without estimating manganese levels in blood and urine, the patient has been treated only for symptoms. Workers are often vulnerable to preventable illnesses and accidents. In industries, workers are neither checked during pre-employment nor yearly during the period of employment, which is a statutory requirement. It can be resolved by multidisciplinary action taken by the different stakeholders from the government, civil society, academia, and non-governmental organizations.

Organ Transplant

Currently India performs 3rd largest volume of organ transplantation. There is a huge gap between the required organs and the available organs for transplantation. To achieve self-sufficiency in organ donation, the estimated Deceased Donation Rate in India will need to achieve a rate of 62 per million population (currently it is less than <1 per million). Transplant activities rest largely on living donation (87%). There are also stark geographic differences in India with active DD programs in South and West India, whereas DD has not been initiated in Northeast India. The top five states account for over 85% of the total DD transplants.

The Government of India enacted the Transplantation of Human Organs and Tissues Act (THOTA) in1994 to curb organ trading and to promote deceased organ donation, but it is not being adopted in all states. The financial grant under the National Organ Transplantation Program is underused because of the lack of sufficient staffing. There is also insufficient documentation on transplant recipients and thelong-term health of live donors.

Only 20% of kidney and <5% of liver, heart, lung, and multiorgan transplants are performed in government hospitals. High costs of transplants at private hospitals are, in general, not affordable for most patients in the absence of governmental healthcare plans. Today, <10% of patients with end-stage kidney failure in India have access to transplantation.

The government should take actions addressing transparency, allocation, policies, oversight, and safety of organ transplantation. Awareness initiatives to increase deceased organ donation, particularly in areas where participation is low, are needed.

Palliative Care

In India, the population of people above 65+ years are increasing. There is a serious gap between needs and available palliative services. While some elements of palliative care have been integrated into national health programmes, the area is still in a nascent stage of development in India. This gap in services is exacerbated by drug unavailability problems, particularly morphine, caused by the Narcotic Drugs and Psychotropic Substances (NDPS, 1985) Act of India, which hinders procurement of morphine (Rajagopal and Venkateswaran, 2004). In 1998, the Government of India recommended that state governments try to simplify their narcotic regulations, but not enough has happened in terms of regulations, so that drug procurement remains a serious problem.

There should be a palliative care policy at national level in decentralized manner. The focus to be largely centered around home-based care and involvement of the family. Develop a “community-led” service capable of offering comprehensive long-term and palliative care through trained neighbors.

Pandemic Preparedness

Infectious disease outbreaks emerge frequently with emerging and reemerging threats holding the potential for epidemics or even pandemics. There can be a two-pronged approach to tackle this. By building a knowledge Reservoir, we can promote the creation of shared databases that integrate data from several sources, boost multidisciplinary collaboration, and enable predictive models for reliable risk analysis. Taking advantage of technological breakthroughs, particularly artificial intelligence, will enable for the analysis of massive datasets, identifying emerging trends, and predicting outbreak trajectories and offers a critical early warning system for timely intervention and resource mobilization. Effective pandemic management necessitates real-time monitoring of disease control measures as well

as information flow to battle "infodemics." Transforming comprehensive surveillance data into evidence-based policy allows for effective resource allocation, focused public health messaging, and proactive prevention implementation, resulting in a more resilient health system for future infectious disease threat.

Disaster preparedness and health emergencies

- Standardized Emergency Response Protocols: Advocate for standardized protocols and guidelines for medical response during emergencies and disasters, ensuring a coordinated and efficient response across healthcare facilities.
- Post Disaster emergency medical preparedness: Emphasize the importance of continuous training programs for healthcare professionals and dedicated teams to enhance their preparedness in handling various types of emergencies, including natural disasters, pandemics, and mass casualty incidents. All hazard approach should be advocated while preparing a response plan. Technology integration in the activities.
- Disaster management plans and infrastructure readiness: Ensure that all the states are having a disaster management plans for medical infrastructure, including hospitals, emergency rooms, medical supplies, and personnel, in disaster-prone areas to mitigate the impact of emergencies effectively. The hazard and vulnerability mapping should be done during planning phase.
- Community Engagement and Public Awareness: Stress the significance of community engagement and public awareness campaigns to educate the public about emergency preparedness, early warning systems, and appropriate response measures.
- Collaboration with Government and NGOs: There should be efforts to enhance collaboration among IMA, government agencies, non-governmental organizations (NGOs), and other stakeholders to develop comprehensive disaster response plans and ensure effective execution during crises.
- Ensuring Equity in Access to Care: Highlight the importance of ensuring equitable access to healthcare services during emergencies, especially for vulnerable populations, including those in remote areas or marginalized communities.
- IMA should identify a state and district focal point for disaster who can aid and provide technical inputs to the authorities.
- State disaster management Authority (SDMA) and District Disaster management Authority (DDMA) should engage IMA state and district disaster management cells.
- Government should extent support to IMA to initiate capacity building programmes on health emergencies for disaster management mainly focusing on the areas of triage and mass casualty management.
- Government should extent support for inclusion of disaster management related activities, drills and safety precautions in the regular IMA meetings.
- Government should extent support for inclusion of disaster management and health emergency related resources and courses in the IMA knowledge platforms.
- Government should extent support for capacity building and awareness generation of the members of the IMA – MSN (Medical students' network) as they can be a vital resources in the disaster management activities

Primary health care

A strong primary care system allows for the integration of all health services, benefiting communities and improving health outcomes for all. For this, we should encourage the expansion of primary health infrastructure, with a focus on preventative and primary care services. Primary care continues to be a grossly underfunded investment area in India. Low public expenditure in primary healthcare inhibits access to the most marginalized population. We should ensure that primary health care centers remain focused on their original mission and do not evolve into specialty care centers. Also, Propose the establishment of one subcenter for every 10,000 people in urban and semi-urban areas, and one for every 5,000 in rural areas, accompanied by infrastructure improvements and increased manpower for subcenters. To avoid a substantial gap in primary care, we should reconsider the wellness center

idea, stressing primary care over specialized care, and address the sluggish rollout of wellness clinics. Implementing a focused approach to increase the number of Primary Health Centers and Subcenters and prioritizing the placement of MBBS graduates in these facilities for effective activity supervision, hence improving overall performance.

Public-Private Parentship

IMA is a unique interface agency between the private doctors and the Governments. IMA has proved its mettle in interventions in National Health programmes like National TB elimination programme. IMA has a presence in almost all the districts of the country with sub districts penetration. There is a large unused capacity in IMA in this regard. HTA should be made transparent for the private sector to raise their concern before the industries make policies for the private healthcare. Major private sector hospital networks should have Medical Responsibility Fund (MRF) like the Social Responsibility Fund by the big corporations and industrial houses. This MRF should be utilised to help the poor patients. Salary and service conditions of doctors in Private hospitals and private medical colleges have to be formulated especially junior staff.

PMJAY

One of the very important initiatives in Healthcare delivery has been the implementation of PMJAY. Many incremental steps have been taken in PMJAY since 2018.IMA would want to put up the following suggestions in PMJAY.

1. PMJAY could be a game changer in involving private sector with inclusive policies and strategic purchases.
2. In essence IMA feels that Government hospitals should be funded directly by the Government and PMJAY should be exclusively used for strategic purchase from private sector.
3. Pricing of services should be based on independent scientific costing in district level basis.
4. The programme should be fully monetised to provide comprehensive coverage for the defined set of population.

Public Health

The health system in India is in the phase of transition and this is linked to the demographic and epidemiological transition, social intermediation, and fiscal policy transformations. India's health system is a unique model in the world with people-oriented planning reflected in five-year plans to start with maximum expressed commitment now in the form of NITI AYOG. Because of the complex challengeslike cultural diversity, vast area, reliance on tax-based revenue generation mechanisms, prevailing poor health literacy and above all the neoliberal market influences, though we plan much the umpteen efforts of both federal and state governments can't operationalize the social penetration of the programs and policies to the full extent. Hence ensuring people centeredness at all levels of functioning of health system is the only answer towards achieving welfare and self-reliance in this world of competitiveness. Results may be slower in democracy and mixed economy than in a command economy. But the story of evolution of public health in India tells us that we will transform our systems towards the best model for health achievement in the world. The pandemic experience is an example. Demand side needs and expectations always grow with the rapid technological boom and providing universal health care to all is a real challenge in the environment of neoliberal market influences and a mixed economy.

School Health

The Rashtriya Bal Swasthya Karyakram screens for the 30 common childhood conditions in government schools. Ayushman Bharat School Wellness Program also has created 11 health education modules, nationally for health education sessions to be conducted by teachers in government and aidedschools. The adolescent health related problems comprise various issues related to health and non-health such as physical, mental, emotional, psychological, educational and skill development and other development related issues. Hence, the focus of school health counselling should be on the following;

- Adolescent physical health: Problems like headache, refractory error, urinary tract infection, dandruff, acne, allergic rhinitis, and in addition among girls, painful menses, abnormal white discharge and PCOS are common.
- Adolescent reproductive health: In many residential institutions for girls, proper menstrual hygieneis not taught to them.
- Life skill education
- Adolescent psychological counselling

Sleep

Sufficient Sleep is one of the basic foundations of positive health along with healthy food and moderate exercise. Inadequate sleep is pervasive among different age groups, constituting a largely unnoticed and underreported public health issue with substantial economic costs. Lack of adequate sleep i.e., less than 8 hours for those below 20 years and 7 -8 hours above 20 years, has shown in many scientific studies to affect the cognitive and emotional growth, and the immune, and endocrine systems leading to lifestyle diseases including cancer, metabolic syndromes, vehicle accidents, and workplace incidents which are on the increase globally. The escalating use of smartphones and electronic devices further exacerbates this epidemic. REM sleep (dream sleep) is the key to brain maturity, creativity and emotional maturity. For children, if the second half of the sleep is lost because of early schooling, they will lose sufficient REM sleep which they get mainly from 2 am to 6 am. Therefore, school time should not be before 8.30 am. Inadequate sleep among adolescents is associated with various issues, including a higher likelihood of being overweight due to decreased engagement in daily physical activity. They may exhibit symptoms of depression, engage in risky behaviours such as drinking, smoking tobacco, and using illicit drugs, and may underperform academically.

- Integrate sleep education into school curriculums and Community outreach programmes to raise awareness and emphasize the importance of sufficient sleep for cognitive function and academic performance.
- Encourage companies to consider flexible working hours, nap-friendly spaces, and mindfulness programs to alleviate workplace stress and enhance sleep quality.
- Leverage technology to promote digital well-being, including screen time restrictions and blue light filters.
- Embrace telemedicine to improve accessibility for sleep disorder diagnosis and treatment.
- Allocate funding for research on sleep disorders and interventions to address existing knowledge gaps.
- Encourage businesses to implement employee well-being programs that prioritize sleep health.
- Government should support IMA in implementing widespread sleep hygiene education campaigns to promote healthy sleep habits.

Snakebite Envenomation

Snakebite envenomation is an acute, life-threatening, time-limiting, medical emergency affecting 1.8-2.7 million people with an estimated 138,000 deaths annually across the globe. India contributes an average of 58,000 deaths annually. WHO formally listed Snakebite Envenoming as a highest priority Neglected Tropical Diseases in 2017. Snakebites are accidents that can be prevented and treated if antivenom can be made available to the 97% rural victims. As per government policy, anti-snake venom(ASV) is available

free of cost in all government hospitals across India and the treatment for snakebiteis totally free. But many rural hospitals do not have ASV stocks or trained medical personnel or life- support equipment to manage a snakebite patient. This forces the patient's relatives to transport the patient to a better hospital which is far away or to a private hospital, both of which are expensive optionsthat are out of reach for a financially weak villager.

Way forward:

- Increase antivenom availability.
- Comprehensive strengthening of primary health care systems.

Tobacco

Tobacco use poses a significant global public health challenge, evolving into an epidemic with profound implications for disability, disease, and death. In India, the gravity of the issue is stark, claiming over 1.2 million lives annually. Smoking contributes to one million deaths, second- hand smoke exposure toover 200,000, and smokeless tobacco use to over 35,000. The economic toll is substantial, with smoking-attributable health expenditure reaching 3.5% of the total health expenditure in India. To address this dual epidemic, recommendations include identifying loopholes in existing laws like COTPA, enacted 15 years ago, and proposing amendments. Empowering sub-national regulations for local situational legal actions is crucial. Measures to curtail access for the younger generation involve raising the age of tobacco product sale to 21or more, prohibiting single stick cigarettes and small packs, and implementing tobacco vendor licensing policies. Further, there is a call for strengthening and scaling up tobacco cessation services, integrating them into routine healthcare, utilizing PPP models, and leveraging AI and telehealth services. Lastly, comprehensive public awareness campaigns are vital to educate the public about the hazards of tobacco use, creating a multifaceted approach to combat thispreventive health threat.

Trachoma

Trachoma is caused by the bacterium Chlamydia trachomatis. It is a public health problem in 42 countries and is responsible for irreversible blindness or visual impairment of about 1.9 million people. The prevalence of active trachoma among children aged 10 years has been estimated by WHO at 2.02 %. The National Program for Control of Blindness (NPCB) launched in 1976 and the Trachoma Control Programme started in 1963 was merged under NPCB in 1976.

To support the elimination of trachoma, the World Health Organization (WHO) established a public health strategy known as SAFE:

- **S**urgery to treat the advanced, blinding stage of the disease (trichiasis)
- **A**ntibiotics to treat active infection
- **F**acial cleanliness
- **E**nvironmental improvements, specifically increasing access to water and sanitation

India is soon to be declared as trachoma free by WHO- AIIMS. Trachomatous trichiasis continues to be common in certain pockets of the country, and surgical interventions are required to achieve the trachoma elimination goal by 2030.

Vector control

Vector-borne diseases are diseases that are transmitted by vectors, such as mosquitoes, ticks, sandflies, etc. Some of the common vector-borne diseases in India are malaria, dengue, lymphatic filariasis, kala-azar, Japanese encephalitis, and chikungunya. The National Center for Vector Borne Diseases Control (NCVBDC) is the central nodal agency for the prevention and control of vector-borne diseases in India. The NCVBDC also has specific guidelines and strategies for each of the vector-borne diseases. According to historical-comparative research on vector-borne disease in India, there was a significant increase observed in malarial incidence cases from 2011 to 2016, compared to Japanese encephalitis and dengue.

According to recent reports by the World Health Organization (WHO), India has made remarkable progress in reducing the mortality and morbidity due to vector-borne diseases in the pastdecade.

Challenges

- Lack of adequately trained staff and resources: Vector control requires skilled personnel, equipment, and funds to conduct surveillance, monitoring, and intervention activities.
- Insecticide resistance and residual transmission: Many mosquito vectors have developedresistance to commonly used insecticides, such as pyrethroids, organophosphates, and carbamates.
- Globalization, climate change, and urbanization: These factors have increased the risk of VBDsby creating favorable conditions for vector breeding and survival, such as increased temperature, rainfall, humidity, and human mobility.
- COVID-19 pandemic: The pandemic has posed additional challenges for vector control, such as disruption of health services, diversion of resources, reduced community participation, and increased exposure of health workers to infection.

Recommendations

- Capacity building to enable prompt surveillance, monitoring, and interventions.
- Strengthen Integrated Vector Management (IVM) combining different methods and strategies for vector control, such as environmental management, biological control, chemical control, personal protection, and community participation.
- Monitor disease outbreaks and employ rapid response teams to investigate and contain the outbreak.
- Maintain geocoded maps to locate cases and facilitate prevention and vector-control efforts.

Water and Food borne diseases

Waterborne diseases such as cholera, acute diarrheal diseases, typhoid, and viral hepatitis continue to be prevalent in India and have caused 10,738 deaths, over the last five years since 2017. In addition, groundwater in one-third of India's 600 districts is not fit for drinking as the concentration of fluoride, iron, salinity, and arsenic exceeds the tolerance levels. The outbreaks of waterborne diseases have been rising because of a lack of adequate sanitation, poor hygiene, and the absence of proper waste disposal systems. Despite various efforts by the government such as awareness campaigns, guidance on diet for infected individuals, and sanitation improvement programs, the situation is still grim.

Challenges

- Lack of access to safe and clean water and sanitation facilities for a large section of the population
- Lack of awareness and education among consumers and food handlers about the importance of hygiene and food safety practices.
- Lack of effective regulation and enforcement of food safety standards and laws.
- Lack of adequate surveillance and reporting systems for detecting and responding to outbreaks

Recommendation

- Enhance public awareness of the importance of hand washing.
- Ensure water quality and purity through regular inspection by authorities.
- Encourage the general population to consume safe and cooked food. Educate them on safecooking practices.
- Increase vaccine coverage for water and food borne diseases and organize vaccination campsduring outbreaks.

Sexuality

- Health care providers need to be sensitized and capacitated on the basics of sexuality, including sexual orientation and its relevance in health care.
- Basic understanding of LGBTQIA + and its relevance in health care to be provided to healthcare providers.
- The difference between homosexuality and transgender issues should be oriented to Health care providers.
- Need for understanding and supporting sexual dysfunctions.
- Readiness among health care providers to explore and treat STIs (Oropharyngeal and anorectal STIs not to be ignored)
- Conduct Sex Education programs at higher secondary school levels and college levels for awareness of healthy sexuality and prevention of disease related to myths and misconceptions about Sex.

Trauma

Approximately 33% of all road traffic accidents can be attributed to the absence of proper walkways or footpaths. Onlookers are often reluctant to help a trauma victim for fear of being entangled in a police case and its legal consequences. Many trauma victims are transported to hospital on three-wheelers or other private vehicles in a manner that destabilizes spine fractures. Ambulances are frequently operated by a single driver who might not be BLS-certified and therefore will not be able to treat the patient. One of the hurdles for creating a unified emergency response system is the heterogeneity in the ambulance services available. A major problem in the public sector is the lack of adequate numbers of staff manning the casualty and support services. Lack of security, threats of violence by emotionally charged or drunk bystanders, an increasingly litigious climate and scarcity of essential equipment and support facilities can make it a challenging workplace to be in. ICU beds, ventilators and paraphernalia cost enormous amounts of money to set up and maintain.

- Adherence to the National Ambulance Code is expected to standardize and streamline emergency response services across the country.
- Ambulance drivers can advance their own skills by providing the EVOC (emergency vehicle operators course) and BLS (Basic life support).
- Organized nation-wide network of emergency vehicles, is required.
- Dedicated ambulance tracks to be set up. Centralized console with real-time expert advice becomes available, the ambulance will be able to transport the patient to the nearest possible destination—without losing valuable time by stopping and enquiring at various hospitals.
- A mechanism to pay for the immediate emergency care expenses for trauma victims will need to be established, especially in the private sector. A government-aided insurance program, which will help offset the cost to private hospitals that treat destitute trauma patients will be a welcome first step.
- A corpus fund for comprehensive trauma care to be set up. All hospitals irrespective of whether public or private to be networked.
- The focus to be largely centered around home-based care and involvement of the family. Develop a “community-led” service capable of offering comprehensive long-term and palliative care through trained professionals.
- Burns cases require special units and trained man power.

4.6 OVERARCHING GENERAL RECOMMENDATIONS

1. Increase the national health expenditure to 5 % of GDP from the present 1.2%. (National Health Policy Recommends 3.5%).
2. Empower primary care with a technology-driven e-referral system for seamless patient flow, informed decisions, and improved healthcare access for all.
3. Under the NHM or parallel mechanisms establish missions for Tribal populations, Slum populations and for populations living in difficult-to-reach areas.
4. Focus on Universal Health Coverage by strengthening Pimary care in India.
5. Revise urban planning strategies to ensure focus on improving sanitation, providing clean water, and decongesting crowded areas.
6. Establish cross-sectoral data-sharing platforms to facilitate comprehensive data analysis for disease surveillance and research.
7. Ensure confidentiality and data privacy across all platforms and sectors.
8. Ensure availability of need-based, real-time information on disease surveillance to IMA for sharing with its members for effective epidemic and endemic disease management.
9. Incorporate health impact assessments into public policies, infrastructure projects, and development initiatives.
10. Increase the availability and access to diagnostics, including molecular and point-of-care diagnostics, in low-resource settings by establishing formal partnerships with non-public health agencies/care providers or by outsourcing to selected agencies.
11. Take steps for large scale production of off patent drugs making them available through Jan Aushadhi stores.
12. Patent laws' provisions like compulsory licensing should be liberally utilized to reduce the prices of patented drugs.
13. Strengthen the cooperation with the private healthcare sector for integrated multi-disease elimination programs.
14. Leverage the IMA network and expertise in increasing community awareness of the need for prevention, early care seeking and dissemination of updates on communicable diseases.
15. Establish research priority settings for communicable diseases at the national level, through an objective, consultative process involving healthcare providers, the private sector, and academia.
16. Devise new programmes to increase local and community participation/ownership of the disease control programmes, through better stakeholder mobilization and resource devolution.

17. More Open-source drug discovery projects should be implemented and the OSDD for the Anti TB drug research should be revised.

18. Health System must be regularized as Primary, Secondary and Tertiary to reduce OOP expenses in Healthcare.

19. IMS- Indian Medical Services is under consideration; to be approved & implemented soon to link Public & Private Partnership in Healthcare.

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5. CONTRIBUTERS

Dr. Sreejith N. Kumar
Dr. N. Sulphi
Dr. Joseph Benevan
Dr. G.S. Vijayakrishnan
Dr. Alex Franklin
Dr. Prasanth CV
Dr. Althaf A
Dr. C. John Panicker
Dr. RC Sreekumar
Dr. T Suresh Kumar
Dr. Sreejith R
Dr. R. Unnikrishnan
Adoor Prakash
Dr Kala Devi
Dr Sameer Kanwar
AN Shamseer
Dr Kalavathy Mathurchennath
Dr Sandhya Lal
Biju Mathew
Dr Korah George
Dr Santhosh Rajagopal
Dawn
Dr Madhav Ram
Dr Saurabh Dalal
Devabala Smitha
Dr Manu M S
Dr Shaffi
Devika Nair
Dr Marthanda Pillai A
Dr Shelby Kutty
Dr Amala
Dr Meghna Joseph
Dr Sherin Susan Paul
Dr Anand Date
Dr Mini G K
Dr Shibu Balakrishnan
Dr Anand Lakshman
Dr MKC Nair
Dr Shibu Vijayan
Dr Aravind
Dr Mohanan Nair
Dr Shiraz Bava
Dr Arun Kumar
Dr Mrinal Murali Krishna
Dr Sujith Chandy
Dr Arun Nair
Dr Muhammed Asheel
Dr Sumi Harikrishnan
Dr Arun Thankom
Dr Muralee Thummarukudy
Dr Sundari Ravindran
Dr Asha Hegde
Dr MV Pillai
Dr Thomas Mathew
Dr Asha Nair
Dr Nandakumar
Dr TP Sreenivas
Dr AV Jayakrishnan
Dr Neena Thomas
Dr Unni Krishnan
Dr Ayyapan M
Dr Nidheesha Noushad
Dr V Mohan
Dr Bhupendra Tripathi
Dr Nigil Haroon
Dr Vaishali Venu
Dr Biju Soman
Dr Nisha Haroon
Dr Vani HC
Dr Binu Luke
Dr Peter Raj
Dr Ved Prakash Mishra
Dr Bipin K Gopal
Dr Philip Mathew
Dr Vijayasree Yelappa
Dr Cherian Varghese
Dr Pradeep
Dr Vinod GV
Dr Chithra Grace
Dr Pradeep Kumar
Dr Vishnu
Dr Douglas Martin
Dr Pradeep V G
Dr Yamini Thankachi
Dr Ekbal B
Dr Rajeev Jaydevan
Johnson Edayaranmula
Dr G Vjayaraghavan
Dr Rajesh Divakaran
KA Beena
Dr Rajesh Nair
KK Shailaja
Dr George Joseph Kodickal
Dr Rajmohan
M Vincent
Dr Haifa
Dr Rajmohanan K
PK Sreemathy
Dr Harikumar SK
Dr Raman Kutty
Priyanka Roy
Dr Hemachandran
Dr Revathy Mohandas
Rajan N Kobregade
Dr Indhu PS
Dr Ruma
Rajeev Sadanandan
Dr Jame Abraham
Dr SA Hafiz
TKA Nair
Dr Jina Dcruz
Dr Salil
V S Sivakumar
Dr Joe Thomas
Dr Salman Khan
Vipin Yadav
Dr Jyothi Arayambath
Dr Sam Prasad
Dr Roy Abraham Kallivayalil
Dr A. Selvarajan
Dr Satish Chandra Pandey
Dr Dilip Kumar Dutta
Dr Navin Goyal
Dr Varghese Manjunath C H
Dr Arulrhaj Sundram
Dr Srirang Abkari
Dr Vallabh Dhaimodker
Dr C. Srinivasa Raju
Dr Ravindra Kute
Dr Suhas Pingle
Dr K V Sarma
Dr S Kannan
Dr M Ramakrishnarao
Dr Ranjan Bhattacharyya
Dr Deepak Sharma
Dr Rajendra Gandhi
Dr Yuri Dias Amborcar
Dr Kavitha Ravi
Dr Sanjay Puri
Dr Navin D Patel
Dr P.S. Bakhshi
Dr Chiranjeeb Kakoty
Dr Somnath Salgar
Dr Sarvesh Gupta
Dr Gopal Shinde
Dr Tejas Patel
Dr Ramkrishna Londhe

DRAFTING TEAM

Team Members	Designation
Dr SS Lal	Chairman, IMA Health Manifesto
Dr Salman Khan R	Technical Advisor, ReAct Africa
Dr Shibu Vijayan	Medical Director, Qure.AI
Dr Vinod Kumar VG	Public Health Specialist
Dr Shelby Kutty	Professor, John Hopkins University
Dr Sam Prasad	Country Director, AHF
Dr Serin Lopez	Public Health Scholar, GIPH
Dr Nabil Rosh P S	Public Health Scholar, GIPH
Dr Ajas PS	Public Health Scholar, GIPH
Dr Siddharth Vijayan	Public Health Scholar
Dr Razi N	Public Health Scholar
Dr Gayatri MR	Public Health Scholar, GIPH
Dr Asha KS	Public Health Scholar, GIPH

IMA Health Manifesto 2024

Indian Medical Association
IMA House, Indraprastha Marg, New Delhi – 110002
Tel : 011-2370009, 23378819. Fax : 011-23379470
E-mail : hsg@ima-india.org