



## **A Review on National Public Health Programs in India and its Role in Pharmacist**

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### **ABSTRACT**

In India, national public health programs are essential for meeting the health demands of the large and diversified population. These initiatives are essential to accomplishing the nation's health goals because they address important health concerns such as infectious illnesses, maternity and child health, malnutrition, and non-communicable diseases. As medical professionals, pharmacists play a vital role in the effective administration and execution of various public health initiatives. They are involved in everything from making sure that drugs are distributed correctly to encouraging responsible drug use, educating communities, and helping to prevent and treat illnesses. This paper explores India's numerous national public health programs, such as the National AIDS Control Program, the National Vector Borne Disease Control Program, and the National Immunization Program, emphasizing pharmacists' vital roles in these projects. The study emphasizes the need for a more comprehensive strategy, with pharmacists having an even bigger influence on public health outcomes and enhancing everyone's access to high-quality medical care.

**Key Words :** Health Program, Pharmacist, Malnutrition, Non-Communicable disease, Educating Communities

### **INTRODUCTION:**

The World Health Organization's 2006 World Health Report states that there is a severe shortage of healthcare professionals in at least 57 nations worldwide. India is severely lacking in health-related human resources. Pharmacists should participate in preventive care initiatives that advance public health and stave off disease, according to a joint International Pharmaceutical Federation (FIP) and WHO paper titled "Developing pharmacy practice: a focus on patient care." However, India's pharmaceutical and health policies have been monitoring the availability of human resources in the pharmacy field for decades. [1] The Indian government manages a number of national public health programs (NPHPs), including efforts to eradicate tobacco, leprosy, AIDS, TB, vector-borne diseases, HIV/AIDS, and pulse polio. These initiatives could help pharmacists improve patient care and public health. Over the past ten years, the pharmacy profession has experienced significant expansion, largely attributable to the dedicated initiatives of the Pharmacy Council of India and various private educational institutions. [2] This growth has been facilitated through the implementation of programs such as D Pharm, B Pharm, Pharma D, and Pharm D (Post Baccalaureate) across the country. Their contributions are predicated on the fact that they received undisclosed training regarding NPHPs during their undergraduate studies. Therefore, the program under NPHP that pharmacy professionals can work in is discussed in this paper. A brief discussion of pharmacists' possible contributions to those NPHPs will be covered in the upcoming event. [3]

### **1.HIV/ AIDS CONTROL PROGRAM**

The most well-known program among the students who responded was the HIV/AIDS control program. This might be as a result of the Indian Pharmaceutical Association's (IPA) efforts since 2000 to raise awareness of the opportunities and roles that pharmacists play in HIV/AIDS prevention and care. Initiatives include National Pharmacy Week 2000, which focused on "Pharmacists to fight against HIV/AIDS," the creation of "guiding principles for pharmacists," the use of in-service pharmacists, certified trainers, and school-based training programs. Additionally, IPA made a number of declarations and endorsements to support the role of pharmacists in HIV/AIDS. [4] Incorporating pharmacists into National AIDS Control Organization (NACO) activities, such as those pertaining to the acquisition, distribution, storage, and appropriate use of antiretroviral (ARV) medications, was advised by WHO-India. Accordingly, the Department of AIDS Control was providing mandatory training to pharmacists employed by Antiretroviral Therapy (ART) centers and Link ART centers (LAC). Given that 83% of students are interested in actively participating in HIV/AIDS control programs, expanding this type of training to include students and interns as well as pharmacists employed by commercial pharmacies will have a multia-fold greater impact. [5,6]

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## 2. REVISED NATIONAL TUBERCULOSIS CONTROL (RNTCP)

Tuberculosis (TB) continues to be a major public health problem in India, contributing a high percentage to the world's TB burden. The Revised National Tuberculosis Control Programme (RNTCP) was initiated to strengthen the control of TB through an established and organized system. The framework, successes, setbacks, and directions for the future of the RNTCP are analyzed in this paper based on important policy reports and research papers. [7] Tuberculosis continues to be a major public health cause of morbidity and mortality globally. With the highest burden of tuberculosis, India launched the Revised National Tuberculosis Control Programme (RNTCP) in 1997 to strengthen the strategies for diagnosis, treatment, and prevention of TB. The programme was later rebranded as the National Tuberculosis Elimination Programme (NTEP) in 2020 with a vision to eliminate tuberculosis by 2025, five years prior to the global target. This review addresses the progress and achievement of the programme. [8,9]

The RNTCP was launched to enhance TB control through the Directly Observed Treatment Short-course (DOTS) strategy. It has undergone several phases over the years. Phase I (1997-2005) was countrywide implementation of DOTS with uniform treatment. [10] Phase II (2006-2012) enhanced diagnosis by adding newer diagnostic modalities and increasing treatment centers. Phase III (2012-2017) further speeded up the services by adding strategies for the management of multidrug-resistant TB (MDR-TB) and adding more advanced diagnostics. [11] The launch of NTEP in 2020 was a step towards universal access to quality TB care, patient-centered strategies, and integration with the health system. Substantial progress has been made in the RNTCP/NTEP. Detection of TB cases has been consolidated through enhanced diagnostic services such as molecular diagnosis and rapid drug resistance testing. [12,13] Private sector involvement has also improved reporting and patient management through efficient public-private partnerships. Notwithstanding these advances, a number of challenges remain. Drug resistance poses a significant threat, with increased levels of MDR-TB and XDR-TB with high treatment difficulty. Gaps in diagnosis and reporting continue to result in underreporting and delayed treatment. Socioeconomic determinants influence patient adherence to long TB therapy, while retention of care continues to be a challenge. TB stigma continues to discourage healthcare-seeking behavior. Additionally, the COVID-19 pandemic negatively affected TB service delivery, leading to reduced detection and treatment backsliding. [14,15]

It is possible to enhance case detection and the prudent administration of anti-TB medications by offering diploma-trained community pharmacists ongoing instruction on TB control. [16] In order to better use community pharmacies and the pharmacist profession, the Ministry of Health collaborated with IPA to create a training module for community pharmacists. RNTCP guidelines for the first time in 2010 identified "pharmacists" as experts in treating Multi-Drug-Resistant Tuberculosis (MDR-TB), which is highly encouraging for the nation's pharmacy workforce. [17]

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## 3. LEPROSY ERADICATION (NLEP)

To reduce the incidence of leprosy infections, the National Leprosy Control Programme (NLCP) was established in 1955. The National Leprosy Eradication Program was started in 1983, and leprosy control tactics were modified. Multidrug treatment was also introduced that year. The World Health Assembly decided in 1991 to eradicate leprosy worldwide by the year 2000. [18] The first World Bank-sponsored project was launched in India in 1993 and finished in 2000 with the goal of bolstering the nation's elimination process. The second initiative funded by the World Bank took place from 2001 to 2002. The national leprosy elimination target was established in 2005 as a result of the decreasing number of leprosy cases. A particular action plan was created in 2009 for 209 high endemic districts spread over 16 states and union territories. [19,20]

In order to guarantee early detection and comprehensive treatment of leprosy, NLEP is implementing a decentralized, integrated leprosy service. Other objectives of NLEP include conducting surveys to detect leprosy in children and multibacillary leprosy, as well as early diagnosis with timely multidrug therapy. The initiative also includes providing health education seminars, enhancing disability prevention services, and involving ASHAs. [21]

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## 4. NATIONAL TOBACCO CONTROL PROGRAM (NTCP)

India is also the world's second largest tobacco consumer after China. Adults (15 years and older) consume tobacco at 35%. For men, this figure is 48% and for women, it is 20%. In rural areas, two in five adults (38%) smoke some form of tobacco, while in urban areas, one in four adults (25%) smoke some form of tobacco. [22]

Effective implementation of tobacco control laws remains a major challenge, with the implementation of various provisions of Cigarettes and Other Tobacco Products Act (COTPA) falling primarily on the responsibility of the state governments. To strengthen the implementation of tobacco control provisions of COTPA and the tobacco control guidelines outlined in the WHO Framework Convention on Tobacco Control, the Government of India launched the National Tobacco Control Programme (NTCP) as a pilot project in 2007/08. The programme is being implemented in 21 of the 35 states/union territories in India. During the XI Five Year Plan, NTCP was introduced in 42 districts nationwide, with the goal of covering the majority of districts. [23] While COTPA 2003 is applicable nationwide, it would be better to implement it throughout the plan period. Tobacco Cessation Centers [TCCs] would also be established to assist individuals who wish to stop smoking in any way. The Global Adult Tobacco Survey India 2009–10 was conducted in all 29 states of the nation as well as the two union territories of Chandigarh and Pondicherry, with a population of approximately 99.9%. Students in grades 8, 9, and 10 who were between the ages of 13 and 15 participated in the Global Youth Tobacco Survey India 2009. Public awareness initiatives at the national level In order to raise awareness of the negative effects of tobacco usage, a two-month outdoor media campaign was started throughout India using a wide range of media. In cooperation with WHO-India, a National Consultation on the Economics of Tobacco was held in New Delhi on December 20 and 21, 2012. [24]

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## 5. NATIONAL MENTAL HEALTH PROGRAM (NMHP)

It is estimated that mental problems affect 6–7% of the population. According to a 1993 World Bank research, the Disability Adjusted Life Year (DALY) loss from neuropsychiatric disorders is significantly greater than that from tuberculosis, diarrhea, malaria, and worm infestations when considered separately. [25] When combined, these conditions make for 12% of the global burden of disease (GBD), and a trend study suggests that by 2020, this percentage will rise to 15% (World Health Report, 2001). A behavioral or mental disorder is expected to affect at least one member of one in four families (WHO 2001). In addition to offering emotional and physical care, these families also experience the detrimental effects of discrimination and stigma. Over 90% of them are still untreated. [26]

The high treatment gap can be attributed to a number of factors, including a lack of information about the signs of mental illness, associated stigma and myths, the availability of therapy, and the possible advantages of seeking treatment. The National Mental Health Programme (NMHP) was started by the Indian government in 1982 with the following goals in mind: 1. To guarantee the provision and availability of basic mental health care for everyone in the near future, especially for the most marginalized and vulnerable segments of society; 2. To support the integration of mental health knowledge into general healthcare and social development; and 3. To encourage community involvement in the development of mental health services and to encourage community self-help initiatives. [27]

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## 6. NATIONAL PROGRAM CONTROL OF BLINDNESS (NPCB)

There is no recorded evidence of pharmacist involvement in NPCB, unlike the HIV/AIDS control program, RNTCP, and NTCP, despite the fact that 72% of the responding students expressed a desire to play an active role in NPCB. Consequently, it is critical that professional organizations take the initiative to determine how pharmacists may contribute to NPCB and generate evidence. As demonstrated by the aforementioned instances and experiences, the Indian government can employ pharmacists' knowledge in a variety of public health initiatives. [28] Professional associations like IPA and the Pharmacy Council of India should collaborate with pharmacy schools to build curricula and create new public health roles and services for pharmacists, as pharmacy students appear interested in contributing to NPHPs. Pharmacists' contribution to public health is being promoted by the Pharmacy Council of India, the statutory organization in charge of regulating the profession and practice of pharmacy. In order to lower the prevalence of blindness to 0.3% by 2020, the National Programme for Control of Blindness (NPCB), a fully state supported program, was established in 1976. The NPCB's 2006–07 Rapid Survey on Avoidable Blindness revealed that the prevalence of blindness had decreased from 1.1% in 2001–02 to 1% in 2006–07. [29,30]

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## CONCLUSION:

Participation in national health programs and NPHPs is crucial for pharmacists. But the pharmacy programs in India are not teaching them enough about NPHPs and health policies.

In particular, their significance in HIV/AIDS control, RNTCP, blindness control, pulse polio, NTCP, and universal vaccination programs is highlighted in the more thorough research to identify pharmacists as prospective contributors within NPHPs.

In India, curriculum development teams and statutory authorities ought to begin considering incorporating national public health programs and public health features into curricula at all levels.

Increased exposure to public health services is likely to improve the general population's attitudes and health, since the National Health and Pharmaceutical Policies and Support are an important component of national public health initiatives. It's time to acknowledge the critical role pharmacists play in public health care, as recommended by WHO resolution WHA 47.12, and curriculum content should reflect this.

## CONFLICT OF INTEREST

No conflicts of interest.

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