

Causes of Tobacco Use and its Effects on Human Health: A Comprehensive Review

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ABSTRACT

Tobacco use is a major cause of morbidity and mortality worldwide. It affects not only children and adolescents but also adults and the elderly. The detrimental effects on human health include psychiatric disorders, a tendency to use other illicit drugs, infertility and more. It also harms foetuses and infants when used by pregnant and lactating mothers. Complications of pregnancy caused by maternal smoking include placenta previa, placental abruption, premature rupture of membranes, ectopic pregnancy, miscarriage and an increased risk of abnormal bleeding during pregnancy and delivery. Babies born to women who smoke throughout pregnancy are more likely to be small for gestational age and there are chances of stillbirth, neonatal respiratory and gastrointestinal diseases, transfer to the Neonatal Intensive Care Unit (NICU) and admissions for more than seven days. Intrauterine death, Sudden Infant Death Syndrome (SIDS) and neonatal infections can also occur. Nicotine secreted into breast milk has adverse effects on the newborn. In the elderly, tobacco use is more likely to cause cognitive impairment, dementia and other sensory disabilities, as well as loss of function, mobility and independence. It also causes age-related diseases such as osteoporosis and breast cancer in elderly women. Major causes of death in the elderly due to tobacco use include cardiac, cerebrovascular and respiratory diseases. It increases the risk of myocardial infarction, Chronic Obstructive Pulmonary Disease (COPD) and lung cancer in the elderly and is associated with poorer wound healing. Hence, the integration of tobacco cessation programs into routine health services is very important.

Keywords: Adolescents, Children, Elderly, Maternal tobacco use, Young adults

INTRODUCTION

The use of any tobacco product is considered "tobacco use." As defined by the US Food and Drug Administration (FDA), tobacco products include any product made or derived from tobacco intended for human consumption (except products that meet the definition of drugs) [1]. Tobacco use is a major cause of global morbidity and mortality and plays a pivotal role in the development and progression of cancer through both smoking and non-smoking forms. It is also a significant risk factor in developing a wide spectrum of oral diseases and conditions.

The age at which school children in rural areas initiate tobacco use is decreasing and children are falling prey to this deleterious habit at an increasingly early age. In India, nearly one in ten adolescents aged 13 to 15 years are ever users of cigarettes and almost half of these initiate tobacco use before the age of 10. Additionally, Smokeless Tobacco (SLT) is easily available, affordable, attractively packaged and used by more than one-fifth of the population aged 15 years and older, with initiation of use often occurring before the age of 10 [2,3]. Most adult tobacco users start this detrimental habit in childhood or adolescence. Tobacco companies are now aggressively targeting their advertising strategies in developing countries like India, which attracts adolescents and young adults to tobacco products. There is an urgent need to intervene and protect them from falling prey to this addiction [4,5]. Tobacco use is also common among the elderly [6,7]. Even women in their perinatal period are succumbing to this harmful habit [8-13].

The aim of this review was to describe the causes and detrimental effects of tobacco use on human health, with an emphasis on barriers to quitting tobacco.

Different Forms of Tobacco

Tobacco is smoked in the forms of beedis and cigarettes or through devices like hookahs, chillums and dhumti. Smoking cigars and pipes is more common in western countries, while cigarette smoking is prevalent in urban areas of India. Because of the relatively

higher cost of cigarettes compared to other forms of tobacco, cigarette smoking is more common among the upper and middle socioeconomic classes. Tobacco is also used in several smokeless forms in India, such as betel quid, mishri, khaini, gutka, snuff and as an ingredient in pan masala [5].

Tobacco Use in Children, Adolescents and Young Adults

Even though the impact of tobacco use on chronic disease is well documented and undeniable, generation after generation continues to use these deadly products and family after family suffers the devastating consequences [14]. One factor contributing to the prevalence of this habit is the easy accessibility of tobacco products. Students often perceive smoking as a cool behaviour that relieves stress and negative emotions. Easy accessibility leads to increased usage. Some students believe that smoking will prevent weight gain, while others think it will result in weight loss. Many students have also reported that smoking and health were never discussed as part of their education in school. It has been reported that students who smoke tend to have more friends and feel it makes them look more attractive [15-18].

Quitting tobacco smoking is associated with improved mental health, including reductions in depression, anxiety and Post-Traumatic Stress Disorder (PTSD) symptoms [19]. The best way to stop a habit is not to start it, as habits are easier to abandon today than tomorrow. We can build strong children instead of repairing broken adults. The adverse health effects on children should be taken seriously and intervention efforts should start before they reach their teenage years, before they can form opinions and begin consuming tobacco [20]. The tobacco epidemic takes a substantial toll on the health of infants, children, adolescents and young adults.

Actions taken by pediatricians may help reduce the risk of developing tobacco use disorder and exposure to tobacco smoke [21]. Raising parental awareness of tobacco products should be part of anticipatory guidance and prevention support [22]. Children with tobacco-addicted parents and siblings are at higher risk of

becoming addicted due to genetic and environmental factors. Parents who are addicted to smoking are more likely to grant their children easy access to cigarettes and are less likely to oppose their smoking. Thus, parents and other adult family members need to set good examples.

Moreover, parents with low educational levels should be targeted with messages appropriate to their social context, literacy and understanding level. This can be achieved through anti-smoking drives or programs, as it has been found that higher parental education is associated with lower tobacco use in adolescents [23-25].

In 2004, the Government of India enacted its comprehensive tobacco control law, known as the Cigarettes and Other Tobacco Products Act 2003 (COTPA 2003), aiming to reduce tobacco use by prohibiting advertisements and regulating trade, commerce, production, supply and distribution [26]. The Central Government has made rules to further amend the Cigarettes and Other Tobacco Products (Packaging and Labelling) Rules, 2008. These amendments, titled the Cigarettes and Other Tobacco Products (Packaging and Labelling) Amendment Rules, 2024, will come into force upon publication in the official gazette.

For smoking and smokeless forms of tobacco products, the phrases "TOBACCO CAUSES PAINFUL DEATH" will appear in white font on a red background. The words and figures "QUIT TODAY CALL 1800-11-2356" will appear in white font on a black background. Parents have expressed a positive attitude toward the strict implementation of the COPTA law in India. They also recognise tobacco as a cause of health hazards for both children and adults and agree to change their behaviour to support strong and sustainable measures for implementing this law. It is essential to educate and motivate people of all ages to prevent tobacco use in India [20].

Many parents are unaware of their children's non cigarette tobacco use. Therefore, establishing expectations for tobacco-free environments appears to be more effective in preventing youth tobacco initiation than merely advising children not to use tobacco [22].

Narain R et al., found a downward shift in the age at which tobacco use begins, with a rising prevalence among girls; the uptake of tobacco habits before age 11 is 1.8 times more common among girls than boys. They also identified a statistically significant linear trend in the age of initiation of any tobacco habit for those up to 15 years of age, among both boys and girls [4]. However, in most studies, a significantly higher proportion of boys are found to use tobacco and they tend to be more sensitive to the disapproval of their best friends or older brothers than to parental disapproval. Boys are also more likely to develop this detrimental habit because they believe it represents a masculine tendency for risk-taking and risk minimisation [5,15,16].

Daily cigarette smoking is associated with an increased likelihood of diagnoses of anxiety, mood disorders and disruptive behaviour. Psychiatric co-morbidity is common among adolescent cigarette smokers, particularly among those with disruptive behaviours (such as oppositional defiant disorder, conduct disorder and Attention Deficit Hyperactive Disorder (ADHD)), major depressive disorders and drug and alcohol use. Early onset of cigarette smoking (before 13 years of age) and early onset of conduct problems are markers of increased psychopathology later in life, including substance abuse. There is also a high rate of cigarette smoking among adolescents with bipolar disorder. The onset of smoking before 13 years of age, compared with onset after 17 years, has been found to be associated with earlier onset and more episodes of major depressive disorder. Substance use disorders, as well as psychotic and depressive disorders, tend to follow the initiation of daily smoking. Conduct or oppositional defiant disorders appear to precede daily smoking. Early initiation of tobacco use among adolescents is also associated

with the use of other substances, such as alcohol, cocaine and marijuana [27]. Hence, it is crucial to control this habit.

TOBACCO USE IN PERINATAL WOMEN

The perinatal period encompasses the time frame from one year before to 18 to 24 months after the birth of the child. This period constitutes a window of opportunity through which parent-infant interaction may be reinforced, offering the possibility of decreasing the risk of family dysfunction [8]. It is a sensitive time for both the mother and the fetus [9]. Maternal cigarette smoking during pregnancy is associated with adverse maternal, foetal and infant outcomes.

On the other hand, maternal Smokeless Tobacco (SLT) use during pregnancy has a more complex risk profile. The perceived safety or reduced harm of SLT use during pregnancy has led to its use as either a smoking cessation aid or as a normalised, culturally acceptable form of tobacco use for women of reproductive age and pregnant women [28]. Furthermore, there is a widespread belief that topical use of tobacco improves oral hygiene, prevents dental caries and, since the tobacco is not swallowed, does not cause adverse systemic side-effects [29].

The relative popularity of SLT can also be attributed to its low cost, easy availability and social acceptability [30]. In some cultures, SLT use among women is taboo, leading to underreporting and lack of visibility in public health discourses. In others, it is used as a traditional remedy for ailments like toothache and nausea during pregnancy, further exacerbating its use among women of reproductive age [31].

The SLT, being a known risk factor for oral cancers, contributes to morbidity in Indian women. The use of this product during the perinatal period is associated with detrimental effects on both the mother and the fetus or infant. It can lead to infertility during the reproductive years of women. Chewable tobacco, a key ingredient in gutka, contains iron that affects iron metabolism, haemoglobin levels and iron stores, potentially diminishing the expression of hepcidin messenger Ribonucleic Acid (mRNA) and reducing hepcidin levels, which are essential for maintaining iron balance, especially in pregnant women. Furthermore, the crushed areca nut in gutka, which contains alkaloids, may impair the intestine's ability to absorb iron, while calcium hydroxide, commonly found in gutka, is known to inhibit iron absorption. All these mechanisms can lead to anaemia.

Preeclampsia can also occur during pregnancy, along with impairment of ovarian function, morphology, oocyte quality and hormonal regulation. It is associated with increased degenerative placental changes, leading to a higher number of chorionic villi with excessive collagen, a higher incidence of apoptosis in parenchymal cells, a higher density of syncytial knots and a thicker subtrophoblastic basement membrane. Such changes increase the risk of adverse birth outcomes, such as foetal growth restriction, resulting in low birth weight infants. It also shortens the gestational period and increases the number of preterm deliveries. Additionally, it can lead to altered gender ratios, foetal distress, neonatal apnea, early neonatal death and stillbirths. Neurobehavioural signs and congenital anomalies can also occur in infants born to mothers using SLT [13,29,31-34].

Nicotine exposure during pregnancy induces vasoconstriction in uteroplacental blood vessels, thereby reducing placental blood flow, oxygen and nutrient delivery. This can lead to hypoxic conditions and impaired foetal development. Additionally, nicotine exposure during critical periods of foetal development has been linked to epigenetic modifications that alter gene expression in vital organs, including the heart, lungs and brain, with lasting effects on health and disease susceptibility.

Both e-cigarette aerosol vaping and nicotine exposure during pregnancy lead to foetal programming of neurovascular and

cardiovascular dysfunction in postnatal life. This programming occurs through epigenetic regulatory mechanisms involving alterations in Deoxyribonucleic Acid (DNA) methylation, RNA methylation and miRNA expression.

Areca nut and leaf contain plant-based alkaloids (arecaidine, arecoline, guvacine and guvacoline) that act as cholinergic agonists similar to nicotine. The mutagenic effects of these alkaloids have been demonstrated in animal models. One potential explanation for the higher rate of infant death associated with tobacco-only quid products is that they contain more tobacco than betel quid products, which include areca nut or leaf [28].

India accounts for over 67% of SLT users globally, with more than 50 million women in India chewing tobacco. Although SLT use among pregnant women has decreased, it has shifted towards those who are socially and economically vulnerable. While the northeastern states show a high prevalence of SLT use, the northern, central and western states together have the highest absolute number of SLT users among pregnant women [35].

In a study conducted in India by Singh PK et al., data on SLT use and prevalence among pregnant women were collected through the Global Adult Tobacco Survey (GATS) and the National Family Health Survey (NFHS), the India-specific version of the Demographic and Health Survey (DHS). The national prevalence of any SLT use among pregnant women was found to be 4% in the NFHS (2015-16). In contrast, the second round of GATS (2016-17) estimated the prevalence at 7.4%, indicating a substantial discrepancy between the two major health information sources [36].

When examining age-wise patterns of SLT use among pregnant women, the NFHS showed an increase with advancing maternal age. For instance, 3% of pregnant women aged 20-24 years were consuming SLT, while the corresponding percentages were 6.3% and 9.5% among the 30-34 and 35-39 years age groups, respectively. In contrast, GATS data suggested an increase in SLT use up to the 25-29 years age group, followed by a decline thereafter [36].

A study by Virk A et al., was among the first to report on the prevalence of tobacco smoking and SLT use among currently married pregnant and lactating mothers in India. They analysed data from the Fifth National Family Health Survey (NFHS-5), conducted between 2019 and 2021 and found SLT to be the most prevalent form of tobacco used by pregnant (2.2%) and lactating (2.8%) women in India. The prevalence among pregnant women increased from 9.6% at 15-19 years of age to 33.4% at 25-29 years and then declined after 30 years of age. Among lactating women, the prevalence of SLT use was highest at 25-29 years (35.2%) [30].

Peng J et al., in their study, found a 6.6% prevalence of SLT use among pregnant women in Cambodia. Tobacco-using mothers during pregnancy were generally older and had lower income and education levels [28].

The adverse outcomes of SLT use are dose-dependent and similar to those associated with maternal smoking [13]. Women of childbearing age who smoke are also at higher risk of delayed conception and infertility [37]. Maternal smoking during pregnancy increases the risk of several complications, including placenta previa (placenta partially or completely covering the lower uterine segment) [38], placental abruption (premature separation of the placenta from the uterine wall before delivery) [39], premature rupture of membranes (rupture of foetal membranes before the onset of labour contractions, increasing the risk of infection and placental abruption, particularly at term) [40], ectopic pregnancy (implantation of foetal tissue outside the uterus, including in the cervix, uterine cornu, myometrium, ovaries, or abdominal cavity) [41] and miscarriage (pregnancy loss before 24 weeks of gestation) [42]. It also doubles the risk of abnormal bleeding during pregnancy and delivery, posing serious risks to both mother and infant [11].

Babies born to women who smoke throughout pregnancy are more likely to be small for gestational age. It is hypothesised that this occurs due to a combination of Carbon Monoxide (CO) exposure, which decreases the oxygen-carrying capacity of foetal haemoglobin and nicotine, which induces maternal catecholamine release. These effects result in repeated episodes of reduced maternal perfusion of the placenta, which can manifest as reduced foetal movements and poor perinatal outcomes, including foetal growth restriction and stillbirth [10].

Smoking during pregnancy is also associated with preterm birth, low birth weight (<2500 g), intrauterine growth restriction, neonatal respiratory and gastrointestinal diseases, transfer to the Neonatal Intensive Care Unit (NICU) and NICU stays lasting more than seven days. Heavy smoking (≥ 20 cigarettes per day) has been linked to intrauterine death and neonatal infection [43]. Maternal smoking is also associated with decreased infant length and head circumference, as well as congenital malformations [44]. Infants born to smoking mothers face a higher risk of neonatal mortality due to conditions such as Sudden Infant Death Syndrome (SIDS), respiratory infections and developmental disorders [45,46].

Tobacco smoke exposure through lactating mothers also has detrimental effects on infants. Nicotine secreted into breast milk can cause severe adverse effects on the newborn, depending on the number of cigarettes consumed by the mother per day and the interval between the last cigarette and breastfeeding, since the half-life of nicotine in breast milk is approximately two hours. Nicotine is rapidly absorbed in the infant's intestine and may accumulate in tissues, causing apnea, restlessness and vomiting. This occurs because the exact age at which infants develop the full ability to metabolise nicotine is unknown.

Breastfeeding thus increases infant exposure to tobacco products, especially nicotine. Acute episodes of maternal smoking cause significant changes in the sleep and wake patterns of breastfed infants. Inhaled nicotine can lead to irritability, excessive crying, lethargy, colic and pallor in infants. Smoking can also reduce the iodine content of breast milk, increasing the infant's risk of iodine deficiency and related physiological disorders, since an infant's thyroid function during breastfeeding depends on maternal milk iodine.

Smoking mothers have been found to have significantly higher serum levels of thiocyanate, which may competitively inhibit the sodium-iodide symporter (responsible for iodide transport in the lactating mammary gland). Maternal nicotine exposure may also induce neonatal thyroid dysfunction and potential secondary hypothyroidism in adulthood [47].

Cotinine, a metabolite of nicotine, is present in both amniotic fluid and foetal cord blood, confirming that nicotine can cross the placental barrier. Cotinine and nicotine increase maternal blood pressure and heart rate while simultaneously decreasing uterine artery blood flow. Carboxyhaemoglobin concentrations in the fetus rise due to the high concentration of carbon monoxide in cigarette smoke, leading to decreased oxygen saturation in the descending aorta and inferior vena cava, which may cause intrauterine hypoxia and complications during pregnancy [48].

Smoking mothers also tend to wean their babies earlier than non-smokers. Cotinine concentrations in breast milk depend on the number of cigarettes smoked and the highest urinary excretion of cotinine (expressed as ng cotinine/mg creatinine ratios) has been observed in infants fully breastfed by smoking mothers [49].

In a study conducted in Cambodia, Peng J et al., found the prevalence of smoked tobacco use among lactating mothers to be 3.3% [28]. Míguez MC and Pereira B, in their study conducted in Spain, reported a 16.6% prevalence of continuous smoking during the perinatal period. The mean self-reported number of cigarettes smoked per day was 5.8 ± 3.58 in the first trimester, 4.2 ± 1.91 in the

third trimester, 7.6 ± 3.60 at two months postpartum and 8.6 ± 3.67 at 6-8 months postpartum. Additionally, 60.9% of participants reported having decreased their cigarette consumption in the past year by an average of 10.4 ± 4.67 cigarettes [50].

Meaton I et al., in their study conducted in England, found the prevalence of smoking among pregnant mothers to be 18.5%. Smoking women were younger, with a mean age of 26.8 ± 4.3 years, compared to a mean age of 28.8 ± 4.2 years; $p < 0.001$ in the non smoking cohort [10].

Allen H and Daw J in their study conducted in the United States, found the prevalence of smoking to be 14.6% (95% CI, 13.1%-16.2%) preconception, 7.2% (95% CI, 6.1%-8.5%) during pregnancy, 7.0% (95% CI, 5.9%-8.4%) in the early postpartum period and 11.5% (95% CI, 10.1%-13.0%) in the late postpartum period. Younger individuals (aged 18-24 years) were less likely than those aged 30 years or older to report never smoking and were more likely to relapse postpartum [12].

Kipling L et al., assessed the prevalence of smoking habits before, during and after pregnancy in the United States using the Pregnancy Risk Assessment Monitoring System (PRAMS). They found the prevalence of cigarette smoking to be 12.1% before pregnancy, 5.4% during pregnancy and 7.2% during the postpartum period [11].

Virk A et al., who studied both pregnant and lactating mothers in India, reported the prevalence of smoked tobacco among pregnant women as 0.3%, while among lactating women it was 0.4%. In both groups, the use of bidi was the most common form of smoked tobacco (1.7% and 2.1%, respectively). The prevalence of smoked tobacco use among pregnant women increased with age, from 10.5% in the 15-19 years age group to 38.9% in the 20-24 years age group. Among lactating women, the highest prevalence of smoked tobacco use was seen in the 25-29 years age group (29.3%) [30].

Working pregnant women had higher odds of consuming smoked tobacco (AOR=4.635; 95% CI: 1.23-17.43; $p=0.023$), while the odds of SLT use were lower among those who were employed (AOR=0.167; 95% CI: 0.057-0.491; $p=0.001$) [30]. Integration of tobacco cessation programs into routine health services, especially for women, can help reduce tobacco use and promote healthier behaviours [31].

TOBACCO USE IN THE ELDERLY

Tobacco use is common among the elderly. In Western countries, smoking is more prevalent than the use of chewable tobacco; however, the situation is reversed in the Indian subcontinent [51]. Mini GK et al., conducted a study in seven major states of India in 2011 using data from the United Nations Population Fund (UNFPA) survey on "Building Knowledge Base on Population Ageing in India" (BKPAI). They found that the current use of any form of tobacco was 27.8% (men: 37.9%; women: 18.8%). Among the respondents, 9.2% reported using only smoked tobacco, 16.9% used only SLT and 1.7% used both forms [7].

Among the selected states, Odisha showed the highest prevalence of current tobacco use (50.7%), followed by West Bengal (40.5%), Maharashtra (38.4%), Himachal Pradesh (23.1%), Kerala (23.0%), Tamil Nadu (12.8%) and Punjab (5.5%) [7].

Hunt LJ et al., in a retrospective cohort study conducted in the USA, found that smoking prevalence among older persons has declined and that a substantial number of older smokers succeed in quitting smoking for a sustained period, highlighting the need for continued aggressive efforts toward tobacco cessation in this age group [52].

Elderly tobacco users are more vulnerable to the consequences of smoking due to the additive effects of smoke exposure. Smoking is associated with a higher risk of cognitive impairment and dementia in the elderly and is linked to various sensory disabilities, loss of function, reduced mobility and decreased independence. It also

contributes to age-related diseases in older women, such as osteoporosis and breast cancer.

Furthermore, smoking is a major risk factor for many causes of death among the elderly, including cardiovascular, cerebrovascular and respiratory diseases. It increases the risk of myocardial infarction, COPD and lung cancer and is also associated with delayed wound healing. Notably, more than 70% of all smoking-related deaths occur in individuals over the age of 60 [6,51-56].

BARRIERS TO QUITTING TOBACCO

The "hardening hypothesis" suggests that tobacco control efforts have largely influenced those smokers who found it easier to quit, leaving behind a group of smokers who are less likely to stop smoking [21]. Many tobacco users are unable to resist temptation and their relapses are often attributed to the influence of friends who smoke in social settings or workplaces. Cigarettes contain highly addictive nicotine, which causes intense withdrawal symptoms when one attempts to quit.

Many smokers report experiencing nausea, dizziness, headaches, depression, cravings, insomnia, coughing, mood swings and numbness associated with withdrawal, all of which make quitting difficult. The offering of cigarettes by friends and relatives also contributes to relapse. Some smokers hold the misconception that the ability to quit depends solely on mental strength or that stopping smoking may harm the body.

If smoking cessation services are not perceived as user-friendly or are poorly understood, this can further hinder successful quitting attempts. Some tobacco users have tried conventional methods (such as smoking cessation clinics and nicotine replacement therapy) as well as alternative methods (such as electronic cigarettes) in their attempts to quit and many have reported that pharmacotherapy was ineffective. This may lead to a negative perception regarding the effectiveness of assisted smoking cessation [19,57].

Coping is the process by which individuals attempt to manage the perceived gap between the challenges they face and the resources available to handle them. Many tobacco users associate smoking with coping with everyday stress. These stressors—often related to relationships, finances, employment, social inequality and family problems—act as barriers to quitting.

Increasing levels of perceived stress among daily smokers are strongly associated with heavy smoking. Many individuals hold the misconception that cigarettes help them relax or boost their confidence. They view smoking as a way to manage life's daily pressures and unwanted emotions. Another barrier to quitting is that many smokers are not sufficiently fearful of the health consequences of smoking and may express a desire to quit even in the face of severe illness [58].

Achieving successful tobacco cessation can also be challenging among individuals with mental illness, particularly when nicotine replacement therapy or other pharmacotherapies to manage withdrawal symptoms are unavailable or unaffordable [19]. Smokers who are prone to depression experience significant difficulties when they stop smoking. They are at risk of severe withdrawal symptoms and may also develop serious depressive episodes that require treatment during the post-cessation period [58].

Quitting smoking becomes more difficult with advancing age due to prolonged and significant nicotine dependence [6]. Physicians should encourage older patients to quit during every patient-physician encounter by offering counseling and replacement therapy [56].

Elderly users differ from younger smokers and smokeless tobacco users in terms of longer duration of use, limited awareness of adverse effects and low motivation to quit. Therefore, motivational interviewing is often necessary. A combination of pharmacological (nicotine replacement therapy, bupropion, or varenicline) and non pharmacological approaches has shown the best outcomes.

Clinicians should prioritise helping elderly tobacco users quit to improve their overall health status [51].

NATIONAL TOBACCO CONTROL PROGRAMME (NTCP)

The National Tobacco Control Programme (NTCP) operates through a three-tier structure:

1. National Tobacco Control Cell (NTCC) at the central level
2. State Tobacco Control Cell (STCC) at the state level
3. District Tobacco Control Cell (DTCC) at the district level

In addition, there is a provision for establishing Tobacco Cessation Services at the district level. The NTCP has facilitated the allocation of dedicated funds and manpower for effective implementation. Currently, the programme is being implemented in all 36 States and Union Territories, covering approximately 612 districts across India.

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