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Short Communication

Breaking the Shackles of Tobacco/Nicotine Dependence - The Role of All Health Care Professionals

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Received: July 10, 2023; **Published:** August 18, 2023

All Health Care Professionals (HCPs) encounter patients with tobacco/nicotine addiction on a routine basis. According to the latest reports, 22.3% of the global population and 29% of the Indian population (37% males and 8% females), are involved in this practice. India is the second largest consumer of tobacco products, mostly used in smokeless forms rather than smoked ones. A recent trend of early initiation of tobacco consumption is seen among Indian youth, according to GATS-2 (2016-17) and GYTS-4 (2019) surveys, with more than 55% of youth beginning this habit before 20 years of age [1,2]. India is now the world capital of oral cancers. More than 8 million deaths yearly have been linked to tobacco, directly or indirectly [3,4]. So, it forms a major public health challenge, creating social, developmental and economic risks.

Varied kinds of tobacco products are used in the Indian sub-continent, making the situation more complex. The widely used forms of smoked tobacco comprise bidi and cigarettes, while hookah and E-cigarettes are also becoming prevalent now. The smokeless tobacco is available as a chew, snuff, dip, powder or liquid form applied for tooth cleaning, consumed with or without betel nut, slaked lime, catechu or other flavouring agents. The consumption of these products is usually initiated for perceived beneficial effects, such as mouth freshening, digestive and astringent effects, mood elevation, relieving tension and toothache, hunger and sleep reduction and oral cleaning [5,6].

India was one of the founder members of WHO Framework Convention on Tobacco Control (FCTC) – 2005. Prior to this, the Cigarettes and Other Tobacco Products Act (COTPA) – 2003 was passed by Indian government for a comprehensive tobacco control program in country. It was also pioneer in prohibiting electronic cigarettes under the Prohibition of E-Cigarettes Act (PECA) – 2019. The guidelines for Tobacco Free Educational Institutions (ToFEI) have been laid down for protecting adolescents from taking up harmful habit of tobacco consumption. Though there are strong laws, their enforcement is sub-optimal and nicotine products are still available and marketed. Nicotine addiction has been increasing globally with emerging use of electronic devices in form of e-cigarettes or e-hookah and Heated Tobacco Products [7].

The tobacco smokers, the general population and labour involved in agriculture or manufacturing of tobacco products are typically affected by nicotine exposure [8]:

- **First-hand smoking:** The person using these products personally is affected by mainstream smoke.
- **Second-hand smoking:** The people around smokers are exposed to side-stream smoke, which is equally dangerous.

- **Third-hand smoking:** The smoke settled on surrounding indoor objects, like curtains, sofas, beds, soft toys, and even wall paint, and affects other people for a long time.
- **Fourth-hand smoking:** The land or water sources are polluted with nicotine released from unused cigarette butts or quid, exposing all living beings. The filter used in cigarettes and tobacco packets are non-biodegradable and form a novel source of plastic pollution.
- **Green tobacco sickness:** The harvesters and labourers involved in tobacco cultivation and processing are exposed to chronic nicotine poisoning, causing nausea, dizziness, insomnia, etc.

Clinical implications: The commercial marketing and extent of availability of these products are immense, making tobacco consumption a major public health menace. A known common risk factor for many non-communicable diseases (NCDs) including cancer, tobacco consumption forms the largest preventable epidemic in modern society. Nicotine, a highly addictive compound present in tobacco, causes psychological as well as physical dependence, making it difficult to quit this habit [9]. After tobacco consumption, nicotine causes the secretion of neurotransmitters, like dopamine, serotonin and noradrenaline, which stimulates the receptors in the brain, causing relaxation or mood elevation, diminished hunger, increased alertness, etc. Over time, the patient develops dependence and tolerance, leading to increased, compulsive tobacco usage and several withdrawal symptoms in its absence [9].

A long term nicotine exposure is responsible for chronic respiratory diseases, diabetes, cardiovascular ailments, reproductive complications and many chronic NCDs, being causally linked with potentially malignant lesions or conditions and cancers in almost all body organs. Conversely, tobacco cessation at any stage reduces the risk of adverse health effects and enhances the quality of life of the person [10]. This, however, requires consistent efforts from the patients and repeated interventions by the health care personnel.

HCPs' role in cessation: Nicotine addiction is a disease, with a huge relapsing tendency. However, it can be treated effectively through evidence-based cessation protocol using behavioural therapy, FDA approved Nicotine Replacement Therapy (NRT) in the form of patches, gums, lozenges, etc. and pharmaco-therapy, e.g. Bupropion (anti-depressant, nicotine receptor-blocker) and Varenicline (nicotine receptor partial agonist) [11,12] All HCPs should consistently address the use of any kind of tobacco products with their patients. They should also ask about attempts for quitting tobacco usage and offer brief advice for de-addiction. They should desist from promoting E-cigarettes for tobacco cessation, which is not approved by FDA for the same. The HCPs should refer their patients to a Tobacco Cessation Specialist promptly for effective deaddiction sessions.

Behavioural counselling can be given by all HCPs and it increases the likelihood of successful quitting. Apparently, a '7-D approach' helps control cravings and quitting without relapse:

1. Drinking 8 - 10 glasses of water
2. Deep breathing and light exercises
3. Delay and increasing duration between tobacco consumption
4. Distract oneself by engaging in hobbies, music, book reading, etc.
5. A diet rich in antioxidants, vitamins and minerals boosts immunity
6. Discuss cravings and problems faced by the loved ones
7. Drugs prescribed by tobacco cessation specialists, for cravings and lesions.

The effective tobacco/nicotine cessation interventions remain largely under-utilized, as their availability and accessibility are low. Patients who are addicted to tobacco products should be warned about the dangers of tobacco use and guided for professional interventions.

They should be instructed for oral self-examination, facilitating early detection of any carcinomatous changes. Enough time allotment for individually tailored cessation-related counselling should be made at each level of the healthcare system, especially primary healthcare facilities. All HCPs should receive proper training and should be able to follow a standard protocol for tobacco cessation therapy, both pharmacological and non-pharmacological. Routine primary healthcare facilities should provide effective and systematic counselling as well as therapy, and at the national and global levels, healthcare professionals should advocate for greater resources and policy attention to tobacco control efforts.

All HCPs should take up the responsibility to treat their patients of this deadly disease of nicotine dependence. Healthcare institutes can develop a systematic referral protocol for all such patients from various departments for effective tobacco cessation counselling. National or organizational quit lines and de-addiction drives can provide a good network for cessation activities. All sections of society should become stakeholdersin in tobacco control including tobacco cessation program.

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Volume 6 Issue 9 September 2023
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