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Editorial

Tobacco Menace from Conventional to E-cigarettes

Tobacco smoking has been in practice for hundreds of years. With the spread of tobacco to Europe and other parts of the world from the sixteenth Century, tobacco smoking also gained popularity in India when Portuguese sailors brought tobacco and offered to the emperor Akbar. After a heated debate on the safety of the substance, the royal *hakim* advised the emperor to smoke only if the smoke passes through water. In few years tobacco became the valuable commodity and its use spread like a wild fire. That was the royal error which gave birth to the leading cause of preventable deaths in India. Now tobacco is one of the major causes of deaths and disease all over the world. In India it is accounting for over eight lakh deaths every year. Apart from smoking *bidis* which is made from rectangular piece of *Tendu* leaf with 0.15 - 0.25 g of sundried flaked tobacco, a plethora of smoking and smokeless forms of consumption exist in India, such as cigarettes, cigars, reverse *chhutta, chumti, hooklis, chillum, hookah, paan, khaini, mawa, snus, snuff, bajjar, mishri, gul, gudhaku*, tobacco water and so many other regional ways of using tobacco.

Despite all the government's efforts to diminish and abolish tobacco use, it remains a common sight across India. The problem is more worrying where some children as young as 10 years of age are using tobacco. Another significant factor in India is second-hand smoke (SHS) exposure, both indoor and outdoor, which is responsible for a large number of respiratory and other diseases to the people. The third-hand smoke (THS) has also taken the monster shape due to the exposure of toxicants and their exploratory behaviour and metabolic activity to children inside the households. It is evident that India has highest oral cancer rates in the world where tobacco is responsible for 90% of oral cancer cases.[1, 2]

The tobacco-related diseases are a cause and consequence of poverty. The *Tobacco Atlas* estimated the economic cost of smoking in India to around Rs.181,869 crores ($27.93 billion)[3], including health-care expenditure on the diagnosis and treatment of various cancers, cardiovascular diseases, chronic obstructive pulmonary disease and other diseases. The indirect costs such as lost productivity and absenteeism can not be ignored due to the ill effect of tobacco smoking and chewing.

However India has made progress on control of tobacco use in recent years by reducing the number of tobacco users from 34.6% to 28.6%,[4] the tobacco menace is shaping a modern look, from conventional tobacco use such as *khaini*, *guthka*, cigarettes to the new packaging coming as filtered *khaini*, low-tar slim cigarettes, and more trendy the electronic cigarettes. Profit making entities are also experimenting with the tobacco and producing tobacco with different types, such as flavoured *Hukka*, is true look alike Vape, low nicotine electronic cigarettes, nicotine salts and so on to allure the tobacco users.[5] Moreover the tobacco industries are promoting under age use of tobacco products. There is variety of electronic nicotine delivery systems (ENDS) available in the attractive designs, shape, flavour in the open market and online stores totally targeting the young and teenage groups. Vapes, vaporizers, vape pens, *hookah* pens, electronic cigarettes (e-cigarettes or e-cigs), and E-pipes are some of the many terms used to describe ENDS were marketed as a way to stop or cut-down on smoking but these are considered a biggest public health threat of this era.[7-10]

The e-cigarettes contains mixture of nicotine salts, glycerol, propylene glycol, benzoic acid and flavourings are battery operated intended to provide a similar stimulus to that of smoking regular cigarettes, works by converting liquid nicotine into a vapour that the user inhales. A number of metals including lead, chromium and nickel, and chemicals, like formaldehyde, have been found inaerosols of some ENDS, with concentrations equal to or greater than the traditional cigarettes.[9] Press release by the Indian Council of Medical Research (ICMR) suggested that ENDS users are almost at the same risk of contracting lung diseases and cancer as conventional cigarette users, also dual users are at a greater risk of heart attacks.[11] Additionally studies in different countries stated that the use of ENDS is addictive in nature and is not an evidence-based medium of tobacco cessation.[11-13] A meta-analysis showed adolescents who use ENDS were six times more likely to smoke traditional cigarettes.[14]

The menace of e-cigarettes can be seen on the world economies. The US health officials on 24th October, 2019 reported 34 vaping-related deaths and 1604 cases of illness caused by the use of electronic cigarettes.[15,16] World Health Organization Report on the Global Tobacco Epidemic 2017, stated that 30 countries including Mauritius, Australia, Singapore, Korea (Democratic People's Republic, Sri Lanka, Thailand, Brazil, Mexico, Uruguay, Bahrain, Iran, Saudi Arabia, United Arab Emirates etc, have banned ENDS in their countries. Now, Government of India put a ban on e-cigarette in September 2019. In conclusion, use of tobacco from conventional to electronic form took lives and gives birth to several painful diseases and is a menace to the society.

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