

Should the Novel Nicotine Products be Used for “Harm Reduction”?

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Introduction

Recently a number of tobacco and nicotine products have been made available on e-commerce sites and at points of sale, which include Heat not burn products (HNB) or Heated Tobacco Products (HTPs) and E-Cigarettes or Vapes, more scientifically called as Electronic Nicotine Delivery Systems (ENDS) [1]. The term harm reduction was initially used in relation to reducing the harm from addictive drugs but now the tobacco or Vape Industry is using the term to promote E-Cigarettes touted as cessation products as these are supposedly less harmful [2]. It is said that the novel products are less harmful so may be used if total abstinence is not possible. But the public health community believes that tobacco cessation does not mean addiction to another addictive substance present in e-cigarettes as Nicotine in chemical form. Harm reduction generally means a reduction of harm at an individual as well as community level so we need to consider the impact of an initiative on the whole population instead of a benefit to an individual so a product that harms a community can't be called a harm reducing product for instance if a large numbers of people use tobacco products; continue to smoke rather than quitting; or continued to use ENDS simultaneously.

The concept of tobacco harm reduction (THR)

To reduce the incidence of diseases and death from tobacco-related illnesses, the concept of THR was floated [2]. It was said that, though completely quitting Nicotine as tobacco may be the most appropriate thing to do but, because of severe addiction it may not be possible. So, E-Cigarettes may be used for tobacco cessation for some time or shift over to the supposedly less harmful product which contains Nicotine in chemical form. It is a well-known fact that Tobacco products are very harmful and lead to all types of Non-communicable diseases including cancer.

Heat not burn products (HNBs)

In HNB products tobacco is heated and not burnt. There is still not much evidence available to prove that HNB products are safer and reduce morbidity or mortality from tobacco-related illnesses, though some of the harmful chemicals related to burning tobacco may be eliminated. There is also not much evidence to prove that HNB products are helpful in tobacco cessation. WHO recommends heated tobacco products (HTPs) should be treated and regulated as tobacco products [3].

ENDS/E-Cigarettes

There has been considerable research available related to the use of ENDS. These contain Flavouring agents in addition to propylene glycol, ethylene glycol, glycerol and polyethylene glycol and Nicotine a highly addictive chemical plus heavy metals are also available in the vapours/smoke [4]. As there is no consensus about reporting the amount of nicotine in e-cigarettes, many of the manufacturers report it in a qualitative manner like zero, low, and medium-high. Different types of nicotine salts are used in e-cigarettes which may create higher nicotine dependency. So, ENDS cannot be called a safe alternative as claimed by vape manufacturers. The e-cigarettes are designed to deliver nicotine to smokers similar to traditional cigarettes. WHO considers ENDS as harmful, not harm-reduction products as projected by ENDS manufacturers and low-grade scientific researchers. The World Health Organization (WHO) warned governments, as well as the public, not to trust the tobacco industry’s latest health claims regarding e-cigarettes. Moreover, kids, pregnant women, young adults have attracted to these novel products and dual usage is another problem resulting in the use of ENDS and Tobacco products simultaneously. E-cigarettes are harmful to health even for bystanders who suffer Second Hand Smoke and are not safe as e-cigarette aerosols may contain, ultrafine particles, heavy metals and toxicants that increases the risk of heart/lung diseases and cancer [5].

ENDS are harmful to the users, minors and adult non-smokers, and potentially bystanders who are exposed to second hand aerosol. Because most e-cigarettes contain nicotine, their use by youth can lead to addiction and can harm the developing adolescent brain, disrupting attention and learning. Also, nicotine in e-cigarettes can have serious adverse effects on the development of the foetus, via the mother, during pregnancy. Whilst nicotine itself is not a carcinogen, it may function as a “tumour promoter” and has a role in degeneration of nerve cells. In addition to nicotine, e-cigarette aerosols can contain heavy metals, ultrafine particles and toxicants that may increase the risk of cancer, pulmonary and cardiovascular disease.

Considering the above-mentioned factors and the Indian Council of Medical Research (ICMR) white paper Government of India (Indian Council of Medical Research (ICMR) banned the HNB products and ENDS under PECA 2019 [6] to prohibit the production, manufacture, import, export, transport, sale, distribution, storage and advertisement of electronic cigarettes in the interest of public health to protect the people from harm and for matters connected therewith or incidental thereto.

Conclusion

The public in general and the senior officials in Government need to be sensitized about the fact that the nicotine addicts need to quit the use of tobacco or nicotine in all forms and quitting does not mean replacing an addicting product with another addicting product. The harm reduction is a misnomer as no novel tobacco or nicotine product is free of harm and also may promote dual use.

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