

HCFI Consensus Statement on Tobacco Harm Reduction and Vaping

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Harm reduction is now an established mode of public health intervention. It works on the principle of cessation of a high-risk behavior and if the same is not possible, then to switch to less harmful alternatives.

A few examples of harm reduction are:

- Human immunodeficiency virus (HIV) harm reduction: Be faithful to your partner, and if you cannot, use condoms; if you cannot, ask for pre-exposure prophylaxis.
- Salt harm reduction: Reduce intake of salt to <5 g/day/person.
- Sugar harm reduction: Switch from white sugar to brown sugar or jaggery.
- Reduce trans fats in diet to <0.5 g/serving.
- Air pollution harm reduction: Aim at reducing particulate matter as much as possible, preferably <80.
- Noise pollution harm reduction: Reduce noise at work to <80 dB.
- Road traffic harm reduction: Use helmets, wear seat belts and follow traffic rules.
- Tobacco harm reduction: Stop tobacco or switch to less harmful nicotine-based products.

TOBACCO HARM REDUCTION

Tobacco products, primarily combustible cigarettes, are the single greatest cause of tobacco-related diseases and kill about 7 million people worldwide each year. The tobacco epidemic in India has also reached alarming levels.

As per the latest estimates, there are nearly 106 million people in India who smoke tobacco and 32 million who smoke as well as chew tobacco. There are around

270 million people who use tobacco in India. India is home to 11.2% of the smokers in the world and 1.35 million people in the country die every year due to tobacco-related illnesses.

The indirect and direct costs of tobacco-related illnesses and deaths in India are also staggering. As per a Report by the Ministry of Health and Family Welfare, Government of India, the total economic costs attributable to tobacco usage-related diseases in India, in the year 2011 for people aged between 35 and 69, was Rs. 1,04,500 crores (around US \$22.4 billion).

In recent times, many smokers have transitioned to vaping products in their efforts to quit combustible smoking or reduce the harm caused thereby. Vaping products contain heated nicotine extracted from tobacco, as well as a variety of flavorings and other additives.

It is important to note here that vaping is not the same as smoking as no combustion takes place in vaping. Combustion from smoking cigarettes produces significant level of tar, carbon monoxide (CO) and other chemicals, of which 69 are known carcinogens. Combustible cigarettes accelerate cancer caused by the chemicals released.

Second-hand smoking or passive smoking from combustion not only increases the risk of coronary heart disease by 25-40% - to almost the same level as a smoker - but also causes numerous health problems in infants and children, including more frequent and severe asthma attacks, respiratory infections, ear infections and sudden infant death syndrome.

Vaping products, on the other hand, do not result in combustion and as a result, do not generate harmful chemicals to the level of conventional cigarettes.

The following consensus points emerged from the discussion:

- Tobacco contains nicotine but nicotine does not contain tobacco.
- Tobacco is = nicotine + CO + tar (more than 4,000 different chemicals are produced due to oxidation of the burnt tobacco many of which are class 1 carcinogens).
- Nicotine does not cause cancer.
- Nicotine is already marketed as an over-the-counter (OTC) drug.
- No human studies are available showing that nicotine is as or more dangerous than tobacco combustion.
- There is significant scientific evidence that suggests that vaping products seem to be less harmful alternatives to combustible cigarettes.
- In its independent evidentiary review, **Public Health England** (PHE) has categorically concluded that *"Vaping poses only a small fraction of the risks of smoking and switching completely from smoking to vaping conveys substantial health benefits over continued smoking. The previous estimate that, based on current knowledge, vaping is at least 95% less harmful than smoking remains a good way to communicate the large difference in relative risk unambiguously so that more smokers are encouraged to make the switch from smoking to vaping."* It has further observed that *"To date, the levels of metals identified in e-cigarette aerosol do not give rise to any significant safety concerns, but metal emissions, however small, are unnecessary."* On assessment of exposure to harmful constituents, PHE has observed that *"biomarkers of exposure assessed to date are consistent with significant reductions in harmful constituents and for a few biomarkers assessed...similar levels to smokers abstaining from smoking or non-smokers were observed."*
- In its report, "Consensus Study Report Public Health Consequences of E-cigarettes", the **National Academies of Sciences, Engineering and Medicine (NASEM)** has concluded in relevant parts that *"there is conclusive evidence that completely substituting e-cigarettes for combustible tobacco cigarettes reduces users' exposure to numerous toxicant and carcinogens present in combustible tobacco cigarettes"* and *"there is substantial evidence that completely switching from regular use of combustible tobacco products to vaping results in reduced short-term adverse health outcomes in several organs systems."*

As such, NASEM has concluded that *"e-cigarettes pose less risk to an individual than combustible tobacco cigarettes"* and *"complete switching from combustible tobacco cigarettes to e-cigarettes would be expected to reduce tobacco-related health risk."* Lead authors of the NASEM report on vaping, David L Eaton and Gideon St. Helen, also published a follow-on Evidence to Practice article, which recommended that, *"if a smoker's initial treatment has failed or not been tolerated, or if the smoker refuses to use approved medications and counseling and wishes to use e-cigarettes to aid quitting, physician should encourage the smoker to switch completely to e-cigarettes. We agree with Public Health England that behavioral support should be provided to smokers who want to use e-cigarettes to help them quit smoking, and that health professionals should receive education and training in use of e-cigarettes in quit attempts."*

 - **The American Cancer Society** has issued a statement that stipulates basis the available scientific evidence that the use of vaping is less harmful than smoking cigarettes.
 - **The American Heart Association** has observed that *"E-cigarettes either do not contain or have lower levels of several tobacco-derived harmful and potentially harmful constituents compared with cigarettes and smokeless tobacco..."*
 - **David B. Abrams from the College of Global Public Health**, New York University, writes in the April 2018 issue of *Annual Review of Public Health*: *"A diverse class of alternative nicotine delivery systems (ANDS) has recently been developed that do not combust tobacco and are substantially less harmful than cigarettes. ANDS have the potential to disrupt the 120-year dominance of the cigarette and challenge the field on how the tobacco pandemic could be reversed if nicotine is decoupled from lethal inhaled smoke. ANDS may provide a means to compete with, and even replace, combusted cigarette use, saves more lives more rapidly than previously possible."*
 - Based on currently available evidence, using current generation vaping products is less harmful than smoking cigarettes, but the health effects of long-term use are not known.
 - The Heart Care Foundation of India (HCFI) and the undersigned medical practitioners recognize their responsibility to continue monitoring and evaluation of emerging scientific evidence in relation to vaping products and will always strive to promptly inform policy makers, public and medical practitioners of these findings.
 - Vaping should be regulated, including regulation of marketing and advertisement.

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**More Evidence Links Pre-eclampsia to Long-Term Diastolic Dysfunction**

Women who develop pre-eclampsia may face a wide range of heart problems long after they give birth, concluded a research review. Investigators examined results from 13 studies that measured cardiac function by transthoracic echocardiography between 6 months and 18 years following a pregnancy complicated by pre-eclampsia. About 19% of women with a history of pre-eclampsia developed diastolic dysfunction, compared with 5.4% of women with uncomplicated pregnancies. With a history of pre-eclampsia, about 25% of women went on to develop heart failure within 4-10 years of giving birth, compared with 7% of women with uncomplicated pregnancies. (*Australasian Journal of Ultrasound Medicine*)

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