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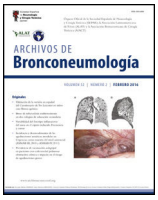

Editorial

The seduction of technology and smoking☆

Technology Seduction and Smoking

Servicio de neumología del Hospital Universitario Nuestra Señora de la Candelaria

Ninguno de los autores tiene conflictos de intereses con la industria farmacéutica ni con la industria tabaquera.

Smoking is the leading cause of disability and preventable death worldwide.[1] In Spain, despite uneven application of the law due to institutional laxity, reflected in the latest EDADES survey,[2] the WHO Framework Convention[3] provided the support needed to stand up to tobacco industry lobby and achieve such notable milestones as reduced prevalence, delayed start of consumption, greater protection for the passive smoker, and better support for individuals addicted to this legal, accessible, and affordable drug.

Given the negative impact of their star product, tobacco companies have put their weight behind 2 old chestnuts in the anti-smoking debate: first, discrediting scientific evidence and manufacturing doubt; and second, the image of social responsibility, backed by notions such as a lesser evil and the free will of the consumer.

The first is what Robert Proctor calls agnotology,[4] the s̈cience of creating ignorance.̈ This attitude has gained ground and has been adopted by deniers in many different terrains, ranging from climate change and gender violence to the evolution of the species and even of the roundness of the Earth.

The second strategy has been backed by the technological revolution that has been part of our lives since the beginning of the 21st century; today, we all hold in our hands a window to the world that by far exceeds the limits imagined by science fiction 50 years ago. This, coupled with the need for a new, responsible image, creates a m̈arket opportunity,̈ a gap that the tobacco companies have not hesitated to fill. Although the quest for the l̈east badöption is nothing new, the surge in new nicotine products only emerged in the 2000s: electronic cigarettes, e-cigarettes with and without nicotine (ENDS and ENNDS, respectively), and heated tobacco products or "heat-not-burn", as manufacturers prefer to call them, removing the word tobacco from the name to give a false impression of ẗhealthy consumption.̈

Sales and use of these products have increased exponentially since their appearance, especially in the Anglosphere, and within the past 5 years among the youngest members of the population.[5,6] It is precisely in this latter group where technology and marketing have the greatest impact: JUUL ENDS, promoted through social networks, surpassed other ENDS available on the market, sending consumption skyrocketing, even among never-smokers. Historically, the tobacco industry has defended tobacco use as a decision made by independent adults, based on social culture. However, the audiovisual media, including fashionable streaming platforms aimed at adolescent and young adult audiences, often revive the 1950s r̈ebel without a causeẗman-and-his-cigarette cinematic image to portray people using ENDS, particularly JUUL.

The emergence of these products has sparked intense debate among the scientific community about their usefulness in cessation, their safety, and the possibility of risk reduction. The recently published official SEPAR statement on electronic cigarettes and IQOS[7] summarizes the main points of interest and discussion. In the first case, studies do not show that these devices are useful for cessation and, although a positive effect compared to placebo may be seen in some cases, results are marginal. The low number of patients and the range of confidence intervals have led a Cochrane meta-analysis to assign this strategy a low grade recommendation (GRADE).[8]

The damage to health caused by these products also remains unclear. Both heated tobacco products and e-cigarettes contain IARC Class I carcinogens that have no safe exposure limit; heated tobacco products, for their part, consist of processed tobacco, so we can expect them to cause damage similar to ordinary tobacco. In terms of e-cigarettes, the e-cigarette and vaping product use-associated lung injury (EVALI)[9] syndrome was declared an epidemic in the USA in July 2019. Incidence peaked in September 2019, and by the first week of January 2020, more than 2,500 people had been hospitalized, and up to 57 deaths had been reported, predominantly in young people using both nicotine and tetrahydrocannabinol and cannabidiol. Although this entity has been associated with irregularly obtained e-liquids and vitamin E acetate, research is ongoing.

Harm reduction strategies are not exactly new[10]; the most obvious example is the effective public health intervention conducted in the 1980s and 1990s for injecting drug users in the face of the threat of HIV/AIDS. The problem with assuming that these devices, especially vaping, can limit harm is that we do not know their real toxicity, and moreover, there is a risk of individuals getting stuck in a chronic pattern of dual consumption of e-cigarettes and conventional cigarettes. It is also important to bear in mind that strategies of this type are sponsored by public health programs, and the normalization of tobacco use must always be avoided. Such strategies cannot be promoted by the tobacco industry, and health profession-

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als cannot and must not support such initiatives, as this practice is contrary to the WHO FCTC, of which Spain is part.

The mass marketing of these products has caught health professionals by surprise, leaving them with questions about how to advise and treat their patients.[11,12] It is imperative that all stakeholders disseminate knowledge and promote training in this respect, as this is the only way we can offer quality care and avoid finding ourselves at the mercy of the tobacco industry. It is time for members of the scientific community to take the reins, and ensure that the WHO's hopeful *Endgame for Tobacco* initiative is not a mere pipedream.

Conflict of interests

None of the authors has a conflict of interest with the pharmaceutical industry or the tobacco industry.

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Ruth Pitti Pérez, Lorenzo Manuel Pérez Negrín

E-mail address: rpitper@gobiernodecanarias.org (R.P. Pérez).

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