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Editorial

Mini-symposium: Vaping – When e-commerce generates e-toxicity

E-cigarettes, e-toxicity and e-commerce: a continuing public health emergency



In 2019, it was not COVID-19 that dominated as an emerging public health issue but an outbreak of E-cigarette or Vaping Associated Lung Injury (EVALI). This illness sometimes fatal, and in survivors associated with incomplete recovery of lung function, was recognized at the same time as a rapid escalation of e-cigarette (EC) use in adolescents and young adults in a number of countries [1,2]. The future course of the COVID-19 epidemic is uncertain. It is clearer that, unchecked, burgeoning use of EC in youth will cause direct and indirect harms of nicotine addiction, progression to combustible tobacco use, the risk of acute lung injury and other short-term harms to lung health. The nature and magnitude of long-term health harms for our current generation of adolescents will not be known for many years.

The political and administrative arms of government are therefore faced with two emergencies each of which require careful decision taking. That related to COVID-19 is to balance the social and economic costs of various lockdowns against the need for control of viral spread. In relation to e-cigarettes, the question of balance rests between the assistance that use may provide for smoking cessation or reduction in some smokers, often framed as harm minimization, and the toxicity associated with long-term dual use and harms as described to young people (harm avoidance). At this difficult time, the health and welfare of adolescents and young adults will be compromised if a necessary focus on COVID-19 infection precludes wise policy setting related to e-cigarettes.

In this issue of Paediatric Respiratory Reviews, we present two papers that argue strongly that harm avoidance must prevail when considering the global problem of e-cigarette uptake in young people, risk of EVALI and the balance between e-cigarettes role as a gateway to smoking versus the potential harm reduction utility of e-cigarettes for existing smokers. In the first paper, Shinbashi and Rubin [3] present a brief overview of the evolution of e-cigarettes as a growing fashionable dependency in adolescents and young adults, particularly over the last 15 years with an alarming upswing in vaping over the last 5 years. The authors point out that e-cigarettes deliver a mainstream aerosol with particle and nicotine concentrations similar to or greater than those emitted by conventional combustible cigarettes. There are variations numbering in the tens of thousands of flavour, base, nicotine strength, delivery device and settings. Determining

individual product safety or risk is impossible. The inclusion of vitamin E acetate and THC in vaping liquids was identified as a substantial contributor to the EVALI epidemic in the USA [1]. Uncertainty exists as to whether health concerns can be directly translated to nicotine salt pod-based vaping, but recent patterns of use suggest that they are certainly highly addictive [4]. The highly addictive nature of vaping is often under-emphasised in order to overlook its role in becoming effectively a gateway to nicotine dependency for smoking naive adolescents and young adults [5]. The uptake by teenagers and young adults in recent years is alarming, with non-smoking vapers being four times more likely to start cigarette smoking [6].

Given that up to 20% of American high school students were reported users of e-cigarettes in 2018, up from around 2% in 2011 [6], the potential toxicities of novel mixes as a health threat to young people is not going to disappear quickly. The threat of e-toxicity to other young people across the world is similar, as they embrace the attractiveness of the product heavily marketed to adolescents and young adults with social media, with its purported “safety” in comparison to smoking cigarettes.

In the second paper in this mini-symposium, Bhatt, Rhampul and Bush [7] provide a comprehensive overview of controversies surrounding the debate about the utility of e-cigarettes for existing cigarette smokers versus the risks for young people. The rather unique environment of England sees active and accelerating promotion of e-cigarette use, the principal institutional proponent being Public Health England, emphasizing benefit and dismissing harms in public and academic discussions.

These arguments only matter when they matter. Australia and the majority of Australian Academics have resisted the e-cigarette push. In Australia, 96.6% of youth aged 14–17 in 2019 had never smoked [8]. In contrast, the latest data from the long-running Smoking in England study show an alarming uptake in teenage and young adult smoking (www.smokinginengland.info).

It seems unlikely that harmonizing opposing viewpoints to allow for more cohesive public policy will occur [9]. Paediatricians and respiratory specialists should play an active role in informing public discussion and debating policy choices. Put simply, vaping is a way to deliver a drug and chemical cocktail to the largest body surface – one that is uniquely vulnerable to adverse exposures. Young lungs must be protected.

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