

## Unintended consequences of a cautious approach to e-cigarette laws

TO THE EDITOR: We agree with Catalano and colleagues<sup>1</sup> that nicotine liquid needs to be regulated. However, we feel that their letter overstates the risk from nicotine poisoning.

The authors state that the minimum potentially lethal dose of nicotine in humans is 60 mg, but the reference used for this claim actually estimates a far higher minimum lethal dose of 500–1000 mg.<sup>2</sup>

While it is correct to say that the “ingestion of even a small volume could cause serious harm or even death,” the reality is less worrying. The bioavailability of ingested nicotine is as little as 20% due to hepatic first pass

metabolism.<sup>3</sup> Furthermore, most cases of significant ingestion result in prompt vomiting.<sup>4</sup>

A recent review of all cases of nicotine exposure reported to the Australian Poisons Information Centres between 2009 and 2016 found that most cases resulted in only mild gastrointestinal symptoms.<sup>5</sup>

We agree with the recommendation to mandate safety labelling and childproof packaging to reduce risk. However, regulation needs to go further; legalising and enforcing quality and safety standards would help to ensure a safer product and minimise unwanted contamination, as found in a recent Australian study.<sup>6</sup>

Vaping has a potential role in reducing smoking-related disease in Australia. A recent large randomised controlled

trial demonstrated that vaping is nearly twice as effective as nicotine replacement therapy.<sup>7</sup>

Regulation needs to find a balance between reducing the risk to children and non-smokers while making high quality reduced-risk products available to smokers who are otherwise unable to quit. Overly restrictive regulations are likely to have a net negative effect on public health.

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