

Quantifying Nicotine Use in Young Vapers: A Scoping Study

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Issues: The prevalence of Nicotine Vaping Products (NVPs) in Australia by adults and particularly by adolescents has increased greatly in the past few years. The ability to quantify the amount of nicotine a user of NVPs extracts has been guess-work to date. There are misperception regarding numbers of puffs and the nicotine contained in NVPs and dependence of the young user. The “topography” (breath-holding, light puffing, individual nicotine metabolism) of vaping has a significant bearing on nicotine plasma levels. These levels drive the usage and informs the management of nicotine withdrawals and vaping cessation. Correct validated questions to indirectly assess plasma nicotine helps us better manage vape usage and develop cessation strategies where required.

Method: Salivary cotinine, the metabolite of nicotine, was tested in anonymous young volunteers who use NVPs. This rapid result biomarker was used to validate a simple questionnaire. Expired Carbon Monoxide test confirmed non-smoking (dual use).

Results To-date: ‘Time to first vape (TTFV), vaping at home alone, what’s it like when you can’t vape?’ were strongly correlated with higher levels of salivary cotinine. Number of puffs and nicotine content of NVPs were not associated cotinine levels.

Discussions and Conclusions: A few simple questions have been validated by the salivary cotinine biomarker.

Implications for Practice or Policy: Simply asking a young person TTFV, Vaping at home alone and how they feel when not able to Vape will help quickly identify young nicotine dependent vapers and inform future management of vaping cessation.

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