

High cost of vaping in Australia revealed

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Credit: QIMR Berghofer Medical Research Institute

QIMR Berghofer researchers have warned that the increased prevalence of vaping could ultimately cost the Australian health system upwards of \$180 million each year, just from a portion of users taking up tobacco smoking.

It is estimated that 13% of people who vape but have never smoked before transition to tobacco cigarettes.

To understand the financial impact of this transition, QIMR Berghofer researcher Professor Louisa Gordon has conducted the nation's first economic analysis of the cost of smoking vapes or e-cigarettes on the Australian health care system.

The findings, [published](#) in the *Australian Health Review*, conservatively estimate at least \$180 million annually will be needed to treat increased numbers of people with [respiratory diseases](#), [cardiovascular disease](#) and cancer. This is in addition to the current health care costs of 25 smoking-related conditions estimated to be \$2.6 billion each year.

"In a short space of time we've seen a huge increase in the number of people vaping in this country. It is estimated that more than 1 million people use e-cigarettes," said Professor Gordon.

"There's a risk that the nation's already strained health system could weaken even further, with an increased number of people experiencing smoking-induced disease and addiction following a transition from vaping to cigarettes.

"The government is absolutely on the right path, banning the importation of disposable vapes and making therapeutic vapes only accessible through medical prescription.

"However, further Australian reforms and community-wide education campaigns are urgently needed to support people addicted to e-cigarettes and to prevent the uptake of tobacco cigarettes which are still widely available," she said.

The research focused on the cost of vape users transitioning to [tobacco smoking](#).

Lung Foundation Australia General Manager of Policy, Advocacy and

Prevention, Paige Preston, who collaborated on the research, said evidence continues to support government action to prevent and reduce use of vapes.

"The commendable action taken by government to get vapes out of schoolyards and corner stores, alongside other strategies, will likely result in significant health care savings, and importantly protect the lung health of so many Australians," Preston said.

"We need to see the reforms implemented and enforced as a priority for all jurisdictions, as well as enhancing education efforts and leading with empathy as we help people overcome vape and nicotine addiction without stigma."

Professor Gordon said the many damaging impacts of e-cigarette use include addiction, poisoning, acute nicotine toxicity, seizures, burns, lung injury, and increased uptake of cigarette smoking.

"However, as a relatively new product, the harmful effects of e-cigarette use are not fully understood, and limited evidence exists for chronic health conditions arising from vaping," she said.

"More research is needed to assess the true burden of e-cigarette use on people's health and the resulting impact on the Australian health care sector and the nation's economy."

Vaping involves inhaling a large mix of chemicals, including listed poisons, [heavy metals](#) such as nickel and chromium, and chemical by-products produced during heating such as formaldehyde, nitrosamines, acetone, and acrolein.

Acrolein, aldehydes, and polycyclic hydrocarbons are "probably carcinogenic" according to the International Agency for Research on

Cancer, while nicotine derivatives (nitrosornicotine and nitrosamine ketone) are known potent carcinogens in humans.

The study assessed reports on vaping prevalence, risk of smoking-related disease, and disease-related health system expenditure.

More information: Louisa G. Gordon et al, Healthcare costs attributable to e-cigarette use and subsequent uptake of cigarette smoking by Australians who have never smoked, *Australian Health Review* (2023). [DOI: 10.1071/AH23178](https://doi.org/10.1071/AH23178)

Provided by QIMR Berghofer Medical Research Institute

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