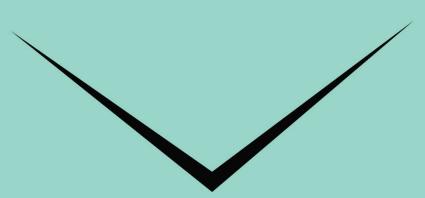


The Vaping Report

Vaping's effectiveness on smoking.

HealthNZ
hospitalisation data, comparative ACC claims, youth vaping and the compliance of sellers.

August 2023





Foreword

We did this report because the dairy and convenience sector has played a major role in making vaping accessible to smokers, helping to slash daily smoking by a third in just two years. Despite being in the places and open the hours when smokers come into buy their cigarettes, at least until 2024 that is, we cannot actively sell e-liquid and smokeless tobacco vaping to a smoker, even if they ask for a pack of cigarettes or RYO tobacco. That has to change as we're extremely compliant as found by Te Whatu Ora.

We're also concerned that this massively successful product is being attacked for being a success. Vaping has been in New Zealand for at least 15-years. Thousands have daily vaped for the past decade too. If vaping is "new," it's new in the same sense a 2008 Toyota Corolla is new in 2023! Misconceptions were brilliantly summed on *RadioNZ* recently by Associate Professor George Laking, Co-Medical Director of the Cancer Society: "Oh vaping, that doesn't sound good'. Many people share this perception and that in itself actually is a concern that people somehow have become scared about the idea of vaping. And even think it could be worse than smoking when it absolutely is not worse than smoking."

What we found by way of Official Information and mining public data:

- Since July 2019, no hospital events in New Zealand have reported vaping as a primary diagnosis.
- Since July 2022 (to 4 May 2023), there has been no use of a vaping code in secondary diagnosis, and while vaping has grown, use of the secondary code declined to zero, noting: "This does not imply that vaping was the cause of the hospitalisation, merely that it was documented as impacting treatment."
- Since 2016, ACC claim costs show vaping is 3,207 times less costly than cycling (\$172,661 versus \$553,813,748) comparing 346,000 daily vapers in 2022 (103,000 in 2017/18), to around 730,000 cyclists (48,000 cycled to work in 2018).
- Dairies, petrol stations and supermarkets are highly compliant sellers with a median compliance of 94% for cigarettes and RYO since 1 January 2019 and 97% for vaping sales since 1 January 2022.
- Ministry tobacco returns show that comparing 2012 to 2022 (11 years), imports of cigarette and RYO tobacco have fallen by over 1,007 tonnes and the fall has accelerated since 2018.
- The record fall in harmful daily smoking mirrors the rise in far less harmful daily vaping; **between** 2020/21 and 2021/22 (two years), 154,000 fewer people daily smoke including 45,000 Māori.
- While there is a focus on youth vaping, we mustn't lose sight of the fact that the Ministry of Health says **90% of vapers over 25 are ex-smokers**.
- Data provided by Auckland Grammar School, show that vaping related stand downs in 2022/23 (non-Covid affected) were in fact less than in 2020/21.
- Vaping is not only 95% less harmful than smoking, but it could also be more effective than prescribed Nicotine Replacement Therapies too (UK Government and Cochrane Reviews 2022).

So, thank you for reading our report because we put a lot of hours into researching and writing it being small businesspeople. We believe we can do so much more if only we are allowed.



Sunny Kaushal Chair

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A basic introduction to

Vaping:

Vaping remains 95% less harmful than smoking



Office for Health Improvement & Disparities

In 2015, the UK government said that "vaping poses only a small fraction of the risk of smoking and is at least 95% less harmful than smoking (that is, smoking is at least 20 times more harmful to users than vaping)." In 2022, the UK government restated this. "Based on the reviewed evidence, we believe that the 'at least 95% less harmful' estimate remains broadly accurate, at least over short term and medium term periods...vaping poses only a small fraction of the risks of smoking. As we have also previously stated and reiterate, this does not mean vaping is risk-free, particularly for people who have never smoked."

Nicotine vaping in England: an evidence update including health risks and perceptions September 2022 (p. 75).

What was EVALI in 2019?



In 2019, EVALI (e-cigarette or vaping use-associated lung injury) appeared mostly in the United States. The US Centers for Disease Control (CDC) identified from patient reports and from sample testing, there was a correlation between EVALI and 'home-made' vaping substances containing tetrahydrocannabinol (THC). The CDC also found Vitamin E acetate was strongly linked to EVALI. Vitamin E acetate was first associated with lung injuries in popcorn factories, hence 'popcorn lung.' Since 2020, US cases of EVALI have declined and there has never been a primary diagnosis of a vaping related injury in NZ. Both THC and Vitamin E acetate are banned here. Outbreak of Lung Injury Associated with the Use of E-Cigarette or Vaping Products.

What vaping is:

Unlike cigarettes that burn hot enough to melt aluminum (creating many cancer-causing chemicals in smoke), vaping heats a liquid, or a solid, to generate a vapour (like when you shower), that is inhaled or 'vaped.' While vapes contain chemicals found in cigarettes, it is in fractional amounts and is why vaping is substantially safer than smoking but is not harmless. Modern vaping was invented around 2004 and came into New Zealand around 2008. By 2016, 33,000 kiwis vaped daily and in 2022, it overtook daily smoking for the first time. In 2022, nearly all daily vapers over 25 were either ex-smokers (64%) or current smokers (26%). Among 18–24, just over half of all daily vapers were either ex-smokers (33%) or current smokers (21%)*.

*Smoking Status of Daily Vapers (health.govt.nz)

Is nicotine dangerous?

Nicotine is "no more harmful to health than caffeine" the UK's Royal Society for Public Health said in 2015. Like caffeine, nicotine is a stimulant but unlike alcohol, does not in itself cause harm. The harm is addicting people to smoking hence why nicotine in vapes is called "harm reduction."

The two types of vaping:

There are two types of vapes sold in New Zealand:

- **E-Liquid**: Sold in containers for tank devices; as pre-sealed pods for reusable vaping devices and as all-in-one disposable vapes. These generate a vapour when the e-liquid within is heated but disposables are set to be banned in 2023.
- **Solid**: Smokeless tobacco is sold in packs and is reconstituted tobacco mixed with vaping ingredients. It also generates vapour when heated, producing a tobacco vapour.

What dairies can sell:

Collectively, we will be known as General Vape Retailers and we can sell e-liquid and solid vapes (and devices), so long as they are mint, menthol or tobacco flavoured only. Specialist stores can sell any flavour.

What dairies want:

The right to 'notify,' 'encourage' and 'promote' e-liquid and smokeless tobacco vapes whenever a smoker asks for cigarettes or RYO tobacco. As smokeless tobacco vaping works with heavier smokers, removing excise would help convert smokers. This is especially needed before and after a 90% reduction in outlets (1 July 2024) and then from 1 April 2025, when only ultra-low nicotine cigarettes may be sold by 600 licensed shops.

Dairy and Business Owners' Group: 2023 Vaping report
The safety record for Vaping recorded by

Te Whatu Ora Health NZ:



0

Primary diagnosis (July 2019 to 4 May 2023)

ETE Whatu Ora Health New Zealand OIA HNZ00024950 (7 July 2023)]

0

Secondary diagnosis (July 2022 to 4 May 2023)

[346,000 daily vapers were recorded in the 2022 NZ Health Survey]



4 Secondary Diagnosis (January to December 2022)
[346,000 daily vapers were recorded in the 2022 NZ Health Survey]

35 Secondary Diagnosis (January to December 2021) [258,000 daily vapers were recorded in the 2021 NZ Health Survey]

14 Secondary Diagnosis (January to December 2020) [144,000 daily vapers were recorded in the 2020 NZ Health Survey]

[Te Whatu Ora Health New Zealand OIA HNZ00020208 (16 June 2023)

Table 1: Primary Diagnosis use of the code

Since July 2019, by month and by year to the current date, how many persons have been admitted/discharged for a condition or symptom that is vaping related against:

- ACS 0001 Principal diagnosis
- ACS 0002 Additional diagnoses
- U07.0 Emergency use of U07.0 as an additional diagnosis

Our response to your request remains the same. There are no events where vaping is reported as the primary diagnosis (or principal diagnosis though this is not terminology we normally use). ACS0001 is the Australian Coding Standard 0001 and is the rule which governs how the primary diagnosis code is assigned (and principal is an acceptable alternative word used to describe this). ACS0002 is the Australian Coding Standard 0002 and is the rule which governs secondary diagnosis codes are assigned.

Source: Te Whatu Ora Health New Zealand OIA HNZ00024950 (7 July 2023)

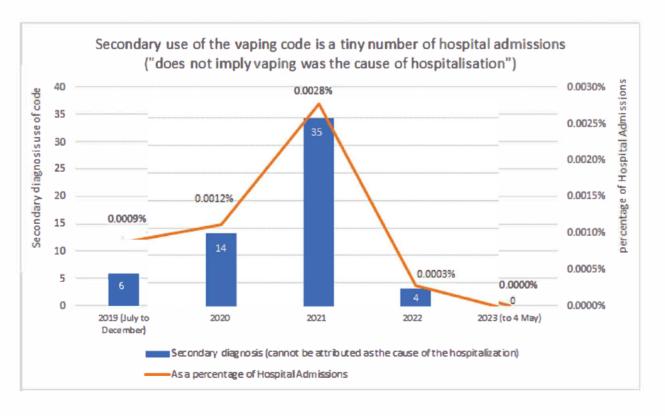
Table 2: The number of publicly funded hospital discharges with a vaping secondary diagnosis code from July 2019 – 4 May 2023:

Year	Secondary Diagnosis*	As a percentage of all Hospital Admissions**	As a percentage of Daily Vapers (approximate)***
2019 (July to December)	6	0.0009%	0.0046%
2020	14	0.0012%	0.0097%
2021	35	0.0028%	0.0136%
2022	4	0.0003%	0.0012%
2023 (to 4 May)	0	0.0000%	0.0000%

Sources: Te Whatu Ora OIA HNZ00020208 | Health New Zealand, National Minimum Dataset (16 June 2023). This data was extracted on 4 May 2023.

People hospitalised multiple times (transfers, readmissions, multiple incidents) will be counted each time.

^{***} The NZ. Health Survey is used but as this straddles years, as opposed to being for a calendar year, is provided for guidance only.



^{* &}quot;The number of publicly funded hospital discharges with a secondary diagnosis of vaping. This does not imply that vaping was the cause of the hospitalisation, merely that it was documented as impacting treatment (HNZ00020208)."

^{**} Total hospital admission data for all ailments is from OIA HNZ00022660 (29 June 2023) and is for calendar years.

The safety record for Vaping recorded by

ACC Active Claims:

Since 2016, vaping costs have been



22 x <u>less</u> than smoking claims.



 $164 \times less$ than e-scooter claims.



 $457 \times less$ than alcohol claims.



By Kenneth C. Zirkel - Own work, CC BY-SA 4.0





 $22,566 \times less$ than automobile claims.



Still from 'Winning try? Or out for the season? (acc.co.nz)

 $26,532 \times less$ than sport claims.

Table 3: Value of active claim costs for related injuries from 01 January 2016 to 31 March 2023.

Calendar Year	E-Cigarettes (Vaping)	Cigarettes (Smoking)	E-Scooters	Alcohol	Bicycle	Walking	Automobile	Sports
2016	\$192	\$219,066	\$30,284	\$7,393,133	\$53,491,252	\$400,652,999	\$447,185,019	\$544,792,617
2017	\$2,480	\$320,685	\$110,088	\$8,334,322	\$56,918,165	\$402,529,857	\$475,264,577	\$571,940,154
2018	\$10,095	\$342,803	\$324,166	\$8,855,367	\$61,389,735	\$424,283,784	\$515,175,462	\$612,888,416
2019	\$5,586	\$314,131	\$4,463,445	\$10,653,445	\$81,875,219	\$419,265,321	\$552,415,470	\$621,715,560
2020	\$31,065	\$806,536	\$5,921,820	\$11,803,123	\$93,129,475	\$433,353,652	\$559,877,658	\$633,254,074
2021	\$32,568	\$808,115	\$6,944,964	\$13,414,199	\$91,527,032	\$452,787,633	\$577,315,884	\$694,471,935
2022	\$83,023	\$837,838	\$8,377,489	\$14,917,823	\$93,318,706	\$497,446,224	\$616,319,813	\$731,715,851
2023 (to 31 March)	\$7,652	\$116,426	\$2,166,848	\$3,484,721	\$22,164,164	\$123,004,534	\$152,705,261	\$170,249,001
Total	\$172,661	\$3,765,601	\$28,339,103	\$78,856,132	\$553,813,748	\$3,153,324,006	\$3,896,259,145	\$4,581,027,608

Table 4: Number of active claims for related injuries from 01 January 2016 to 31 March 2023.

Calendar Year	E-Cigarettes	Cigarettes	E-Scooter	Alcohol	Bicycle	Automobile	Walking	Sports
	(Vaping)	(Smoking)						
2016	<4	280	25	3,362	31,198	51,484	365,746	569,358
2017	8	245	50	3,406	30,784	53,277	344,436	556,560
2018	17	245	469	3,559	33,456	54,772	338,506	547,209
2019	27	249	2,958	3,780	46,480	54,404	299,949	537,427
2020	38	220	2,111	3,627	45,431	47,872	283,794	486,282
2021	44	174	2,290	3,626	42,185	49,048	282,527	507,549
2022	57	156	2,793	3,462	38,887	49,260	273,997	502,072
2023		64	1,094	1,322	14,821	23,514	102,061	163,903
Total	190	1,348	9,488	20,927	227,597	245,119	1,857,846	3,203,193

Source: Tables derived from ACC (2023). GOV-024730 Appendix

Dairies and General Vape Retailers are Highly Compliant Sellers according to Te Whatu Ora Health NZ:

1 January to 31 March 2023:



100% compliance

97% compliance

Our median compliance as sellers:



94% since 1 January 2019

97% since 1 January 2022

[Te Whatu Ora Health New Zealand OIA HNZ00017767 (15 May 2023) and correction (19 May 2023)]

Table 5: Controlled Purchase Operations seeking Cigarettes/smoked tobacco products within general retailers

Date	Number of covert visits (Controlled Purchase Operations) seeking Cigarettes/smoked tobacco products within general retailers	Number of offences for smoking products recorded under the Act as a result of these Controlled Purchase Operations visits	Level of compliance as a percentage
1 January – 31 March 2023	12	Nil	100%
1 July – 31 December 2022	245	15	94%
1 January – 30 June 2022	122	17	86%
1 July – 31 December 2021	163	13	92%
1 January – 30 June 2021	323	18	94%
1 July – 31 December 2020	255	5	98%
1 January – 30 June 2020	130	10	92%
1 July – 31 December 2019	739	27	96%
1 January – 30 June 2019*	1086	77	93%
TOTALS (MEDIAN %)	3075	182	94%

^{*}HNZ00017767 (15 May 2022) contained a major data error for 1 January - 30 June 2019. It originally listed 1009 for "Number of offences" but this corrected on 19 May 2023 to read, 77.

Table 6: Controlled Purchase Operations seeking Vaping/smokeless tobacco products within general retailers

Date	Number of covert visits (Controlled Purchase Operations) seeking Vaping/smokeless tobacco products within general retailers	Number of offences for vaping and smokeless tobacco products recorded under the Act as a result of these Controlled Purchase Operations visits.	Level of compliance as a percentage
1 January – 31 March 2023	37	1	97%
1 July – 31 December 2022	150	17	89%
1 January – 30 June 2022	1	Nil	100%
1 July – 31 December 2021	Nil	N/A	N/A
1 January – 30 June 2021	Nil	N/A	N/A
1 August – 31 December 2020	Nil	N/A	N/A
TOTALS (MEDIAN %)	188	18	97%

Ministry of Health data on what vaping and other policies have done to

Imported Tobacco:



-1,007 tonnes

[Comparing 2012 to 2022 (11 years) and the fall in cigarette and RYO tobacco imported by BAT, Imperial and PMI as reported to the Ministry of Health].

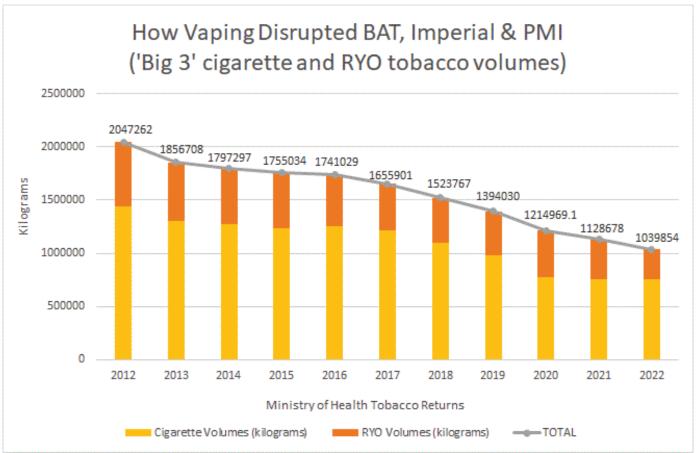


-483 tonnes

[Comparing five-years of cigarette and RYO tobacco imported by BAT, Imperial and PMI in 2018 (before vaping's 2020 regulation) and 2022 (post 2020 vaping regulation), as reported to the Ministry of Health].

Image: E-Cigarette-Electronic Cigarette-E-Cigs-E-Liquid-Vaping-Stop Smoking-Quit Smoking (15654052383).jpg

Source: Ministry of Health Tobacco Returns



Source: Ministry of Health Tobacco Returns for British American Tobacco, Imperial, and Philip Morris

What Vaping and other policies have done to

Smoking in Aotearoa New Zealand:

"There is high-certainty evidence that ECs [Electronic Cigarettes] with nicotine increase quit rates compared to NRT [nicotine replacement therapy] and moderate-certainty evidence that they increase quit rates compared to ECs without nicotine. Evidence comparing nicotine EC with usual care/no treatment also suggests benefit, but is less certain..."

Hartmann-Boyce J. Lindson N. Butler AR. McRobbie H. Bullen C. Begh R. Theodoulou A. Notley C. Rigotti NA. Turner T. Fanshawe TR. Hajek P. Electronic cigarettes for smoking cessation. Cochrane Database of Systematic Reviews 2022 Issue 11. Art. No.: CD010216. DOI: 10.1002/14651858.CD010216.pub7

The fall in daily smoking since 2020/21

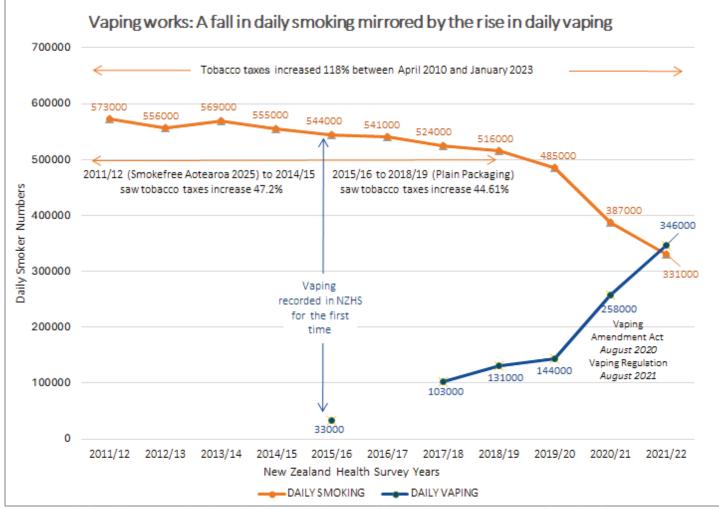
-154,000 smokers

[the decline in daily smoking recorded in the 2020/2021 and 2021/2022 NZ Health Survey]

-45,000 Māori

[the decline in Māori daily smokers recorded in the 2020/2021 and 2021/2022 $\underline{\text{NZ Health Survey}}$

In 2022, daily smokers averaged 9.6 cigarettes per day. This works out to be around 57 minutes smoking each day.



Source: New Zealand Health Survey Prevalence for Daily Smoking and Daily Vaping with the ten tobacco excise increases and annual CPI adjustment. Note: Tobacco excise is also subject to GST.

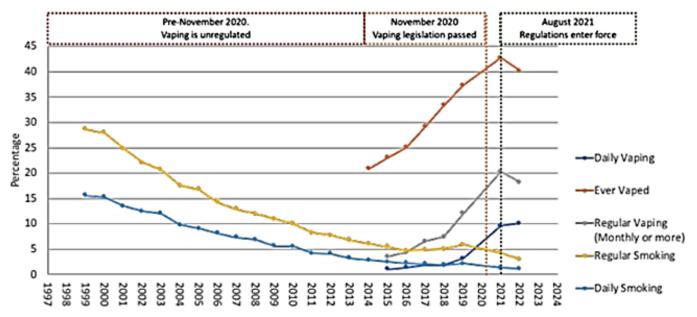
Are all the kids

Vaping (and how are they accessing it)?

What does ASH say about youth vaping?

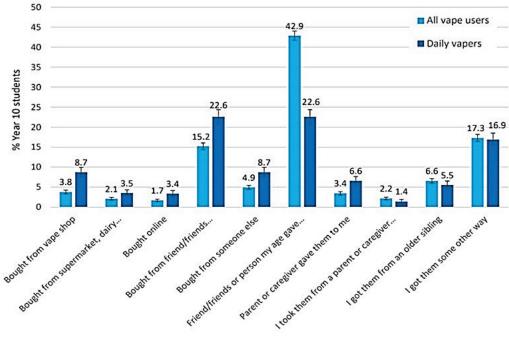
- "New Zealand was slow to enact legislation to regulate vaping. Controls on marketing, sales, nicotine limits and access for people under 18 were not passed until 2020 and not implemented until August 2021.
- This delay was costly to youth. In the six years between 2015 and 2021 daily vaping had already increased from 1% in Year 10 students to almost 10% (Figure 1), and from 1% to 18.6% for under 25s.
- ASH is concerned about this level of youth vaping but notes that since the vaping regulations were implemented, the rate of increase in daily vaping in youth has slowed markedly and was just over ten percent (10.1%) in 2022. Regular vaping, defined as at least once a month, has decreased (Figure 1). This suggests that the regulations are starting to have the desired impact."

Figure 1. Year 10 smoking and vaping rates (%) 1999-2022



Extract from: Vaping and young people ASH Position Statement May 2023

In 2021, ASH also said the biggest source for youth vaping was informal



Case Study: Auckland Grammar



Auckland Grammar School (2,500+ students) has provided data on vaping and non-vaping related discipline. This covers June to May for 2020/21 and 2022/23, but June to June, for 2022/23. Please note: Vaping/smoking does not lead to suspension or expulsion.

2022/23 (+/- compared to 2020/2021)

Vaping/Smoking Stand Downs 26 (-2)

Non-vaping Stand Downs
Non-vaping Suspensions
90 (+48)
14 (+10)
Non-vaping Expulsions
8 (+5)

2021/2022 (Covid-19 classes affected)

Vaping/Smoking Stand Downs 11

Non-vaping Stand Downs	33
Non-vaping Suspensions	2
Non-vaping Expulsions	1

2020/2021 (Covid-19 pupils impacted)

Vaping/Smoking Stand Downs 28

Non-vaping Stand Downs	42
Non-vaping Suspensions	4
Non-vaping Expulsions	3

While not playing down the issue, Auckland Grammar saw improved vaping/smoking discipline in 2022/23 and over a 13-month period too. This is compared to a 12-month, non-lockdown period, straddling 2020/21 but where Covid-19 directly impacted pupil wellbeing.

Ramraids and burglaries could be feeding a blackmarket among young people:

- We know around half of those apprehended by Police for retail burglary were under 17 as were almost 70% of those caught ramraiding.
- In July, \$150,000 worth of vapes were stolen in Thames following a ramraid. In June multiple Rotorua businesses were hit by ramraids while dairies and vape stores are regular targets. We have asked Police for a granular breakdown by retail store type, and this is expected in late August.
- Our point is that not all the products taken in burglaries, robberies and ramraids is recovered. This may be feeding an informal market.
- A focus on retail crime could reduce the volume of stolen goods finding its way into the hands of youth.

Schools need to help us (and the VRA) to crack down on youth access:

- As all legal vapes, have to be notified to the Vaping Regulatory Authority (VRA) to be legally sold in NZ, so knowing the names and brands of vapes, is a big clue.
- In 2022, we asked more than a dozen major schools with over 21,000 students between them for the major vape brands confiscated to see if there was a pattern. Not one school recorded such vital information including AGS, when asked again about this again in 2023 (see opposite).
- Schools can really help us in this regard noting dairies, petrol stations and supermarkets are highly compliant sellers. If we can know the brands, we can find the maker/importer or distributor and work with them, or the VRA, if they choose not to do the right thing.
- Having brand information would also help detect stolen goods being sold at schools, or if vapes are being illegally imported into NZ. In Australia, 93% of vapes purchased by those under 30 is done illegally 'without prescription.' (See E-cigarette attitudes and use in a sample of Australians aged 15–30 years).
- When new vaping regulations come into force, they will also have to feature identifying information on vapes as well.



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