

Specialist vape store audit reveals poor compliance with new e-cigarette regulations

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ABSTRACT

AIM: Regulations announced in mid-2023 aimed to reduce youth vaping by curtailing the availability of cheap high-nicotine e-cigarettes (vapes). This study tested compliance with the new regulations for single-use vapes, which came into force on 21 December 2023.

METHODS: A 20-year-old “mystery shopper” visited 96% of specialist vape retailers (SVRs) in Wellington, Porirua, Lower Hutt and Upper Hutt (N=74) in January 2024, and observed i) R18 signage, ii) age verification practices, and ii) prices and brands of the cheapest available vaping products. Low-price vapes were purchased and inspected for compliance with new nicotine limits and safety regulations.

RESULTS: All but three stores (96%) displayed an R18 sign; however, signage in 29 stores (39%) was suboptimal. Only one store (1.4%) requested age identification (ID) on entry to the R18 premises. In 50% of stores, ID was requested when a purchase was made; however, a third of those retailers proceeded with the sale despite the buyer not providing ID. Single-use vapes remained available for NZ\$10 or less in most stores, and reusable starter kits were also widely available for NZ\$10–20. Discounted high-nicotine products were sold for as little as NZ\$2.50 each. Most low-price products did not comply with the updated regulations.

CONCLUSION: Cheap, high-nicotine vaping products remained widely available following the introduction of stricter regulations in December 2023; products for sale included discounted and non-compliant vapes. The majority of SVRs had poor age verification practices. There is an urgent need to clarify rules, increase enforcement efforts and disallow discounting and giveaways of vapes.

E-cigarettes (commonly known as “vapes”) ostensibly provide a less harmful alternative to tobacco smoking. Research suggests that vaping can help people stop smoking,¹ and the Ministry of Health – Manatū Hauora believes that vaping products have a role to play in achieving Aotearoa New Zealand’s Smokefree 2025 goal.² Although vaping poses fewer physical health risks than smoking, vaping may harm respiratory, cardiovascular and oral health.^{3–7} Additionally, most vaping products contain nicotine, which is highly addictive and may undermine psychological and social wellbeing, especially among children and adolescents.^{8–11}

Vaping prevalence has increased rapidly in Aotearoa New Zealand in recent years, particularly among young people, most of whom have never smoked. For example, in 2022/2023 people aged 18–24 had the highest prevalence of daily vaping at 25%, compared with 10% in the adult population overall.¹² Daily vaping among 15–17-year-olds was 15%, a dramatic increase from 2% in 2019/2020.¹² Youth smoking has continued to decline in recent years; however, the easy availability of high-nicotine vapes has seen an increasing proportion of young people transition from experimental to

daily vaping, and become addicted.^{8,13,14}

Rapid vaping uptake among young people reflects the aggressive marketing undertaken to position vapes as lifestyle accessories.¹⁵ Although the Government introduced legislation to regulate vape product marketing and sales in 2020 (The *Smokefree Environments and Regulated Products (Vaping) Amendment Act 2020*),¹⁶ the measures failed to adequately protect young people^{17,18} and further regulations, including limits on the nicotine content of disposable vapes, came into effect in 2023.¹⁹

Among other measures, the 2020 *Act* and accompanying regulations prohibited the supply of vaping products to people under 18 and required retailers to display R18 sales restriction notices. Under the *Act*, specialist vape retailers (SVRs) must be registered, and must take “*all practicable steps to prevent a person under the age of 18 years from entering the retailer’s approved vaping premises.*”^{16,20} Changes introduced in 2023 affected single-use (disposable) vaping products; from 21 December 2023, these products had to meet new product safety requirements, including a nicotine limit of 20mg/mL, removable batteries and a child safety mechanism. From 21 March 2024, regulations will limit flavour descriptions and packaging

(e.g., disallowing cartoon imagery), limit reusable pods and e-liquids to nicotine strength of 28.5mg/ml and extend battery and child safety requirements to reusable vapes.

While the new 2023 regulations have also introduced some proximity limits (new SVRs may not trade within 300m of schools or marae), they do not address the proliferation of vape outlets that has occurred, particularly in lower-income communities—a pattern that has also been observed internationally.²¹ Many of these outlets have evolved as “stores-within-a-store” that exist inside an existing dairy’s retail footprint.²² This phenomenon does not respect the law’s intent, which aimed to prevent normalisation of vaping and reduce children’s exposure to vaping products. Furthermore, it has contributed to the easy availability of vaping products in lower-income neighbourhoods.

Although few studies have examined retailers’ compliance with vaping regulations, the existing research suggests inconsistent compliance. Within Aotearoa New Zealand, qualitative research exploring how underage youth access vaping products found many knew of retailers who did not require age identification (ID).²³ Overseas studies examining compliance with restrictions (e.g., nicotine content or flavour restrictions) also report widespread non-compliance and enforcement challenges.^{24–30}

Given the serious community and public health concerns about underage sales and youth vaping, we examined compliance with vape regulations in Aotearoa New Zealand in January 2024. We focussed on regulations intended to prevent sales of vapes to minors and curtail the availability of cheap, high-nicotine disposable vapes favoured by underage users. Specifically, we audited SVRs’ compliance with R18 laws and new regulations that came into force on 21 December 2023, which lowered the maximum nicotine strength from 50mg/ml to 20mg/ml in single-use vapes and required all single-use devices to have removeable batteries and a child safety mechanism.

Methods

The audit used an observational study design and employed a “mystery shopper” approach to evaluate compliance with the *Smokefree Environments and Regulated Products Act 1990* (the primary legislation that the 2020 *[Vaping] Amendment Act amended*) and related regulations. The mystery shopper was a 20-year-old medical

student (LK).

Ethical approval

The study was approved by the University of Otago Human Ethics Committee, reference 23/147.

Identification of SVRs

The study area was defined by the City Council boundaries of Wellington, Porirua, Lower Hutt and Upper Hutt cities. We identified retailers currently operating within the study area using a list of registered SVRs supplied by Regional Public Health (dated November 2023) and supplemented this list with the “vape store near me” search function on Google Maps to identify any new or additional stores.

Audit questions

We drew on relevant Aotearoa New Zealand legislation and regulations and overseas vaping-related compliance projects, and consulted with an advisor from Regional Public Health (Health New Zealand – Te Whatu Ora) when developing the audit questions.

The audit focussed on low-price products because these are the most affordable devices and are favoured by young people, the priority group for vaping prevention. We also examined measures to prevent underage sales as set out in the 2020 legislation.

The key audit questions were:

1. Is there an R18 sign displayed outside the store?
2. Is the outlet a store-within-a-store (i.e., within the footprint of another store)?
3. Is ID checked at retail entrance when entering the store?
4. What is the price and brand of the cheapest single-use (disposable) vape in the store?
5. What is the price and brand of the cheapest starter pack for reusable vapes?
6. Is ID requested upon purchase of vape products?
 - If so, is sale refused due to failure to provide ID?
7. For purchased single-use products, does the vape meet product safety requirements for
 - nicotine content;
 - removable batteries;
 - child safety mechanism?
8. Other observations related to the store or sale of vaping products.

Procedure

Store visits by LK took place between 3 and 23 January 2024. LK followed the fieldwork protocol, which defined key terms (e.g., “highly visible” vs “less visible” R18 signage), the process for engaging with retailers and recording audit findings, and safety procedures as required by our ethics approval (see Appendix).

Responses to the audit questions were recorded using a Qualtrics survey on a mobile phone device, with the initial questions (e.g., location, signage) being completed before LK entered the store.

Upon entering each store, LK enquired about the cheapest single-use product and the cheapest starter kit, noting the price and brand of each. She asked to purchase one of these products. If she was asked to show ID, she said she had accidentally left it at home/in the car and asked to make the purchase without ID.

If the vape price was NZ\$20 or less, and LK had not already purchased that model/brand, she made the purchase (if not refused due to failure to show ID). If an example of the cheapest brand/model had previously been purchased, or the device cost more than NZ\$20, LK began the purchase to test whether she would be asked for ID, but then said she had forgotten her wallet.

Remaining responses were entered into Qualtrics immediately after leaving the store, and a detailed inspection of the purchased products was carried out by JB following fieldwork completion.

On two occasions LK was refused a sale after failing to show ID, and JB (who had accompanied LK on 2 out of 6 fieldwork days to provide transport) then entered the store to purchase the product.

Results

Location of SVRs

We identified 77 SVRs currently operating in the study area: 34 in Wellington, 16 in Porirua, six in Upper Hutt and 21 in Lower Hutt (Table 1). All were on the list of registered SVRs supplied to the researchers. Three stores were temporarily closed when we visited (one each in central Wellington, Kenepuru and Wainuiomata), leaving 74 stores (96%) included in the audit.

We observed clustering of SVRs in city centres, particularly in the entertainment district of Wellington (Cuba St, Manners Street, Courtenay Place), areas where young people congregate. Suburban stores were often located in communities with high socio-economic deprivation e.g., Newtown, Porirua East, Tītahi Bay, Naenae, Taitā

(Table 1). We found no SVRs in affluent suburbs such as Thorndon, Kelburn, Seatoun, Khandallah or Plimmerton.

Store-within-a-store vs standalone SVRs

Of the SVRs visited, 43% (n=32) were stores-within-a-store (i.e., an SVR within the footprint of another store). Almost all of these were within superettes or dairies, mostly in suburban areas.

One suburban dairy was registered as an SVR and was selling both groceries (e.g., bread, pies, soft drinks) and a wide range of vaping products at a single counter, apparently contravening the requirement that at least 70% of the total sales from an SVR must be from the sale of vaping products. A child was in the store when LK entered and could easily view the array of vaping products for sale.

R18 signage and age verification practices

Of stores audited, 42 (57%) displayed a highly visible R18 sign outside the store (i.e., eye level, large, bold type). A further 29 stores (39%) displayed a less visible R18 sign (e.g., faint font, small, positioned away from the entrance, perpendicular to the entrance, or below eye level), and three stores (4%) did not display an R18 sign at all.

Only one store (1.4%) asked for ID when LK entered the store.

Half of the SVRs (n=37) requested ID when LK attempted to make a purchase, and of these 36% (n=13) proceeded with the sale, even though she did not provide ID. (Typically, the retailer would say, “*Make sure you bring it next time*” or similar). Half did not ask for ID at all.

Availability of low-price vaping products

Several stores sold non-compliant disposable vapes at heavily discounted prices. For example, we purchased two AirsPops vapes (50mg/ml nicotine strength) for NZ\$5 (NZ\$2.50 each) in a Porirua store. We observed non-compliant “old stock” available at discounted prices throughout the study area, with AirsPops the most widely available brand. Some retailers spontaneously explained that the products were discounted because they were no longer legal.

The cheapest non-discounted single-use vapes ranged from NZ\$10 to NZ\$35; most stores (63%) sold solo (n=26, 35%) or alt. Nu brands (n=21, 28%) as their cheapest disposable (both NZ\$9.99). AirsPops was the cheapest brand in 14 stores

Table 1: Location of specialist vape retailers operating in Wellington, Porirua, Upper Hutt and Lower Hutt, January 2024.

Location	Number of stores	NZ Deprivation Index decile
Wellington		
Wellington Central City	22	3–6
Newtown/Mt Cook	4	6–9
Kilbirnie	2	7
Tawa Central/North	2	5
Strathmore	1	8
Brooklyn	1	2–3
Newlands	1	3–4
Johnsonville	1	3
Porirua		
Porirua Central City/Kenepuru	5	10
Titahi Bay	5	8–9
Waitangirua	2	10
Porirua East/Ranui	2	10
Takapūwāhia	1	9
Whitby	1	1
Upper Hutt		
Upper Hutt Central City	3	4
Te Mārua	1	3
Silverstream	1	2
Trentham	1	7
Lower Hutt		
Wainuiomata	5	7–8
Lower Hutt City Centre	3	2–4
Naenae	3	10
Petone	3	5
Taitā	2	10
Stokes Valley	2	7
Boulcott	2	4
Moera	1	10
Total	77	

(19%), with non-discounted prices at NZ\$10 (single use, 3ml) or NZ\$15 (eco single use). Only one store did not sell disposable vapes.

The cheapest starter kit (comprising a device plus e-liquid or pods), ranged from NZ\$10 (solo brand) to NZ\$50. The cheapest starter kit in most SVRs sold for NZ\$15–20.

Compliance of low-price single-use products

We purchased 11 different low-price vape products. Table 2 summarises the characteristics of purchased products. Figure 1 provides examples of single-use products purchased.

Based on our interpretation of the law, none of the single-use products purchased were compliant with the new regulations that came into force on 21 December 2023. Some were clearly non-compliant (Figure 1a), while others were ambiguous and compliance depended on the interpretation of “removeable batteries” (Figure 1b) and “single use” (Figure 1c).

Nicotine limit

Only two single-use products purchased complied with the new nicotine limit of 20mg/ml for single-use vapes: solo and alt. Nu 2% disposables (Figure 1b). Other products that we classed as single use based on our reading of the legislation (Figure 1a, 1c) exceeded the nicotine limit.

Removeable batteries

Three single-use products purchased were moulded disposable vapes that did not have removeable batteries; these clearly did not comply with the new regulations (Figure 1a).

Three vapes (solo and alt. Nu disposables, AirPops Eco) had tiny screws in the base; theoretically these could be unscrewed to disassemble the body of the vape and remove the battery. However, the screw holes were less than 1mm wide and removing the batteries would require specialist tools (Figure 1b, 1c iii). User instructions for alt. Nu and solo state: “*We do not recommend removing the battery from this device.*” These three products did not meet our interpretation of “removable batteries.”

Two products, Vorteke puk. and ALLO Nexus 6000 (Figure 1c), had a rechargeable battery that could be removed from the disposable vaping device and re-used with replacement devices. In our view, these products complied with the new removable battery regulations.

Child safety mechanism

None of the vapes pictured in Figure 1a had a child safety mechanism and were clearly non-compliant. All new single-use products (Figure 1b–c) had a locking mechanism of some kind.

Users could lock and unlock the AirPops Eco vape (Figure 1c) by performing three quick puffs on the mouthpiece; this device locked automatically if unused for 1 hour. We consider that this device does not comply with the child safety requirements, since a child could easily pick up the unlocked device within an hour, activate a locked device by mimicking an adult seen taking three puffs or inadvertently turn the device on by simply trying to puff on it.

The puk. device (Figure 1c) requires the user to connect and disconnect the pod to the battery three times to activate the device. The instructions do not state how to power off the device; nor do they describe an automatic locking mechanism. Based on inadequate child safety instructions, we consider this product non-compliant.

solo, alt. Nu, and ALLO Nexus 6000 devices (Figure 1b, 1c) unlocked by rapidly clicking a button on the base five times and locked automatically 10 minutes after the last puff. We consider these child safety mechanisms adequate to meet the new regulations.

Compliance of low-price reusable products

Characteristics of reusable products purchased are summarised in Table 2. Of the three low-price starter kits we purchased, one was clearly non-compliant because it did not meet labelling requirements (Figure 2a), and two were compliant at the time of purchase, but do not meet nicotine limits or child safety requirements that came into effect on 21 March 2024 (Figure 2b).

Discussion

We found that cheap, high-nicotine vapes remained widely available following the implementation of new regulations intended to curtail these products’ availability. Products offered for sale included both non-compliant “old stock”, often sold at heavily discounted prices, and ambiguous new products intended to meet (or circumvent) current regulations, most of which we deemed non-compliant based on our interpretation of the law. Over half of the SVRs visited had poor age verification practices and either did

Table 2: Characteristics of low-priced vapes purchased in January 2024.

Brand, model	Flavour(s) purchased	Price (NZ\$)	Volume	Nicotine strength (nicotine salt)	Nicotine limit compliance	Child lock compliance	Removable battery compliance	Notes
Single-use products								
AirsPops one use	Ice Cola, Bubble Bum, Pink Crystal, Aromango	\$2.50–9	3ml	50mg/ml	No	No	No	Generally discounted, e.g., two for \$5
AirsPops Eco	Freezy Grape, Energy Power	\$14.90	3ml	50mg/ml	No	No*	No*	Marketed as recyclable, \$5 credit when used vape is returned
ALLO Nexus 6000	Raspberry Peach	\$22	14ml	50mg/ml	No	Yes	Yes	Rechargeable battery, single-use vaping device
alt. Nu	Lemon	\$10	3ml	20mg/ml	Yes	Yes	No*	Batteries cannot be removed without specialist equipment
Smok Stick Bar	Taro Ice Cream	\$5	3ml	50mg/ml	No	No	No	Discounted. Flavour may be designed to appeal to Pacific people
solo	Strawberry Mint, Sour Apple, Mint	\$10	3.5ml	20mg/ml	Yes	Yes	No*	Batteries cannot be removed without specialist equipment

Table 2 (continued): Characteristics of low-priced vapes purchased in January 2024.

Brand, model	Flavour(s) purchased	Price (NZ\$)	Volume	Nicotine strength (nicotine salt)	Nicotine limit compliance	Child lock compliance	Removable battery compliance	Notes
Vorteke puk.	Mint	\$14.95	10ml	35mg/ml	No	No*	Yes	Rechargeable battery, single-use vaping device
Vozol Bar	Refreshing Mint	\$10	4ml	46mg/ml	No	No	No	Discounted
Reusable starter packs								
R and M Dazzle	Peach Ice Cream	\$15	10ml	Not stated	Unclear	NA	NA	Non-compliant labelling
solo kit	Mint	\$9.99	2.5ml	50mg/ml	Yes	NA	NA	
Vozol Switch	Grape Ice	\$20	4.5ml	50mg/ml	Yes	NA	NA	

*Based on authors' interpretation of the law.

Note that compliance of reusable starter packs was based on the law at time of purchase (January 2024).

Figure 1: Examples of low-price single-use vapes purchased in January 2024.



a) Clearly non-compliant single-use vapes, old stock

- i) Vozol Bar, 46mg/ml strength (nicotine salt), 4ml volume, NZ\$10.
- ii) Smok Stick Bar, 50mg/ml strength (nicotine salt), Taro Ice Cream flavour, 3ml volume, NZ\$5.
- iii) AirsPops, 50mg/ml strength (nicotine salt), 3ml volume, NZ\$2.50–9.

b) New single-use products, do not appear to comply with removeable battery requirement

- i) alt. Nu 2%, 20g/ml strength (nicotine salt), 3ml volume, NZ\$10. Batteries cannot be removed without specialist equipment.
- ii) solo 2%, 20mg/ml strength (nicotine salt), 3.5ml volume, NZ\$10. Batteries cannot be removed without specialist equipment.

c) Ambiguous new products, exceeded nicotine limit for single-use vapes

- i) ALLO Nexus 6000, 50mg/ml strength (nicotine salt), 14ml volume, NZ\$22. Removeable, rechargeable battery but vaping device itself is single use. Marketed as “device + pod”.
- ii) Vortek puk., 35mg/ml strength (nicotine salt), 10ml volume, NZ\$14.95. Removeable, rechargeable battery but vaping device itself is single use. Marketed as “device + pod”.
- iii) AirsPops Eco one use, 50mg/ml strength (nicotine salt), 3ml volume, NZ\$14.90. Marketed as recyclable, with a \$5 discount on next purchase when used vape is returned to the store.

Figure 2: Examples of low-price reusable vape starter packs purchased in January 2024.



a) Non-compliant reusable vape starter pack

R & M Dazzle device + 10ml e-liquid, nicotine strength not stated, NZ\$15. Does not comply with labelling requirements, e.g., lacks health warning, nicotine strength, ingredients. At time of writing, cartoon imagery was still permitted but has become illegal from 21 March 2024.

b) Reusable vape starter packs—compliant when study was undertaken

i) solo kit: vaping device + charging cable + 2.5ml pod, 50mg/ml (nicotine salt), NZ\$9.99. At the time of purchase, pod systems were not subject to reduced nicotine limits or safety requirements. This kit is longer compliant from 21 March 2024.

ii) Volzol Switch device + prefilled pod 50mg/ml strength (nicotine salt), 4.5ml capacity, NZ\$20. At the time of purchase, pod systems were not subject to reduced nicotine limits or safety requirements. This kit is longer compliant from 21 March 2024.

not request ID or made sales even in the absence of ID.

Discounted prices on old stock meant high-nicotine vapes (50mg/ml) remained available for as little as NZ\$2.50 each in the month following the regulation change. The cheapest products we purchased were available in the poorest neighbourhoods (New Zealand Deprivation Index decile 10). Inspection of online vape retailer websites in November and December 2023 showed that discounted disposable vapes were also promoted immediately prior to the regulatory change. Although the regulations aimed to reduce vaping products' addictiveness and affordability, in the short term, discounting and bundling promotions have had the opposite effect and high-nicotine products have become cheaper.

SVRs are currently exempt from measures in the *Smokefree Environments and Regulated Products Act* that prohibit free or discounted distribution or supply of regulated products. We strongly recommend removing this exemption and aligning vaping products with other regulated products to prevent heavily discounted vapes from flooding the market whenever regulations change. The National–New

Zealand First coalition agreement includes plans to ban disposable vapes, which is likely to lead to heavy discounting of these products if implemented. A law against price discounting would also disallow loyalty schemes, giveaways and “buy one, get one half price”-type deals, which are currently used extensively by retailers to promote low-price vapes, making them very affordable for children and adolescents.

Until very recently, only disposable vapes were available for NZ\$10 or less; however, pod system “starter packs” are now available at that price, making them easily affordable to young people. For example, the solo website (examined in January 2024), sold NZ\$10 starter kits online and at 1,864 physical outlets around Aotearoa New Zealand, including SVRs and general vape retailers (the latter may only sell tobacco, mint and menthol flavours). Continuous innovation allows vape companies to evade regulations while undercutting competitors' pricing and the appearance of cheap pod systems means NZ\$10 vapes are likely to remain available, even if single-use vapes are disallowed.

“Hybrid disposables”, a new product category,

appear to meet the removable battery requirement but many contain high-nicotine (50mg/ml) e-liquid (illegal for single-use products from December 21 2023), which suggests suppliers do not view these products as “single use.” However, the vaporising mechanism (i.e., the vaping device) appears to be located in the disposable “pod” and the reusable component contains only the battery. We consider that the “puk.” and “Nexus 6000” are therefore single-use products and should be subject to the 20mg/ml nicotine limit, as should the AirPops Eco one use. Regulators must clarify this ambiguity, either via prosecution of test cases or by revising the regulations.

Greater clarity regarding compliance with removable battery regulation is also required. Products such as solo, alt. Nu and AirPops Eco require specialist tools to remove the batteries and thus do not appear to align with the Vaping Regulatory Authority’s advice: “[T]he intention of the regulation is to allow easy inspection of the battery and removal if necessary. A product requiring a specialist screwdriver that an average consumer wouldn’t have easy access to may not be meeting the intention” (personal communication in: email from Senior Advisor – Regulated Products, Public Health Policy and Regulation, Ministry of Health – Manatū Hauora, 30 January 2024). A clear response outlining what is and is not acceptable would provide product manufacturers and consumers with clarity and avoid the “grey areas” that are rapidly developing.

Although SVRs did not break the law by selling to our 20-year-old mystery shopper, we find the lack of robust age verification practices unacceptable. Guidelines for selling alcohol state that “All customers who look under the age of 25 should be asked for valid ID”;³¹ vape retailers should have to apply similar guidelines.

While existing regulations have restricted vape product advertising, they have not effectively controlled sales promotions. Tobacco advertising restrictions in the 1980s and 1990s saw a large growth in retail promotions (e.g., loyalty schemes, discounts, point of sale promotions) as tobacco companies re-aligned their marketing strategies;³² vaping product marketers appear to be responding in a similar way, and our findings show that SVRs are pushing (if not breaking) the boundaries set by regulations. As a result, low-cost, addictive products remain highly visible and affordable to young people and will continue to undermine

their wellbeing if decisive action is not taken.^{4,6,9,10}

Since our audit, the Government has repealed laws aimed at reducing tobacco’s availability and addictiveness. The repealed measures would have significantly reduced the risk of youth transitioning from vaping to tobacco addiction, since denicotinised tobacco would hold little appeal and would be difficult to access. Given the repeal, it is vital that policymakers designing new policies governing tobacco, vapes and other nicotine products consider youth wellbeing and the difficulty of changing behaviour once addiction is established. Poorly designed regulations could inadvertently drive young people towards tobacco for their nicotine “hit”, given its easy availability. There is an urgent need for guidance and support services to help children and adolescents overcome nicotine addiction.

This study is the first to audit compliance with Aotearoa New Zealand’s vaping-related legislation. As with any research, it has limitations. We only audited SVRs and did not include general retailers that sell vapes (e.g., convenience stores/dairies, service stations), which greatly outnumber SVRs and operate under different rules (e.g., the flavour restrictions noted earlier). Future research should audit these stores’ compliance with current policy. Our audit only covered four City Council areas in the Greater Wellington Region, and thus may not be representative of other regions. Nonetheless, because compliance problems were not limited to a particular area or sub-group of stores, we think it likely that the problems identified are systemic and nation-wide. We could not check compliance of all products for sale at the SVRs audited and focussed on a selection of low-price products. Future studies should take a more comprehensive and systematic approach to product compliance testing, including testing whether nicotine strength is true to label.

In conclusion, our findings indicate that recent regulations have been largely ineffective; post-implementation, high-nicotine vapes remained widely available at prices school children could easily afford. While we have called for stronger policy, we also believe existing regulations require more comprehensive enforcement. Addressing the regulatory gaps and breaches we have identified must become an urgent priority if the Government is serious about reducing vaping among young people.

COMPETING INTERESTS

None to declare.

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Appendix

Protocol SVR Compliance Audit Fieldwork

January 2024

Safety:

- Fieldwork must only be conducted during daylight hours.
- If conducting fieldwork alone, check in with Jude by text/phone at the beginning of each shift stating WHERE you will be working and, after, that you've finished safely.
- If at any time you feel unsafe, please withdraw and return to a safe place.
- If your cover is exposed, please hand over a letter to the retailer explaining the project and withdraw immediately, saying they should contact Dr Ball with any questions.

Identifying SVRs:

- Use the “master list” from RPH, and cross them off as you go.
- If a store has closed down, note this on the master list.
- If you can't find a store, try Google Maps and/or phone Jude for support.
- In each suburb/area, use Google Maps (“vape store near me”) to check in case there are new or unregistered stores.
- Please include new/unregistered stores in the audit and note the name and address on the master list.

Before entering store:

- Enter name and address of SVR in Qualtrics and complete all the initial questions, using definitions below.
- Is the store located next to/opposite bus/transport?
 - **Definition:** within 20m? Easy line of sight from bus stop to store, thereby making vapes highly visible to people waiting at bus stop.
- Is there an R18 sign on display outside the store?
 - **Definition:**
 - **Highly visible** = eye height, straight on, next to or on door, large and/or bold type. Can't miss it.
 - **Not very visible** = small, faded/faint

type, at an angle to person entering, not located well. Could easily miss it.

- Is there a window display with vaping products visible from outside the store?
 - **If yes, take a photo** (if possible/comfortable to do so).
- Is this a store-within-a-store?
 - **Definition: (if “yes” to ANY of the following)**
 - Has the SVR been subdivided from a larger store (i.e., it is within the footprint of another retailer)?
 - Do customers have to walk through another store to get to the SVR (i.e., the SVR doesn't have a separate entrance from the street)?
 - Does the SVR have a door connecting to a different retailer?
 - Does a staff member have to come from the “main” store to the SVR to serve customers?

In the store:

1. Look around, notice posters, promotional materials.
2. Ask price of cheapest disposable vape—remember it!
3. Ask price of cheapest starter-pack for reusable vapes—remember it!

Definition: “Disposable” = single-use, all-in-one product with no replaceable components—you can't insert new pods or refill it. **“Reusable”** = a vaping device that you can refill or insert new pods into.

- Ask to buy the lowest priced product (if there are options, go for the most youth-appealing one, or a brand you haven't purchased yet). “OK, I'll take the...”
- If cost is \$20 or less, go through with the sale. **GET A RECEIPT please!**
- If more than \$20, pretend to go through with the sale and see if they ask for ID before realising you left your wallet at home.
- If asked for ID, try to get away without it. (e.g., “It must be in the car.”)

Other observations could include:

- Detail about the store-within-a-store set up
- Proximity to other SVRs
- Age-checking policy displayed

- Don't sell disposables at all
- Children/underage youth in store (including children of customers)
- Young people loitering outside the store
- IQOS is being promoted
- Detail about promotional displays in store
- Other discounts, promotions
- Vape vending machine, self-service touchscreen
- Sale of other youth-oriented products
- Vape emissions passing into adjoining store

After leaving the store:

- Complete remaining Qualtrics questions.
- Use envelopes/rubber bands to keep the product and the receipt together.

Back at the office:

- Analysis of compliance, marketing attributes of purchased products.
- Investigate SVR locations—NZ Deprivation Index.