

**Submission
No 36**

E-CIGARETTE REGULATION AND COMPLIANCE IN NEW SOUTH WALES

Name: Mr Andrew Thompson

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E-cigarette regulation and compliance in New South Wales

Submission to the NSW Parliamentary Inquiry - 2023

The submission of Andrew Thompson, vaper and Tobacco Harm Reduction advocate.

Terms of Reference

This submission will seek to address each of the terms of reference from the perspective of a current nicotine vaper and advocate living in NSW. Namely:

- a. the current situation in NSW regarding:
 - i. the prevalence of e-cigarette use among children and young people
 - ii. health risks associated with e-cigarette products
 - iii. the impact of programs and services aimed at preventing uptake or continuing use of e-cigarettes,
- b. NSW's current regulatory framework, in particular:
 - i. its effectiveness in reducing harm from e-cigarette use
 - ii. its effectiveness in preventing illegal supply
 - iii. challenges to enforcement and compliance and ways to overcome these,
- c. how NSW can work with the Federal Government to implement reforms on e-cigarette products,
- d. any other related matter.

Preamble

My lived experience aims to contribute to providing the government a clear path to achieving these goals.

To better understand the context of my replies, I announce the following concepts and ideas which I strongly hold:

Nicotine is innocent

Nicotine is not a carcinogen. Separated from the harmful substances that are in the tobacco smoke emitted from cigarettes, nicotine consumption is relatively benign. While it is toxic in large doses, the usual form of administration, via the mouth (e.g. smokeless tobacco such as snus, or using the relatively new product that puts nicotine in pouches for oral use) or via inhalation (vapes or heated tobacco products), produces nausea and headaches at levels far below what might cause permanent damage or death. While there is a swathe of evidence to support this, perhaps most demonstrative is that the federal Therapeutic Goods Administration approved nicotine replacement therapies first for prescription, then later for retail sale to persons over the age of 12 years old (I.E. kids).

It is important to acknowledge the few deaths from nicotine poisoning. Most involve intentional use via oral means (drinking high strength nicotine) or injection, presumably to suicide. The former is often unsuccessful, as nicotine acts as an emetic - it causes vomiting.

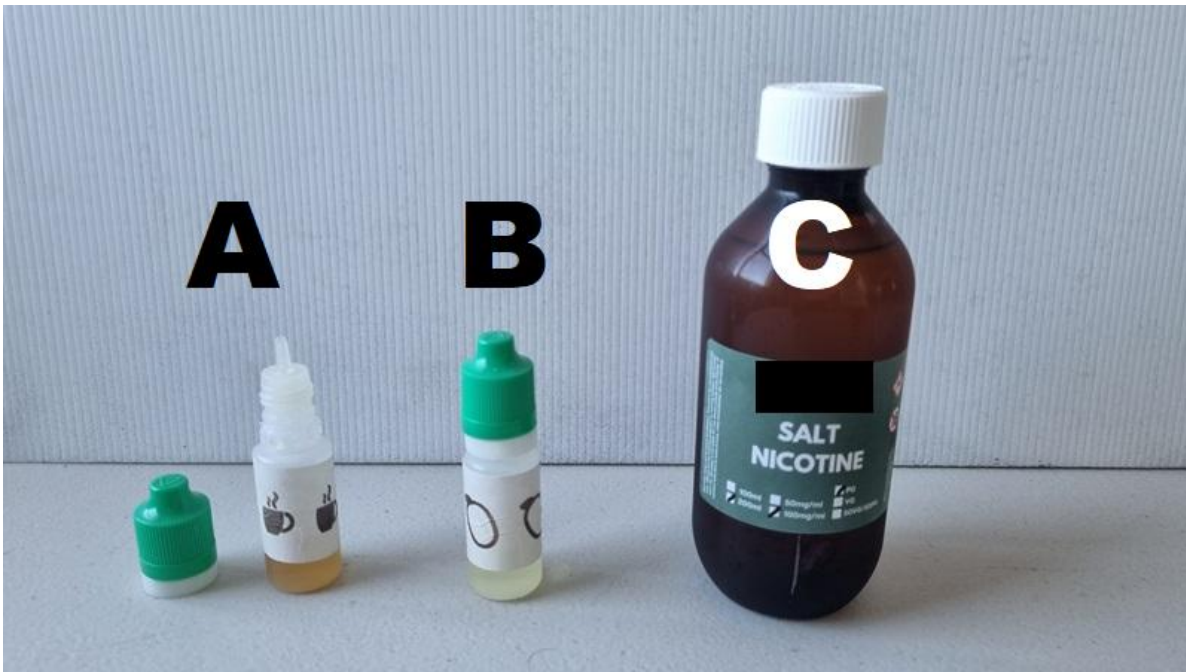
But we should all carefully study and try to understand the reasons behind why a toddler in Victoria tragically died after drinking the high strength nicotine his mum was using to mix down for e-liquid, when she left it uncapped for a moment and turned her back as she was putting other ingredients away. This event was telling about the potential harms of poor regulation.

I buy high strength nicotine. It is the only ingredient not legally available in Australia. While I vape at 30-40 mg/mL strength, I have bought nicotine from outside Australia at a strength of 100-200 mg/mL (note that 200 mg/mL is now 'super duper' banned). I buy it in larger amounts 250-500 mL at a time as the cost for international shipping is high, and one of the reasons I first tried vaping was to cut costs. I have no children, and live alone. I enjoy DIY mixing, in the knowledge that I can then know, and control, what goes into the e-liquid, rather than buy it pre-mixed from shady gray or black market sources in Australia.

It is likely the mother of the toddler was buying the stronger form of nicotine for much the same reasons. Having children in the house, would she have done that if suitable, sensibly regulated nicotine e-liquid was available at the local vape shop or tobacconist?

The Therapeutic Goods Administration has a quite sensible and comprehensive standard for safe nicotine e-liquid ([TGO 110 Nicotine](#)), specifying what can be safely supplied. That would be quite valuable for retail or therapeutic nicotine vaping, but given the first is illegal and the second is inaccessible, too expensive or unappealing for most, it has almost no influence in the nicotine e-liquid supply chain as it is accessed by consumers.

Lower strength (ready mixed) regulated nicotine e-liquid, supplied in bottles with childproof caps that has flow-rate limited tops. To explain further:



- A. 10 mL bottle of e-liquid of strength 10 mg/mL, uncapped to show the needle tip which limits the flow rate.
- B. 10 mL bottle of e-liquid of strength 10 mg/mL, capped with its childproof top.
- C. 200 mL bottle of nicotine of strength 100 mg/mL, capped with a childproof top.

Bottle C would be similar to the container from which the toddler drank the fatal amount of strong nicotine. While it has a childproof cap, once that is off, it becomes dangerous for young people, pets and potential spills. When making e-liquid using that nicotine, there would also be bottles of flavour (perhaps even multiple bottles), and bottles of both excipients used in e-liquids (PG and VG). There might also be scales for measuring, open vessels used for measuring, stirring and mixing, and more. Quite complicated, and something that should be done with great care in places where only responsible adults are present.

Bottle B contains 10 mg of 10 mg/mL strength e-liquid ready for use, in a bottle with childproof cap in place.

Bottle A contains 10 mg of 10 mg/mL strength e-liquid ready for use, in a bottle with childproof cap off to show the needled tip. When needed, the user can remove the cap, fill the tank or pod using the flow-rate limited needle tip, then pop the cap on to avoid accidental exposure.

Bottle C contains 200 times the overall quantity of nicotine, and with no needle tip to limit flow rate, could potentially be guzzled to fatal effect once the cap is removed. To get any amount of nicotine from the uncapped bottles like seen in A and B, the bottle would need to be picked up, put into the mouth upside down, and squeezed. Even then, it would likely only issue a few drops, containing minuscule amounts of nicotine.

Addiction, Dependence and Habituation - Understanding the Differences and Responding Appropriately

By all meaningful definitions of addiction, which include not only dependence, but also compulsive use associated with *significant levels of harm*, it is illogical and counterproductive to claim that anyone can be addicted to low-risk forms of nicotine use.

Addiction is defined as a chronic, relapsing disorder characterized by **compulsive drug seeking and use despite adverse consequences.**

National Institute on Drug Abuse (NIDA)



Addiction is a complex condition, a brain disease that is manifested by **compulsive substance use despite harmful consequence.** People with addiction (severe substance use disorder) have an intense focus on using a certain substance(s), such as alcohol or drugs, **to the point that it takes over their life.**

American Psychiatric Association

A compulsive, chronic, physiological or psychological need for a habit-forming substance, behavior, or activity **having harmful physical, psychological, or social effects.**

Meriam Webster Dictionary



Addiction is marked by a change in behavior caused by the biochemical changes in the brain after continued substance abuse. Substance use becomes **the main priority of the addict, regardless of the harm they may cause to themselves or others.**

Addiction Center

The regular use of drugs are usually defined as occurring in three levels:

1. Habituation
2. Dependence
3. Addiction

Having discussed how nicotine does not fit the definition of addiction, we now need to address the matter of whether it can cause dependence.

The answer to that is yes, *and* no. Every person possesses anywhere between 7 and 13 separate receptors which can bind nicotine. Some people do not have the receptors that bring pleasure or provide other benefits from nicotine consumption and consume it for other reasons. Those individuals have no problem ceasing use.

I used to smoke (in late school and to my mid 20s). I thought smoking was a great way to make a statement about myself that would impress those I cared to impress and irritate those I cared to irritate. But I always thought it tasted disgusting, was a stupid thing to continue and threatened to limit my early career opportunities.

I recall just drifting out of smoking, a pathway common to many ex-smokers. And like many smokers, I recall it being anything but difficult or torturous.

On the pleasure of smoking

Simon Chapman

<https://theconversation.com/on-the-pleasure-of-smoking-69721>



Most of the people who enjoy nicotine use, on the other hand, are not as lucky as the above. The reasons though, are more complex than they might seem, because *nicotine has healthful benefits* for many individuals. An astonishingly wide variety of benefits might be conferred from low-risk nicotine use, as documented in the [Safer Nicotine Wiki](#) list of [Nicotine therapeutic benefits](#). The peer reviewed papers do not provide 'proof', no scientific investigation can do so (a fact seemingly lost on those who wish to quell smoking or nicotine use. Though they are highly suggestive of beneficial effect. While the list is long, a brief overview of possible benefits of nicotine consumption includes: slowing of the progression of neurodegenerative diseases such as Parkinson's and Alzheimer's, amelioration of ulcerative colitis symptoms, positive effects on ADD / ADHD & attention, autism, cancer as well as its treatments (e.g. lessening side-

effects of chemotherapy), risk of catching COVID (reversed if the person enters hospital and has no access to nicotine), improvement of mental health for a variety of neurodiversities and the side-effects of the common medications ...

Following on from the assertion that nicotine cannot be addictive, can we truly claim that people who consider themselves as being dependent on nicotine are not simply gaining tangible benefits from self-medicating?

Another more recent definition from those seen above comes from the [Addiction Ontology](#). A salient part of which is high lit in yellow: "[a behaviour that includes] *serious net harm* as a feature. The reason is to limit the class to things *that merit a treatment and public health response*".

Definition ?

A mental disposition towards repeated episodes of abnormally high levels of motivation to engage in a behaviour, acquired as a result of engaging in the behaviour, where the behaviour results in risk or occurrence of serious net harm.

Synonyms ?

- Dependence

Comment ?

This entity focuses on abnormal motivation to engage in a behaviour and **includes serious net harm as a feature. The reason is to limit the class to things that merit a treatment and public health response.** It is a quantitative entity and a fuzzy set because there can be varying thresholds set for degree of harm and strength of motivation. As a result, it is essential to operationalise the term for it to be meaningful.

Given the road to Hell is paved with good intentions, we must carefully consider if a behaviour is of such great harm to the individual or society, as to merit any intervention that might make it more harmful, or otherwise exacerbate the problem (e.g. in becoming a target for rebellious youth to challenge).

Two further notes on the potential for dependence of tobacco and nicotine.

- Tobacco contains small amounts of monoamine oxidase inhibitors (MAOIs) while those levels are raised by orders of magnitude when the tobacco is combusted. MAOIs act as anti-depressants, and unknown to many smokers, provide some relief for depression they might mistake for simple tension or stress.
- Ammonia is added to most brands of cigarettes to adjust the PH and thereby aid absorption. Such additives contribute to the speed of the 'hit' that many smokers enjoy.

Given the e-liquid used for vaping includes neither of those substances at significant levels (perhaps a small amount of MAOIs left over from processing, though entirely absent from synthetic nicotine), it seems intuitively obvious that nicotine vaping would be less dependence forming than smoking. This intuitive result has been confirmed in formal and informal research. When asked, people report that they feel less tied to nicotine consumption, and giving up nicotine vaping is easier than quitting smoking ever was.

Those dependent on nicotine or who use it habitually may want to cut down or cease use of nicotine on the basis that it costs money, is stigmatised, or they feel 'trapped' by the habit. The lower form of hold nicotine has on the user in this safer form is easier to address in that the person can gradually lower levels of nicotine in their e-liquid until they are vaping '0 nic'. It then becomes a matter of giving up the 'hand to mouth' motion or haptic habit they have developed and may also enjoy. This is one of the few situations in which otherwise largely ineffective suggestions from those in tobacco control suggest may work. An example is 'suck through a straw when tempted'.

The current situation in NSW

The prevalence of e-cigarette use among children and young people

Anecdotal reports and media click bait reporting suggest that many youth are vaping nicotine disposables.

These of course, are illegal for sale in NSW and Australia, yet when I regularly inquire at shops with the question 'got any mango vapes?' the answer is invariably 'yes'.

Health risks associated with e-cigarette products

Almost vanishingly small. Studies of ex-smoking vapers and vapers who were young enough and smart enough to go directly to nicotine vaping, show no detectable harms. The aerosol emitted from nicotine vaping devices is of low toxicity. Some studies that claimed otherwise were because the researchers used a machine to do the test and kept increasing the power levels until the wick dried out and began to undergo pyrolysis. These 'dry hits' are truly acrid and horrible. Anyone who experiences one (e.g. when the tank or pod is empty) would immediately stop vaping and investigate the cause. Other studies have been conducted of biomarkers of harm in the human body. Given they can find no or minimal levels of the biomarkers, they explain the earlier results.

The impact of programs and services aimed at preventing uptake or continuing use of e-cigarettes

The impact of current anti-vaping campaigns (most notably in Victoria and Queensland) not only make youth aware of the existence of vapes, but offer a chance for rebellious kids to rebel. It is seen as a direct challenge to their agency and an assault on their common sense, and has the reverse effect than intended.

NSW's current regulatory framework, in particular

Its effectiveness in reducing harm from e-cigarette use

Nicotine vaping has immense potential not only for reducing the harm of smoking, but for diverting those who might ever smoke from doing so. The Royal College of Physicians, an institution of over half a millennia existence and the first (in 1962) to issue a report on the health effects of smoking, had this to report in 2016 in their report [Nicotine without smoke: Tobacco harm reduction](#), before many studies of biomarkers of harm were available.

Royal College of Physicians (est. 1519)

“The available data suggest that e-cigarettes are unlikely to exceed 5% of the harm associated with smoked tobacco products, and may well be substantially lower than this figure.”



The fact it was published in 2016 before biomarker data was available is significant, in that the RCP are currently undergoing investigations needed to publish an update on their (very conservative) '5%' estimate. I would not be surprised if new report drops that to 2% - around the same risk assigned to Nicotine Replacement Therapies.

Its effectiveness in preventing illegal supply

If that had instead been 'Its effectiveness in *creating* illegal supply', I could award the regulators 10/10. By making nicotine vaping so high in the public consciousness they created interest, particularly among youth. By cracking down on nicotine vaping, they have jumped the shark and made a situation where adult DIY mixers who vape began to approach local shops to ask about the availability of supplies. Vendors, noting the potential for profit in turn, began to import the (much maligned) disposable nicotine vapes (which could, BTW, help the elderly smokers with limited dexterity, and those adults too busy, or with young children in the house, who would prefer a sealed, fuss-free solution). Once that local market was established & the screaming headlines brought them to the attention of young people, the vendors knew that youth would be interested and it would be a threat to them if they tried to *exclude* young people from purchasing the product. "My older bro buys from you, sell to me too or I'll dob you in!".

Challenges to enforcement and compliance and ways to overcome these

Legalise and regulate the consumer sale of nicotine vapes and e-liquids. 50+ years of the Drug War tell us that drugs win.



To lower youth interest in and use of nicotine vaping, I recommend:

- Doing what the UK did some years ago. It showed middle aged and older persons vaping, mentioned quitting smoking, and were very low-key. Nothing drops a youth's interest in vaping than seeing some 'old fogey' who reminds them of grandma puffing on a vape. Unfortunately these ads have not been run for some time, and the UK's implementation of low tank and bottle sizes and low nicotine levels (maximum 20 mg/mL) combined to allow a trickle, then a flood of higher strength disposables.
- Offer free and confidential services (phone support, school referrals to mental health services ..) to help young people deal with the stressors in their lives that might make them amenable to trying substances in order to deal with those.
- Provide quit services with realistic strategies to help vape cessation, notably taking their advice from people who formerly vaped.

How NSW can work with the Federal Government to implement reforms on e-cigarette products

The reforms needed for the health gains in youth and adults are to create a sensible, well regulated market that implements (and enforces) age limits. By showing what a well regulated consumer market can do, they can assure the Federal Government how to achieve the aim of limiting the harms of smoking and diverting people from ever taking it up.

Features of this regulation would include:

- Legal sale of nicotine containing e-liquid to adults through licensed premises. Breach of license conditions would attract fines of considerable size and suspension or cancellation of the license to sell. Unlicensed vendors should face fines of at least double what applies to the licensed vendors, and/or extra fines on top for unlicensed sale.
- Specifying that e-liquid bottles come with both child-proof caps and flow limiting tips.
- Adopting the TGA's TGO 110 standard in terms of substances that need to be excluded from nicotine e-liquids, or at least below levels that are dangerous.
- Add 'best before' dates to ensure those potentially toxic substances do not build up over time, from the natural decomposition of the ingredients (mostly the flavours).
- Legislate that all combustible tobacco sold include [pack inserts that promote low-risk nicotine and tobacco products](#), including corrective statements on nicotine to assure those older smokers reticent to swap 'one addiction for another'. These folks are actually the ones most in need of the information, but it would be beneficial to younger smokers. Add *severe penalties* for non-compliance. This would result in even many vendors of chop-chop and illegal tobacco to comply.

Any other related matter

Dreams of a smoke-free generation are unattainable if low-risk alternatives are suppressed and a large proportion of the tobacco sold comes from the black or grey markets.

Dreams of a nicotine-free generation are delusional for a product that is enjoyed by many, and provides obvious benefits to a large proportion of the consumers.

Please put a stop to this nonsense (mostly coming from anti-nicotine and tobacco zealots in tobacco control) and face up to a world in which low-risk nicotine use is not repressed or stigmatised. Nice people use drugs, including nicotine. Let's make sure they are not harmed by shoddy products sold through black markets, or lack of availability drawing them towards smoking.

Thank you for offering this opportunity to allow me and other members of the community to contribute our thoughts on reducing or eliminating harm for nicotine consumers (of all ages). Please consider the points made above, and if you need references, get back to me. If public hearings are conducted, I am available to provide further clarification or evidence. I live within a few kilometers of the NSW Parliament building and can reach it with a short (and fun!) e-Bike ride.

Let's get this done, NSW. 'Be the first' state in Australia to sensibly regulate nicotine vapes as an adult consumer product and demonstrate the benefits of doing so to the rest of Australia and the world.