# Acute Drug Related Harm in the Taranaki Region from those on the Frontlines

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## ABSTRACT

**Aims:** To establish the extent of the problem of synthetic cannabinoid use in Taranaki, and provide suggestions on ways to prevent further acute drug-related harm.
**Methods:** A literature review, stakeholder interviews and collection of epidemiology information were the three main avenues of research. The first was carried out via keyword searches in a number of different scholarly databases. Stakeholders were initially reached out to via email and a total of four interviews were carried out. Epidemiology information was primarily received anecdotally through interviews.
**Results:** Acute harm was not perceived as a major problem presenting to health services, but could be a larger issue out in the community. The key drugs of harm identified were alcohol, methamphetamine, synthetic cannabinoids and natural cannabis. Age did not appear to be a factor, but there is a link between usage of synthetics and Māori. There is a general consensus among all stakeholders that interventions should be community and education based, and predominantly aimed at youth.
**Conclusions:** The level of harm due to synthetic cannabinoids appears to be less in Taranaki than elsewhere. It is likely that greater harm is experienced out in the community and is not presenting to services so the full extent of the problem has not yet been ascertained. Interventions to prevent harm should begin with surveillance, as well as increased access to services, strength-based community programs and education.

## INTRODUCTION

Synthetic cannabinoids are a group of substances that have rapidly become a dangerously toxic substance being sold on the black market in New Zealand[1]. There has recently been a dramatic increase in acute harm from synthetic cannabinoids nationwide, intensified by a lack of knowledge of the substances, their manufacturers, and their consumers. Nationally, synthetic cannabinoids are one of the most commonly used substances, along with methamphetamine, MDMA and natural cannabis[2]. Dr. Paul Quigley, a doctor working in the Emergency Department (ED) in Wellington states that one third of fatal poisonings are caused by synthetics; they have contributed to 70 deaths in one year alone[3]. The Ministry of Health has released a Discretionary Fund for supporting interventions specifically aimed at responding to acute drug related harm. However, the extent of the issue in the Taranaki region remains unclear, and it would be

difficult to address the concern, without first understanding what it is. In the context of this problem, the Ministry of Health has defined acute drug related harm as short term consequences and serious medical emergencies as a result of drug use, which affects individuals or communities as a result of a particular drug or new substances[4]. This service development project aims to gain insight from key stakeholders, individuals with lived experience, and collate these perspectives with epidemiology data and a literature review, to establish the level of acute drug-related harm in Taranaki. The aim is to provide a basis for equity-positive harm reduction interventions to be put in place via a population health approach.

## METHODS

Key stakeholders who were identified as having experience with drug-related harm, including individuals with lived experience were reached out to via email. Primary data was retrieved from the National Poisons Centre, and Taranaki District Health Board (TDHB) medical records. The code requested for was T43.8: "Other psychotropic drugs not elsewhere classified". The Emergency Department in TDHB does not code for presentations which do not go on to be admitted, and so a text search was done for variations of "synthetic cannabinoids" to retrieve any use of the substances that had been recorded. Data dating back five years was requested. of St Johns was reached out to but no insights from the frontline or primary data was able to be retrieved. Eleven stakeholders were initially contacted via email (Appendix A). Of the 11 stakeholders contacted, four interviews were carried out and recorded for later analysis. The roles of these four stakeholders were; Youth Alcohol and Drug worker, Health Advisor, Mental Health and Addiction Nurse, and Emergency Department Clinical Nurse Manager. A basic information and consent form was written up (Appendix B) and provided before each interview to be read and signed. Each interview was then carried out on the basis of a pre-drafted template (Appendix C).

In the analysing process ideas on five main themes were retrieved:

- Epidemiology of synthetic cannabinoid use in the Taranaki region, including ethnicity, age, and particular geographical areas that are affected.
- The level of acute drug related harm experienced by the community, and what the major drugs of concern are
- The perceived reasons why individuals are using synthetics
- Perceived accessibility and cost of synthetics
- What could be done locally and practically by the DHB to prevent drug related harm.

In addition a literature review was carried out. Four main databases were searched to retrieve papers namely; PubMed, Google Scholar, University of Auckland Library, and Proquest. Keywords used to search included combinations of; 'synthetic cannabinoids', 'harm', 'New Zealand', 'acute drug-related harm', 'hospitalisations', 'death', 'epidemiology'. No relevant literature was found in any of the search engines when looking specifically for Taranaki/New Plymouth information. In most cases, searches were refined to 'after 2015' to return results that were both recent and post-Psychoactive Substances Act. There is not a significant amount of research into acute drug related harm and synthetic cannabinoids. Much of the research that has been done is retrospective, or based on self-reporting which has its limitations. Most papers state that the epidemiology is not well understood and further research is required for a fuller understanding of the extent of the problem in New Zealand.

# FINDINGS

## Primary Data

Data on all presentations to the Emergency Department and hospital admissions specific to the code T43.8: "Other psychotropic drugs, not elsewhere classified", was requested for the last 5 years. In Taranaki, ED presentations are not coded and so a text search on variations of "synthetic cannabinoids" was carried out as a substitute; however hospital admission data was received strictly based on the above code. Data encompasses both Taranaki Base Hospital and Hawera Hospital. Two data sets were received and divided into ED presentations, and Hospital admissions. In total there were 34 ED presentations from September 2015 to February 2019. Of these, 12 appear to have been admitted to the ward or ICU. However on admissions data, from the specific code search, only seven admissions are reported within the same period of time.

ED admissions data shows that the frequency of presentations per year increased from 8 presentations in 2016 and 2017, to 11 in 2018. (Figure 1). General complaints from patients presenting to ED included; feeling unwell, seizures, chest pain, headache, collapse, overdose, or other. Of the 34 presentations the most common complaints apart from "other" were seizure (n=6), unwell (n=6), and overdose (n=2). A majority of 25 presentations were males, the remaining 9 female, and the age ranged from 1 year of age to 58. Figure 2 shows presentations to ED divided into age categories, and Figure 3 represents the number of presentations according to ethnicity.

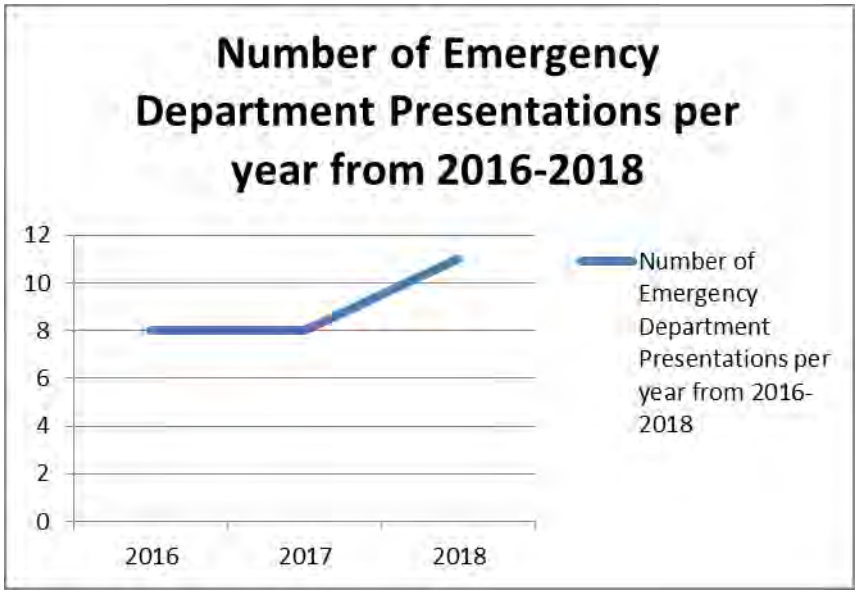


**Figure 1: Number of presentations to Taranaki Base and Hawera Emergency Departments due to acute harm from synthetic cannabinoids each year from 2016-2018.**

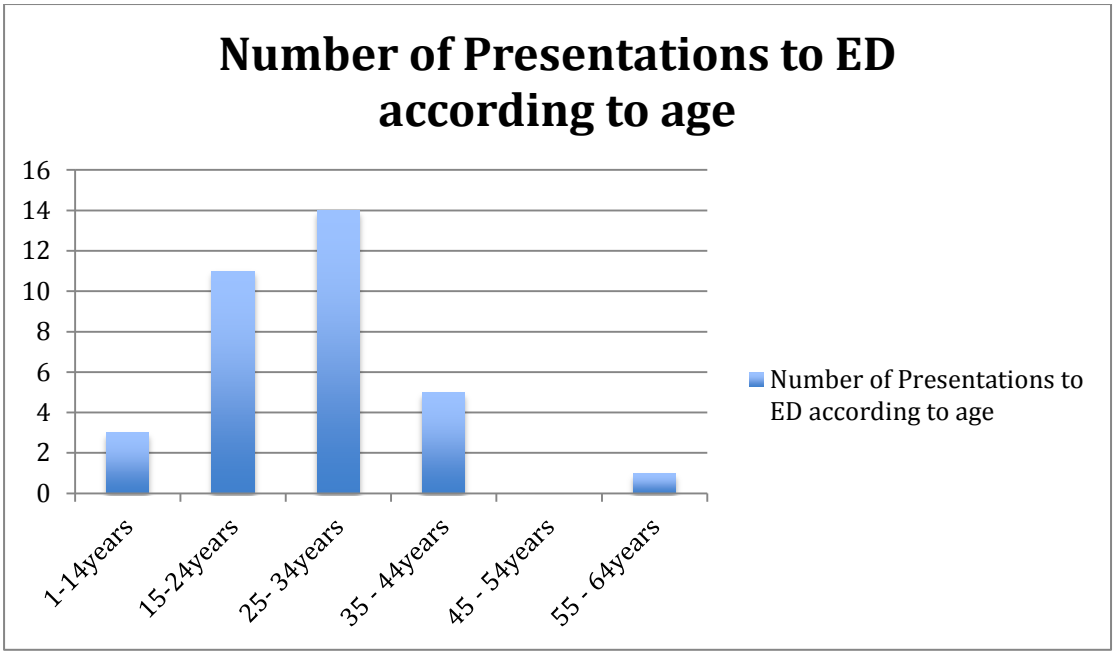


**Figure 2: Number of presentations to the Emergency Department due to harm from synthetic cannabinoids between September 2015 and February 2019 according to age group**

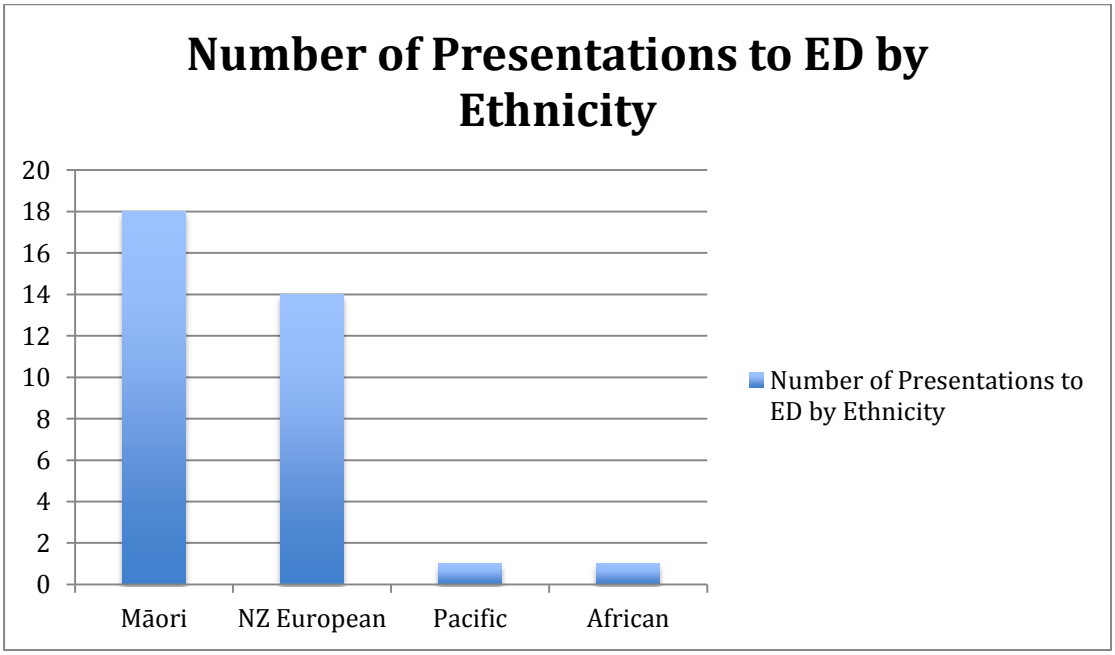


**Figure 3: Number of individuals presenting to the Emergency Department due to harm from synthetic cannabinoids between September 2015 and February 2019 according to ethnicity**

The primary data received from the National Poisons Centre (NPC) is national data spanning two years from August 2016 to November 2018. The NPC received 18 calls relating to these substances during this time. In general, the data reported cases from a broad age range, majority of 9 males compared to 7 females and 2 unspecified, and predominantly from within the North Island. Some cases were unintentional or poisonings of unknown cause, but majority were the result of abuse. Four of the 18 calls

related to multiple substance use, and the majority of calls made to the Centre were by health professionals rather than the public.

## Stakeholder Interviews

Stakeholders varied in ideas and perception of a problem of acute drug-related harm from synthetic cannabinoids in the Taranaki region. Different service providers and areas of work provided differing perspectives, and some could not comment on specific epidemiology, such as accessibility and cost. There were a number of insights into the five main categories, outlined below.

### *Insights into who is affected*

A broad spectrum of ideas was obtained around the epidemiology of synthetic drug use, likely due to the wide variety of the roles of stakeholders, and also due to lack of precise knowledge and clear evidence. Perceptions differ between stakeholders about demographics of users. Age does not appear to be a factor as users appear to range from high-school age teenagers to 50-60year-olds. The older group seems more likely to be poly-drug users. In general, it was said youth are at risk, likely because they are an age of experimentation and peer pressure and for this reason sellers may be targeting them. Other at-risk individuals are those with social issues, a background of mental health problems, or a history of drug use. In regards to ethnicity, responses were varying. Two European males have recently presented to ED, while another stakeholder said the majority he's seen in the community appear to be Māori or Polynesian. One key informant states there is a definite link between Māori and use of synthetic cannabinoids, and predominantly affects those who are of lower socioeconomic status. It was suggested that synthetic cannabinoids may have become a replacement substance for inhalant abuse (huffing), as it may give a similar dissociative effect, and grips a similar group of people. In terms of geographical location, anecdotally, there seems to be a prolific synthetic cannabis issue within the community of Waitara. Two stakeholders mentioned there being a problem there; one providing anecdotal stories that a 16-year-old male could not name one house that didn't contain the substance. The other has personally witnessed seizure activity and comatose individuals after smoking the substance. Unfortunately there was not a large enough stakeholder response to gain a real sense of the problem elsewhere in the community.

### *Perceived Level of Acute Drug Related Harm in Taranaki and the Key Drugs of Harm*

Stakeholder responses were varied in regards to the level of harm from synthetic cannabinoids that is experienced in the Taranaki region. The number of acute medical emergencies appears to be relatively low – ED staff did not see it as a very large problem compared to substances such as methamphetamine and natural cannabis. However within the last two months ED has seen an increase in the number of drug-related presentations of uncertain cause, but people have been presenting very agitated and difficult to sedate. There have been a number of patients present with cannabinoid hyperemesis syndrome, and one individual has recently been admitted to ICU. Unfortunately St Johns insight and data could not be retrieved to give a broader picture of medical emergencies relating to synthetic cannabinoids. The acute aspect of harm is vague from a services perspective, as those stakeholders receiving patients in Addiction and Alcohol and Drug services generally witness chronic harms of substance abuse. The stakeholder with a community perspective states the level of harm is increasing as the

effects as a result of smoking the drug in terms of the symptoms experienced by consumers are worsening.

The major drugs of concern as perceived by the key informants were fairly constant across the board; alcohol, meth, synthetics and cannabis were the only substances mentioned, with differing opinions on which were the most harmful. Alcohol came up as the substance of greatest harm with all stakeholders. Methamphetamine and synthetics vie with each other as the next biggest concern currently, the reason given is that they present the highest risk to consumers.

### *Ideas around why people use synthetic cannabinoids*

Perceived reasons for use ranged from lack of detectability in drug tests, to using as a way to cope with stress or circumstances. The Mental Health and Addictions Nurse noted substance use is usually tied up with mental illness, whether that be anxiety, depression or social isolation, and commonly attachment and/or trauma. A perspective shared by most stakeholders was that use of synthetics is common as a self-management technique. Other reasons included; "bang for the buck", lack of natural cannabis or other substance availability, wanting to escape from thoughts and feelings, lack of support or for entertainment.

### *Perceived Accessibility and Cost*

Little is known about the cost and accessibility of synthetic cannabinoids within Taranaki. Anecdotally it is cheaper relative to other drugs of abuse, and one stakeholder has said that it is very accessible and easy to find. Synthetics are not usually the drug of choice, for example it was suggested that individuals may only access it if natural cannabis is unavailable, or when financially unable to purchase other substances such as methamphetamine. This is supported by another stakeholder who suggested that given a choice, most people would choose cannabis, regardless of cost and accessibility. Synthetic cannabinoids may be a "runner up" drug, and most people using may also be using other substances.

### *Ideas and Intervention Suggestions*

The consensus around interventions seems to be strength-based community programs and education. Majority of stakeholders suggested strength-based approaches, for example, asking people what they're interested in and good at, and attaching them to existing programs in the community that support these activities. Individual communities should be approached and asked what they think should be done and what would be helpful for them to carry out the vision for the families within their regions. Through interviewing each stakeholder, it became apparent there are a number of community initiatives that already exist. There is a parent-run group that has been operating for five years who hire a hall every Friday night for 50 kids of all ages. They saw a gap in the community and are currently filling it out of their own pockets. There is also police Blue-light, and Early Start who run activities for high-risk youth.

Education was an intervention suggested by all stakeholders. Different kinds of approaches to education were mentioned. Some ideas were: widespread education around the effects that synthetic cannabis can have, general education in schools, and teaching kids and young adults strategies to keep safe and well. Specific education about what exactly they're putting into their bodies and conveying an understanding of the

long-term effects and of synthetic cannabinoids and the ramifications of substance abuse may be helpful.

It was suggested by two stakeholders that resources should be directed at identifying the source of substances. Investigating manufacturing which, anecdotally, occurs within gangs, rather than targeting small-scale suppliers, in order to restrict availability. Another popular suggestion was having a youth drop-in center or 'hub'; places in the community where youth can play sport, engage in activities, but also receive healthcare and counseling. Other ideas that stakeholders suggested included: general support for people to identify their needs should they wish to change, have a place or online forum for confidential intel for people to inform on what is going on in the community, whānau-oriented services. Removing Addiction, A&D and Mental Health services from hospital grounds in an effort to remove some of the stigma that surrounds these problems, and increased accessibility were other proposed harm-reduction strategies. Another point made is that Alcohol and Drug services are a 'third tier' service. Individuals presenting are already dependent on drugs and need a lot of help and resources. So a suggestion made was to have more 'lower level' services that people, especially the younger generations can easily access, without fear of judgment or incrimination. Increasing community outreach, the number of available services and accessibility to these services is an idealistic goal of multiple stakeholders.

## DISCUSSION

The results from this report outline an initial effort to establish the level of acute drug related harm in the Taranaki region. According to the UNODC, New Zealand reported an internationally significant number of deaths from synthetic cannabis between 2016 and 2018[5]. New Zealand also reported the second largest number of new psychoactive substances worldwide between 20018-2014, following Australia[6]. Here in Taranaki, the overall level of harm has not yet been fully elicited despite primary data from the NPC and on ED presentations. The data from the National Poisons Centre does not provide an accurate picture of the problem in New Zealand, but it does show that the service perhaps is not as well utilized as it could be. The small number of calls received about synthetic cannabis was surprising considering the surge in acute harm around 2017-2018, and the negative media around it. A survey done on poisons information centre calls in NSW reports some useful epidemiology. The study revealed 74% males, median age of 19, majority of calls (77%) were made my health professionals. They also found a reduction in calls after a ban on synthetics similar to the Psychoactive Substances Act. This reduction could be attributed to a change in help-seeking behaviour. The geographic location of cases showed that synthetics are likely to be used more in lower socioeconomic areas[7].

Data on ED presentations within Taranaki, from both Base Hospital and Hawera, showed that at face value, there are not many acute ED presentations caused by synthetic cannabinoids. The data received based on the one code requested, while specific, may not be particularly sensitive. It is likely that relevant data may have been excluded by using this approach. This is shown by the difference in number of admissions between ED presentation data and admissions data, the later of which is specific to code. This may mean other admissions have been coded differently, and therefore missed. The text search for ED presentations and code search also exclude any presentations of uncertain cause. Data clearly shows a steady increase in the number of presentations since 2015, and presentations of greater severity (seizures and those considered overdoses) are more frequent. It also shows that males, those older then 25,

and Māori are much more likely to experience harm from these substances. A global survey reported that within one year, 1 in 40 synthetic cannabis users sought emergency medical attention after use[8], another systematic review describes synthetic cannabis users as 30 times more likely to seek emergency treatment and a greater number of symptoms compared with natural cannabis[9]. This gives an idea of the prevalence of serious adverse affects of synthetic cannabinoid use. To the best of knowledge there has not yet been any fatalities caused by synthetic cannabinoids locally.

Both stakeholders and literature note that youth, and individuals with a family history of, or a pre-existing mental health condition, are at risk of harm[10], although local data shows it is the older users who are experiencing greater harm. Although, those presenting to services may represent a smaller proportion of those that are experiencing both acute and chronic harm within the community as a whole. There are ambulance callouts, for example, from people who have had an adverse reaction to a substance, but by the time the ambulance arrives they have recovered and no longer want assistance, and therefore do not present to services. Information from the interviews, and literature suggest that use of synthetics is predominantly concentrated among the marginalized and dispossessed[11], a group who are already less likely to present to, and receive help from services. It is well known that statistics on harm from alcohol and drugs shows Māori suffer more than pākehā[12], however a study in Auckland showed that those presenting to detoxification services were predominantly European[13]. A deterrent to seeking help may be the illegal status of synthetic cannabinoids[7], and more should be done to improve health-seeking behaviour, as problematic use of psychoactive substances is known to worsen existing inequities[14]. Unfortunately the chronic harm, and dependence issues experienced out in the community is not included in the scope of this report, but is something that should be investigated and evaluated further. The level of acute harm in Taranaki appears to be less than in other areas, but more data needs to be collected and analysed to properly assess this.

The goal of any population-health intervention is to be equity-positive. Interventions should be aimed at those who are more at risk, whom in the Taranaki region appear to be males around 20 years and older, Māori and those from low socioeconomic areas. Interventions need to reach those vulnerable communities such as Waitara, and incorporate strength-based and whānau-based approaches. Currently in New Zealand the Ministry of Health are planning action in response to the recent increase in acute drug-related harm, targeting synthetic cannabinoids. The current plan of action includes the following:

- Reclassification of the two main synthetic cannabinoids, 5F-ADB and AMB-FUBINACA, as Class A substances, in order to give greater enforcement powers on suppliers and manufacturers, for whom there will be greater penalties.
- Amendment to the Misuse of Drugs Act to increase use of police discretion around personal use and possession with the aim to view substance abuse as a health issue rather than a criminal one.
- Funding to the total of $16.6million directed into community addiction treatment services, and specifically for:
    - Addiction 101 training to be developed and delivered to communities experiencing harm from synthetics.
    - Developing a drug early warning system to provide information to support the funding
    - Aiding communities respond to acute surges in harm
    - Helping individuals turn their lives around by removing determinants of health that may be driving substance abuse such as homelessness[15].

There is also an unclear goal of working towards prevention strategies, which perhaps in Taranaki would be the most important element, seeing as there haven't been any major surges in acute harm. The Ministry of Health is taking steps in the right direction to reframe drug and alcohol addiction and dependence as a health issue. Police, among others are beginning to realize we cannot arrest our way out of New Zealand's drug problem[16]. Current drug laws disproportionately affect Māori who are overrepresented in convictions and incarceration for drug-related offences[17], so an effort to divert these individuals into healthcare and social support will hopefully aid in prevention of drug-related harm.

To make sure this change in tack is not in vain due to lack of social support and services in communities, funding should be redirected from drug enforcement to addiction services and better ensuring primary healthcare is able to respond to these issues for Māori[17]. Currently enforcement is receiving three times the funding that health services do, and so ensuring there is enough community support and resources will be especially important for Māori who often are not diverted to these pathways or given alternatives[16]. It is imperative that services are set up in a way that encourages Māori culture and participation. This is important because The Mental Health Inquiry recently discovered that there is a deep lack of trust in the current health system. The stigma around mental health, co-existing with racism, was identified in The Mental Health inquiry as a major deterrent to seeking help[17]. Mental health, as many of our stakeholders identified is closely intertwined with substance abuse and addiction. Interventions need to consider and overcome these barriers in order to respond to drug-related harm in an equity-positive, meaningful way.

It has become apparent during this research that there is not enough formal data collection and information sharing on synthetic cannabinoid harms. Initial intervention suggestions stem from this current lack of current information, as it would be difficult to aim to prevent a problem that we are not yet wholly aware of.
Surveillance: set up systematic collection of data from multiple sources and agencies such as Emergency departments, St Johns, Police and Detoxification services. Data collected should be that which would aid in responding to any acute increase in harm, both in accessing the designated funding, and to prevent further acute harm. Evidence collected might include:

- Police and ambulance callout data relating to acute drug-related harm
- Adverse reactions or deaths suspected to be drug related
- Presentations to Emergency Departments and hospital admissions
- Presentations to secondary services such as addiction and mental health services, as well as community and social services
- Increased presentations related to acute drug-related harm to primary care services
- Increased calls to health lines or the National Poisons Centre, in relation to drug related harm

Real-time analysis and interpretation of this data could monitor the level of acute drug-related harm at any given time, and therefore a rapid response can be initiated as soon as there is a sudden increase in acute harm. Different services respond to different levels of harm, and so it would be important for information from all agencies could be collated in one place to provide an accurate overall picture of the problem at a given time in Taranaki. With the information from surveillance, further, more targeted interventions could be developed.

At this time, due to the lack in specific knowledge around acute drug related harm locally, and synthetic cannabinoids in particular, more broad interventions have been suggested by stakeholders. The leading ideas from stakeholders, literature, and primary data include:

- Strength-based community programs and outreach. "Strength-based" refers to framing things in a way that gives empowerment, and a sense of one's own 'mana'[12].
- Education of youth around the effects of synthetic cannabinoids, long-term harms of substance abuse, and how to stay generally well.
- Increased services and access to services
- Redirecting enforcement funding to addiction services and better positioning primary healthcare to respond to the health requirements of Māori in a more meaningful way[17].
- The National Poisons Centre appears to be a service that is not overly used by the public and so a low-cost, potentially effective intervention might include promoting use of the National Poisons Centre phone number, as there are toxicology specialists available 24/7 to aid with queries and preventing harm.

## *Appraisal and Limitations of the Study*

A major limitation of this study was the minimal number of stakeholders, and individuals with lived experience were also unable to be interviewed. This restricted the scope of the study and could introduce bias, as there was not a wide range of stakeholders from the community or frontline services. It is impossible to know whether other potential stakeholders may have had differing insights. The statistics received from NPC, ED and hospital admissions do not provide adequate demographic data, and may under-report the problem due to lack of service use and how presentations are coded. Unfortunately there is also an absence of data from St Johns Ambulance and the local Police force.

## *Further Work Needed*

To the best of my knowledge there has been no Taranaki-specific research undertaken on the issue of acute drug-related harm, and in particular on synthetic cannabinoids. There is also little national data outlining epidemiology of this problem including prevalence, drug-use patterns, demographics of users, types of drugs, presentations to services and overall level of harm. Other than beginning formal surveillance, discussions with individuals with lived experience would be useful to further understand use, and also to have insight into what services are useful and accessible from a consumer point of view.

## *Conclusion*

It is important to understand the level of acute drug-related harm experienced within the communities in Taranaki in order to initiate appropriate harm reduction strategies. The first step towards prevention is to gain a better grasp on the issue by initiating surveillance. Once informed decisions can be made, strength-based community programs and education can be targeted towards vulnerable groups, with the aid of government funding. Support for, and use of those services, resources and organisations

that already exist and are doing good work may also be effective in prevention of acute drug-related harm.

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## REFERENCES

1. Doyle, K. (2019). *Huge jump in synthetic cannabis deaths - coroner*. [online] Radio New Zealand. Available at: https://www.radionz.co.nz/news/national/362758/huge-jump-in-synthetic-cannabis-deaths-coroner [Accessed 28 Mar. 2019].

2. Anderson, V. (2018). *Syn city: NZ's deadly designer drugs crisis*. [online] Stuff. Available at: https://www.stuff.co.nz/national/105679358/syn-city-nzs-deadly-designer-drugs-crisis [Accessed 20 Mar. 2019].

3. Dr. Quigley, P. (2019). *ONE News*.

4. Ministry of Health (2018). *Acute Drug Harm Response Discretionary Fund: Definitions*.

5. UNODC Early Warning Advisory on NPS (2019). *Current NPS Threats*. Volume I March 2019. United Nations Office on Drugs and Crime.

6. Global SMART Programme (2015). *The Challenge of Synthetic Drugs in East and South East Asia and Oceania*. Trends and Patterns of Amphetamine-type Stimulants and New Psychoactive Substances. UNODC.

7. Cairns, R., Brown, J., Gunja, N. and Buckley, N. (2017). The impact of Australian legislative changes on synthetic cannabinoid exposures reported to the New South Wales Poisons Information Centre. *International Journal of Drug Policy*, 43, pp.74-82.

8. Winstock, A. and Barratt, M. (2013). The 12-month prevalence and nature of adverse experiences resulting in emergency medical presentations associated with the use of synthetic cannabinoid products. *Human Psychopharmacology: Clinical and Experimental*, 28(4), pp.390-393.

9. Courts, J., Maskill, V., Gray, A. and Glue, P. (2016). Signs and symptoms associated with synthetic cannabinoid toxicity: systematic review. *Australasian Psychiatry*, 24(6), pp.598-601.

10. Noller, G. (2014). *Synthetic cannabinoid use in New Zealand: Assessing the harms*. Report #01. The STAR Trust. Auckland: New Zealand.

11. Brown, R. (2017). *We should have known | NZ Drug Foundation - At the heart of the matter*. [online] Drugfoundation.org.nz. Available at: https://www.drugfoundation.org.nz/matters-of-substance/october-2017/we-should-have-known/ [Accessed 20 Mar. 2019].

12. Calman, M. (2015). *Taking the pulse of Māori public health | NZ Drug Foundation - At the heart of the matter*. [online] Drugfoundation.org.nz. Available at: https://www.drugfoundation.org.nz/matters-of-substance/august-2015/taking-pulse-maori-public-health/ [Accessed 20 Mar. 2019].

13. Macfarlane, V. and Christie, G. (2015). Synthetic cannabinoid withdrawal: A new demand on detoxification services. *Drug and Alcohol Review*, 34(2), pp.147-153.

14. Wodak, A. (2012). Inequity, psychoactive drug use and drug-related harm. *Australian and New Zealand Journal of Public Health*, 36(6), pp.517-517.

15. The Beehive. (2019). *Crackdown on synthetic drug dealers*. [online] Available at: https://www.beehive.govt.nz/release/crackdown-synthetic-drug-dealers [Accessed 26 Mar. 2019].

16. Drugfoundation.org.nz. (2019). *Police discretion for drug offences needs greater health funding | NZ Drug Foundation - At the heart of the matter*. [online] Available at: https://www.drugfoundation.org.nz/news-media-and-events/police-discretion-for-drug-offences-needs-greater-health-funding/ [Accessed 21 Mar. 2019].

17. Inquiry into Mental Health and Addiction. 2019. Oranga Tāngata, Oranga Whānau: A Kaupapa Māori Analysis of Consultation with Māori for the Government Inquiry into Mental Health and Addiction. Department of Internal Affairs: Wellington.

# APPENDIX

## *Appendix A*

### Email to Stakeholders:

Kia ora,
My name is Nicole Stonestreet; I am a 5th year medical student working on a Public Health project on behalf of Taranaki DHB. The subject of my project is acute drug-related harm, with a specific focus on synthetic cannabinoids. The purpose of this project is to provide the DHB with an overview of the problem in Taranaki, with a goal of suggesting interventions to be put in place to prevent further harm from these synthetic drugs.
I am keen to hear from people and organisations with experience in this area, to gain their insights, perceptions and ideas about synthetic cannabinoids and how to reduce use and prevent harm. For this reason I would like to set up a time to meet for an interview, or even talk over the phone if that suits better. Or if you have any suggestions of other people to talk to I would be grateful for that information. Your contribution will be highly valued, and will aid in the improvement and development of services to vulnerable people within the Taranaki region.

Looking forward to hearing from you,

Nicole Stonestreet

## *Appendix B*

### Information and Consent Form

The aim of this interview is to gain insight into your perceptions and knowledge on the subject of acute drug related harm, specifically relating to synthetic cannabis.
The overall goal of this service development project is to co-design new interventions to reduce and prevent drug related harm. The interview may be recorded for ease of later analysis. Feel free to refuse to answer any of the questions, and you may ask questions of your own at any stage.

I, _____have read and understood the above information and have had the opportunity to ask questions. I give consent for the interview to be recorded for the purposes of later analysis, and for inclusion of my ideas in the report. I understand that my consent is voluntary and I have the right to withdraw from the project at anytime without any reason.

- ☐ I would like to receive emailed drafts of the report in order to give feedback for the purpose of producing the final draft (tick if yes)
- ☐ I would like to be emailed a copy of the final report (tick if yes)

Email: _____

Signed: _____ Date: _____

## *Appendix C*

## Template for Stakeholder Interviews

**Introduction**
"Kia ora, my name is Nicole Stonestreet; I am a 5th year medical student working on a project on behalf of Taranaki DHB. Thanks so much for agreeing to meet with me to discuss your thoughts on the use of synthetic cannabinoids in the Taranaki region. The subject of my project is acute drug-related harm, with a specific focus on synthetic cannabinoids. The overall goal of this project is to suggest harm prevention initiatives to the DHB that they can put in place to create awareness and to prevent harm from these synthetic drugs.
Firstly I'd like to give you some information about the project and gain your consent for the interview."

**Questions**

- What do you know about the level of acute drug related harm in the Taranaki region?
    - Who is affected?, Is it any particular areas? Age? Ethnicity? Situation/circumstances?
    - Who is at risk and why?

- What is the access like to these substances?
    - Availability? Cost?

- What are the key drugs of harm?
    - What is the current biggest concern?

- Why are people using?
    - Risk factors

- Do you have any evidence or data that you can share?

- What needs to be done by the DHB to prevent further acute drug related harm?
    - Practical, localised solutions.