Submission No 37

INQUIRY INTO IMPACT OF THE REGULATORY FRAMEWORK FOR CANNABIS IN NEW SOUTH WALES

Name: Name suppressed

Date Received: 9 May 2024

Submissions for Inquiry into Impact of the regulatory framework for cannabis in New South Wales

It is difficult for me to write these Submissions as I, like many others in my position, feel we cannot be open about our situation lest we be fired from our job or accosted by the police. I personally have faced intense stigma from loved ones and the community that I was raised in. Stereotypes have been put on me and I felt like people expected me to live a certain narrative. I have been a legal medical cannabis patient for ten months now and I have experienced situations in the community that have driven me to write to a member of parliament whom I personally know is an upstanding representative of people in need of assistance.

I read the expert evidence in respect to the driving legislation Bill which was tabled by Cate Faehrmann and rejected last year, and the appalingly insensitive and discriminatory comments from sitting members of "pass the bong" when her motion was heard, and the objections raised by other members, in summary being:

I have been struggling with chronic pain as a result of "ice pick" headaches and neuropathic pain since I was very young, and I have been suffering from radicalopathy in my lower back for a several years now. To treat my condition I am prescribed an array of medication. A key part of this regime is my medical cannabis which is prescribed by at Tetra Health. Access to this medicine in a legal setting has been amazing for managing the symptoms of my conditions, which occur every single day. Yet, New South Wales is incredibly far behind when it comes to cannabis laws and there is still a large amount of archaic policies that persecute members of a community trying to legally treat their illness. I am writing to you because I think it's time that our community gains some sort of voice so that we can share our experiences and educate people on our reasons and results.

In the start of these submissions I'm going to address the following 3 points.

#1 Unjust drug driving laws in NSW

#2 Cost prohibitive access to products

#3 Incompatibility between TGA frameworks and current medical cannabis and hemp medications which make it impossible for such medications to ever obtain approval by the TGA.

4. Medicinal Cannabis use and Driving Related Offences and Motion for the Right for Medicinal Cannabis Patients to drive whilst under the influence of medicinal cannabis medications, and summary of extracts of academic journal article findings on how cannabis and cannabis-based medications affect the body, health and mental health for the inquiry's consideration.

#1 Unjust drug driving laws in NSW.

Firstly, I would like to highlight the driving laws in NSW, and request a notice of motion to amend the driving laws in line with what South Australia and Victoria have recently introduced, that if the patient is

1. Medically eligible.

2. Prescribed a cannabis medication containing THC.

3. Not impaired. - (Has a doctor's certificate certifying that the patient is not impaired to the extent that they would propose a safety risk towards others on the road.)

Then the patient, if they have met the above 2 criteria, should not be criminally culpable for drug driving offences in NSW in relation to their medically prescribed medications which contain THC.

It would also be ideal for the drug driving laws to be amended to make level of impairment prosecutable for all persons, rather than the presence of THC alone being enough to make someone criminally culpable for drug driving related offences. This would require police to test drivers for the quantity of cannabis metabolites in their mouth (as is done with RBT alcohol roadside testing, and/or some sobriety testing, rather than testing for the presence of THC alone.

The only Australian medical studies that have been conducted on THC (the main psychoactive component in cannabis) used doses as high as 150mg of THC per person. One particular test by doctors Arkell and Lintzeris [1] (Refer to citation [1] in the footnotes of these submissions] dosed patients with a very high dose of 125 mg of THC and asked them to conduct a four hour driving task. To put that into perspective an average cannabis patient treating mental illness and chronic pain may take as little as 5mg and as much as 75mg of THC during an entire day, combined of course with a regime of CBD (Individual cases may vary. For example a patient treating cancer pain may take upwards of 250mg of THC per day, this however is an extreme case example). The study, reported by Sydney University, stated that nearly all patients at this dosage experienced a high reluctance to drive, suggesting that in a social setting they would not be behind the wheel anyway. When put into the simulation half of the patients were recorded only weaving slightly more between lanes than the sober group. The other half of the patients actually acted safer, they maintained a greater distance from cars and travelled at a mean lower speed. Obviously someone should never drive if impaired. However, it is absolutely barbaric and criminal to imprison a driver simply because they have some amount of THC in their system. Especially when the preliminary research into the issues suggests that THC does not inhibit the individuals in the manner as would be as dangerous on the road. Not to mention that patients can test positive on saliva test days after consuming their medicine. As a patient I could stop medicating tomorrow and in a month I could still test positive on any form of THC test.

I note that both South Australia, and recently Victoria have approved legislation which allows medical cannabis patients who have been prescribed THC medications, eligibility to drive on the condition they are an approved medical cannabis patient, with a prescription, and a certificate from a G.P. certifying that the patient is not impaired from medical cannabis to an extent which would affect driving.

I have had a court appointed expert clinician psychologist from Sydney Counselling Centre, and my regular treating G.P. from Enmore Medical Practice both give evidence in a custody matter in regards to my daughter that they have not observed any negative affectation or intoxication when assessing me and my behaviour, having regard to the fact I had administered my medical cannabis medications which contain THC before I had been observed by both doctors.

My treating clinical psychologist from Pusey Psychological Services in Sydney has also shared this view.

I note that there is clinical evidence witten by Dr Strohbeck-Kuehner, and Dr. Gisela Skopp which

shows that consumption of THC does not result in incapacitation or intoxication for some patients, and in fact can improve the driving performance of some patients. I have cited 3 paragraphs from citation [2] of the footnotes of these submissions, in the 3 paragraphs below.

> "Abstract - The purpose of this case investigation was to highlight that people with ADHD can benefit in some cases from the consumption of THC. A 28-year old male, who showed improper behaviour and appeared to be very maladjusted and inattentive while sober, appeared to be completely inconspicuous while having a very high blood plasma level of delta-9-tetrahydrocannabinol (THC). Performance tests, which were conducted with the test batteries ART2020 and TAP provided sufficient and partly over-averaged results in driving related performance. Thus, it has to be considered, that in the case of ADHD, THC can have atypical effects and can even lead to an enhanced driving related performance."
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> - "The tests of performance functions that are relevant to driving skills involved the four subtests of ART2020, a computer-controlled test system, which is commonly used to assess driving performance. These subtests evaluate complex reactions (RST3), sustained attention (Q1), directed attention (LL3) and visual surveying and perception (TT15). In addition the functions of "vigilance" and "divided attention" were tested with the attention test module (TAP)."
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> - "The results of these tests (see Fig. 1) showed that the subject met, in all of the functions tested by ART2020, not only minimum criteria but that he achieved average or, in some areas, even above-average results. In the very demanding tests for "vigilance" and "divided attention" categories he also showed average performance. ADHD or acute effects of THC by themselves would usually impair performance particularly in these tests."
>
> – "Conclusions - The present case report suggests that individuals suffering from ADHD, a dysfunction with a symptomatic change in activity levels, may - in some cases - benefit from cannabis treatment in that it appears to regulate activation to a level which may be considered optimum for performance. There was evidence, that the consumption of cannabis had a positive impact on performance, behaviour and mental state of the subject."

Source for above 3 citations:

[1] Arkell, T.R., Lintzeris, N., Kevin, R.C. et al. Cannabidiol (CBD) content in vaporized cannabis does not prevent tetrahydrocannabinol (THC)-induced impairment of driving and cognition. Psychopharmacology 236, 2713–2724 (2019). https://doi.org/10.1007/s00213-019-05246-8
AND
[2] Peter Strohbeck-Kuehner, Gisela Skopp. et Al. Case report Cannabis improves symptoms of ADHD" - Institute of Legal-and Traffic Medicine, Heidelberg University Medical Centre, Voss Str. 2, D-6 9115 Heidelberg, Germany – Cannabinoids Journal, (2008). https://www.cannabis-med.org/data/pdf/en_2008_01_1.pdf

The biggest threat to the law- abiding cannabis patient is ignorance and mis-education. This country's laws on psychotropic substances were written by men and women who had been fed blatant lies about a substance that is not only a wonderful medicine, but an integral part of humanities cultural history. There are several areas in which the average cannabis patient is unfairly dispositioned compared to an able bodied constituent.

#2 Cost prohibitive access to products.

Secondly, patients can not grow their own plants for medical use. Medical cannabis is incredibly expensive. A bottle of CBD oil containing 5% full spectrum extract costs $160 for 25ml, which may last only two weeks. A bottle of dried medical cannabis flower can cost anywhere from $150 to $240 for a two week supply. Of course these prices vary from patient to patient but, I personally have to pay upwards of $500 a month for my medication. If patients were allowed to grow their own medicine then we could be saved from big pharmaceutical companies pricing sick individuals out of the market.

Medical cannabis patients in NSW are required to spend extra money every time they order their medication to have it shipped to them. Very few pharmacies dispense medical cannabis and those that do determine the price that they sell it at. It is pure common sense that a dispensary model should be introduced. Currently patients are at the mercy of the pharmacies and clinics because they are not able to hold companies accountable for the product they are selling. There have been issues with mould, bugs and seeds in patients medicine and patients had to wait numerous weeks to get any answer out of their health practitioners. Cannabis can not kill anybody. Cannabis has never killed anybody from overdose. It is absurd to think that a liquor store can operate in a recreational setting, where a person can come in and make a purchase and die from consuming that product. Yet, a dispensary cannot be allowed to operate to sell medicine in a way that benefits the patient.

The current amendment to the TGA which comes into effect on February 2021 which downschedules CBD oil medications (which have recieved TGA approval to be sold as approved pharmaceuticals) to a schedule 3 medicine available over the counter in pharmacies, brings along with it a lot of counter intuitive regulations which may not be compatible with natural unprocessed flower medicines (both cannabis flower medications containing THC and CBD, and hemp flower medications which only contain CBD and no THC)obtaining TGA approval as approved pharmaceutical products, which some patients have to take to manage their symptoms due to the increased efficacy of naturally produced and unprocessed phytocannabinoid flower medications administered by the means of vaporisation, compared to the efficacy of oil-based cannabis medicines which undergo processing.

Processing medicinal cannabis or medicinal hemp into an oil or granulate also reduces the availability of the full spectrum of cannabinoids, terpenoids and flavonoids which are otherwise available in unprocessed medicinal hemp and cannabis, due to evaporation or when products are sold as concentrates rather than a full-spectrum product, and for some patients the unprocessed cannabis or hemp flower is more suitable to managing their conditions when administered by the means of vaporisation as such administration offers patients near-immediate effects, as well as offering a full-spectrum of phytocannabinoids, terpenoids and flavonoids, compared to the oral administration or topical application of oil-based cannabis medicines which take longer to take effect, which is harder to dose properly, and which is often sold as a concentrate.

In order for a medicine to be an approved medicine pharmaceutical in accordance with Australian TGA regulations, the product must be the same every single time for every person. (E.g. a paracetamol tablet will always contain what is advertised on the packet)

#3 Incompatibility between TGA frameworks and current medical cannabis and hemp medications which make it impossible for such medications to ever obtain approval by the TGA.

Having regard to the above, the TGA policies which outline the requirements for a medicine to be approved by the TGA and considered a pharmaceutical are not conducive or compatible with naturally produced cannabis medications which are in their raw form, which give the benefit of a full spectrum of naturally occuring phytocannabinoids, terpenoids and flavonoids.

Unlike countries like the USA and Netherlands which have more flexible policies on requirements for medicines to be approved and considered pharmaceuticals, Australia's TGA amendment downscheduling CBD oils to schedule 3, whilst may provide the public access to CBD oils, the current framework makes it borderline impossible for any cannabis flower or any pure CBD hemp flower medications to ever be approved due to the strict standards which provide that medicines must always have the same contents to be considered a pharmaceutical.

The Netherland government have approved the following Bedrocan medicinal cannabis flower products as officially registered pharmaceuticals.

Bedrocan® THC 22% | CBD <1.0% Sativa. Flos.

Bedrobinol® THC 13.5% | CBD <1.0% Sativa. Flos.

Bediol® THC 6.3% | CBD 8% Sativa. Flos.

Whilst indoor growing environments can ensure a more consistent yield pattern of cannabis season to season, as is currently done by approved medical cannabis manufacturers, there have been issues with variances in potency, bugs, mould and seeds in some batches which cause problems with the prospects of such cannabis medications ever being approved by the TGA.

Whilst such occurrances of contaminants are far lower in medicinal cannabis products are far lower compared to illicitly produced cannabis, the current medicinal cannabis medications must comply with strict standards in terms of adulterants and contaminants in accordance with TGO93 standards, the nature of producing floral cannabis medications necessarily involves some variance compared to producing chemical medications in a lab, and on that basis natural cannabis medicines are not compatible in the current TGO100 framework to obtain approval by the TGA as registered pharmaceutical medications.

It therefore necessarily follows, that either the TGA policies must be amended to create a framework which is compatible with naturally unprocessed medicinal cannabis floe products receiving approval from the TGA to be sold as approved pharmaceutical medications, or legislation must be introduced similar to Canberra to allow medicinal cannabis patients to be allowed to grow their own cannabis at home at a reasonable limit, if the Government will not consider decriminalising and commercialising cannabis, and allowing retailers to act as dispensaries.

Until the above framework incompatibility issues between natural medicinal cannabis medications and their prospects to be registered as approved pharmaceutical medications by the TGA is resolved, medicinal cannabis patients will be forced to pay high fees for medicinal cannabis without any rebate from the public health pharmaceutical benefits scheme, as only TGA approved pharmaceutical medications are given any subsidy from the government.

I am writing this letter to appeal to you on compassionate grounds. Patients in the community feel like

they have no voice against a system that treats them differently to every other patient. The community just wants to feel safe and have the reassurance that they can lawfully take their medication and continue their road of recovery.

In the last few years its been a common occurance for there to be shortage of stock for medicinal cannabis products, with it being commonplace for my medications only being in stock for less than a week at a time, this is quite frankly not up to the standard it should be as I suffer having to wait for weeks or months at a time for my medication to come back in stock, and when it does come back in stock sometimes some products are only available for a week or less in terms of cost-effective cannabis flower pharmaceuticals. This has been a recurring problem but now it has exponentially become worse with regard to the fact that a significant number of new medical cannabis patients have recently been granted access to medicinal cannabis products in Australia, and as a result the demand for products has outstripped the available supply.

It is clear that the current framework is not able to support medical cannabis patients, and as a result the most sensible approach would be decriminalisation and allowing for citizens to cultivate small quantities of cannabis plants for personal use.
With or without commercialisation, but potentially the greatest resistance would come from suggesting a bill with commercialisation of cannabis as a component of the bill.

I highlighted similar concerns, with respect to the current TGO100 framework being too strict for medical cannabis flower products to be registered as approved pharmaceutical products, due to the provisions within the TGO100 standards which prescribe the standards for any approved pharmaceutical product, not being compatible with the necessary variance in concentration that you have when growing a plant, from season to season it's hard to produce a plant with exactly the same amount of concentration of cannabinoids, notwithstanding the fact there is variance in concentration of cannabinoids within one plant depending on how much light that area of the plant received whilst growing.

As a result, this inherent variance in cannabinoid concentration in cannabis plants makes it very difficult, if not impossible for manufacturers to produce pharmaceutical products that they can guarantee will be exactly the same percentage and concentration of cannabinoids every season, and as a result the current framework for medicinal cannabis products may necessarily be entirely incompatible with medicinal cannabis flower products, and as a result under the current framework medical cannabis flower products may never receive approval as authorised pharmaceutical products which have to consistently be the same concentration, in every packet, in order for that pharmaceutical to be compliant with TGO100 standards.

Therefore on that basis, the most sensible approach would be to decriminalise flowers if the current framework for medical cannabis products is not compatible with medical cannabis flower products ever receiving formal approval from the TGA to be approved and registered pharmaceuticals which don't require registering with special access schemes to access.

There are many patients currently unable to receive any medicinsl cannabis flower medications legally, as all of the prescribed medical cannabis flower products which are prescribed to some patients are currently out of stock, and forseeably out of stock in the near future.

My prescribing nurse from Tetra Health advised me today over the phone, that if I

wanted any medicinal cannabis products within the next few months, that I had better bulk order them now and stretch them out for as long as possible due to the shortage of stocks and the fact the last 3 medicinal cannabis flower products in stock are currently low on stock, and further he advised me that most available medicinal cannabis products would be out of stock for the foreseeable future due to the major influx of new approved medicinal cannabis patients, outstripping the supply of available medicinal cannabis products.

These circumstances are not economically feasible for many people, including me, unfortunately not everyone has the luxury or capacity to bulk order expensive medications all the time, and as I have been advised these stock shortages are a recurring problem which is getting worse due to there being too many medicinal cannabis patients, and concomitantly the current framework is not able to meet the needs of all the patients within the legal TGA frameworks.

I would appreciate if the issues and points of discussion I have identified in these submissions are included in the issues of discussion which are brought up in the debate for the bill which you have introduced to parliament with regards to legalising or decriminalising cannabis, as well as to tabling changes to the Roads and Transport Act to provide exceptions from drug driving related offences for medicinal cannabis patients, so that they aren't discriminated against and so they receive the same treatment and rights as people who are prescribed opioids and benzodiazepenes who are allowed to drive despite the intoxicating nature of both opiods and benzodiazepenes.

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4. Medicinal Cannabis use and Driving Related Offences and Motion for the Right for Medicinal Cannabis Patients to drive whilst under the influence of medicinal cannabis medications, and summary of extracts of academic journal article findings on how cannabis and cannabis-based medications affect the body, health and mental health for the inquiry's consideration.

I read the expert evidence in respect to the driving legislation Bill which was tabled by Cate Faehrmann and rejected last year, and the appalingly insensitive and discriminatory comments from sitting members of "pass the bong" when her motion was heard, and the objections raised by other members, in summary being:

1. That you cannot differentiate between illicit and medicinal cannabis in testing.

2. In relation to the potency of illicit cannabis.

In response, I wanted the Inquiry to consider the following matters:

1. You currently cannot differentiate between illicitly created and medicinally prescribed substances for any regulated substance. There are people who have prescriptions for benzodiazepenes who use illicitly obtained and created benzodiazepenes which false positive for prescription benzodiazepene, or rather there is no test or method to differentiate for any drugs illicitness or whether it is an approved substance. Cannabis should not be treated any differently, and there is evidence of an epidemic of illicit lab made bendodiazepenes such as xanax in the Australian markets.

2. Medicinal cannabis is now more affordable than street cannabis and of better quality, being at

cheapest $95 for 15 grams on concession card or $109 for 10 grams as opposed to $100 dollars for 7 grams of illicit cannabis. The risk of illicit cannabis being false positived on roadside testing should only be a concern relevant for people who would qualify for exemption of the charge of driving under the influence of cannabis, which requires a medicinal cannabis prescription, and the risk of such persons using illicit cannabis is actually significantly less than it would be if the law were to remain, on the basis that medicinal cannabis is cheaper than illicit cannabis so cost is not a prohibitive factor and on the basis that many more persons would seek medicinal cannabis prescriptions if driving on medicinal cannabis were made legal thereby reducing the amount of illicit cannabis use and false positives of illicit cannabis for medicinal cannabis in MDT roadside tests.

3. Approving the driving amendments to make it legal to drive whilst under the influence of medicinal cannabis would likely increase the amount of medicinal cannabis users by converting current existing illicit users into medical patients by virtue of the ability to drive. If this occurs, there would be less risk to the road as medicinal cannabis is safer as compared to illicit cannabis which many people currently use and drive and this measure would greatly reduce illicit cannabis use, since many people do not use medicinal cannabis as they can not drive on medicinal cannabis and they are required to for work.
Medicinal cannabis is safer than illicit cannabis as it's more regulated, it guarantees consistency of potency between each batch, no toxic adulterants or other drugs which could cause impairment as criminals have been known to adulter illicitly grown cannabis with.
By virtue of the ability to drive and the consistency of potency of medicinal cannabis compared to illicit cannabis, and guarantee of no additional toxic or drugs of impairment added as unknown additives, the road would be much safer and the concern of potency of medicinal cannabis should not be of any significant concern, as it is currently more dangerous to allow the law to remain as is where the community is at risk to cannabis users who use illicit cannabis with varying potency and with no guarantee that the illicit cannabis isn't laced with other dangerous drugs such as fentanyl.

4. The amendment would not only save lives of illicit cannabis users poisoned by toxic chemicals and prohibited substances such as fentanyl, but save lives on the road by ensuring that cannabis users have no surprise with varying potency between their purchases, as medicinal cannabis products being consistent in potency necessarily entails that there would be less risk of potency shock and overdosing, and less risk on the roads as users are likely to become tolerant to the medicinal cannabis medication they use resulting in less impairment as compared to illicit cannabis effects, which is a guarantee in terms of medicinal cannabis as opposed to a guaranteed inconsistency in respect to illicit cannabis.

5. If some sobriety test is proposed such as standing on one leg to ensure that the individual medicinal cannabis user is not overly intoxicated to the extent they would propose a safety risk on the road to others and/or to themselves is advanced, one has to ask if it's necessary on the basis that no such test or certificate is required for any other controlled substances of impairment, such as benzodiazepenes and opioids, which have a remarkably more intoxicating effect and a greater capacity to knock people out and make them unconscious from overdose as compared to cannabis.

Its like treating cannabis intoxication as a greater danger and requiring greater safeguards as compared to regulated schedule 8 medicines such as oxycodone, xanax or valium, which require no sobriety tests or sobriety/risk safety certification from a doctor, when the aforementioned substances can more easily

knock out a person when overdosed and impair a person as compared to medicinal cannabis, when medicinal cannabis use is objectively less impairing compared to oxycodone, valium and xanax and when medicinal cannabis use cannot cause death from overdose at all.

I'd appreciate it if the Inquiry would consider reviewing the material in these submissions, as well as the academic journal articles attached in the compilation of academic journal article findings on cannabis which was provided as an attachment to these submissions (17 pages long), and to refer to the clinical literature contained in these submissions and consider them in the Inquiry.

For example, with regards to how cannabis use affects the general wellbeing of patients, at the bottom of these submissions there is a study which showed that cannabis use increased sperm count for male individuals who use cannabis; and on the subject of how cannabis use affects mental health, these submissions and it's attachment contain academic findings supporting the use of medical cannabis to treat symptoms caused by stress induced psychiatric disorders such as PTSD and Borderline personality disorder)

> >Harvard: An unexpected link between cannabis and fertility. (Conclusion: Men who consume cannabis have sperm counts 1.5x as high as people who do not use cannabis)

Source for above citation:

> https://news.harvard.edu/gazette/story/newsplus/an-unexpected-link-between-marijuana-and-fertility/, Feb 2019.

I'd like to note that there are health risks associated with smoking cannabis as well as tobbaco on a regular basis, even though there are observed and reported bronchodilator properties of cannabis and some clinical evidence which suggests cannabis use for treating asthma and emphysema may be beneficial due to an observed bronchodilatory component in THC,

> - "However, recent large studies have shown that, instead of reducing forced expiratory volume in 1 s and forced vital capacity (FVC), marijuana smoking is associated with increased FVC. The cause of this is unclear, but acute bronchodilator and anti-inflammatory effects of cannabis may be relevant. Bullous lung disease, barotrauma and cannabis smoking have been recognised in case reports and small series. More work is needed to address the effects of cannabis on lung function, imaging and histological changes."

Source for above citation: Effect of cannabis smoking on lung function and respiratory symptoms: a structured literature review, npj Primary Care Respiratory Medicine Journal, published 20 October 2016 at https://www.nature.com/articles/npjpcrm201671

Irrespective of the above findings, in my view the government should, in circumstances where cannabis is decriminalised, recommend people not to consume cannabis by smoking it considering long term chronic smoking can cause COPD, and excessive exposure of lungs to heat can cause emphysema, and in my view the government should make publicly available recommendations in circumstances cannabis is legalised advising citizens not to use cannabis by smoking if they intend to use it habitually either recreationally, or regularly to treat a medical condition; in order to minimise the potential health risks associated with chronic long term cannabis use.

I believe the Government has similar precautionary labels on tobbacco products, and have even considered such labels for alcohol products, considering the known health effects of chronic habitual alcohol and tobacco use.

There is also no doubt in my mind, that legalising or decriminalising cannabis, either privately or with commercialisation included in an act, will reduce health risks associated with cannabis use; since there will be a greater access for citizens to either legal commercial cannabis, or privately grown cannabis which does not have contaminants and adulterants such as may be found in illicit cannabis, such as lead or methamphetamine liquid to weigh down the cannabis.

Recently I asked the medicinal cannabis community for their input on collating together some of the available medical literature on how cannabis can be used to manage anxiety and other mental health conditions, and how cannabis use affects the brain and the body.

For context, I had to present this evidence in civil proceedings concerning custody arrangements of my daughter, to an expert psychologist appointed by the court who did an assessment on me, in order to satisfy his concerns that there is sufficient evidence to support the clinical treatment of mental health disorders with cannabis.

I've put together the most relevant findings from those clinical articles and I attached them to these submissions (in the document titled "Review and compilation of clinical studies on cannabis use 2020") , in a 17 page document containing the relevant clinical findings in regards to cannabis and it's affectation, efficacy and use in treating mental health conditions, chronic pain, and the effects of cannabis on the respiratory system, which can be showed to your GP or other doctors if they don't understand medical cannabis very well, or if you would like to understand more about how cannabis interacts with and affects the brain.

In summary, the findings of the clinical journal articles contained in the link above provide strong conclusions which don't just recommend further studies being undertaken by academics to determine the efficacy of using medical cannabis to manage mental health conditions, but actual strong findings and recommendations which support the clinical use of medical cannabis to manage several stress induced psychiatric disorders, such as PTSD, Generalised Anxiety, ADHD, Borderline Personality Disorder, and possibly even Schizophrenia.

> >- "Taken together, these data suggest that 2-AG-CB1 signaling plays a crucial role in gating stress-induced activation of the BLA-plPFC circuit and that functional collapse of 2-AG signaling at BLA-plPFC synapses may be important for translation of stress exposure into anxiety-like behavior."
>
> >-"Here we explored the neurobiological substrate by which stress exposure is translated into anxiety-like behavior and identified collapse of 2-AG-CB1 signaling within a reciprocally connected BLA-plPFC-BLA circuit as a molecular mechanism subserving stress-induced circuit strengthening and generation of anxiety-like behavior."
>
> >- "These data suggest that the enhancing 2-AG-CB1 signaling], via MAGL inhibition for example, could represent an attractive therapeutic target for the treatment of stress-induced psychiatric disorders."(Chanda et al., 2019; Lisboa et al., 2017; Patel et al., 2017)."*

Source for the above 3 citations: "Endocannabinoid Signaling Collapse Mediates Stress-Induced

Amygdalo-Cortical Strengthening" https://ir.vanderbilt.edu/bitstream/handle/1803/9850/MARCUS-DISSERTATION2020.pdf;jsessionid=AEAE66EE814F40377327C599BE03BC0E?sequence=1 - January 31, 2020.

>- "The literature reviewed does not allow for general indications of treatment with CBD in BPD. However, there is enough knowledge to indicate a treatment ratio of high level of CBD to low level of THC.."

Source for above citation: "Targeting the Endocannabinoid System in Borderline Personality Disorder" –Current Neuropharmacology https://pubmed.ncbi.nlm.nih.gov/32351183/–published 29 April 2020

>- "Findings suggest that for some bipolar patients, marijuana may result in partial alleviation of clinical symptoms. Moreover, this improvement is not at the expense of additional cognitive impairment" (Sagar et al., 2016)."*

Source for above citation: "Medical Marijuana for Depression, Bipolar Disorder, Anxiety & Mental Illness: Can It Help?" –Psych Central https://psychcentral.com/blog/medical-marijuana-for-depression-bipolar-disorder-anxiety-mental-illness-can-it-help/?fbclid=IwAR1QishTKwdbjpVkyGj6_1Svp6ay3VNCVZoYjxwQoZG7SNBJMKksx9JlQ2o– 8 July 2018

>- "For adult patients with ADHD, who experience side effects or do not profit from standard medication, cannabis may be an effective and well-tolerated alternative."

>-"Under Monotherapy with Cannabis, 73% of patients reached a ADHD-symptom level that allowed them to participate in working and social life. In 47% of cases, an improvement of concentration abilities were mentioned explicitly. Especially helpfulappeared thereduction of agitation and impulsiveness."

>-"The anamnestic data from adult ADHD patients indicate that Cannabis use is not a result from a prolonged misuse beginning in teenage, but rather a re- lately discovered self-medication.".

Source for above 3 citations quoted above: "Successful authorised therapy of treatment resistant adult ADHD with Cannabis: experience from a medical practice with 30 patients" http://www.drmilz.de/wp-content/uploads/Poster-CC-2015.pdf, January 1 2015

>- "A 28-year old male, who showed improper behaviour and appeared to be very maladjusted and inattentive while sober, appeared to be completely inconspicuous while having a very high blood plasma level of delta-9-tetrahydrocannabinol (THC). ... THC can have atypical effects and can even lead to an enhanced driving related performance."

Source for above citation: "Case report Cannabis improves symptoms of ADHD" -Institute of Legal- and Traffic Medicine, Heidelberg University Medical Centre, Voss Str. 2, D-69115 Heidelberg, Germany –Cannabinoids Journal https://www.cannabis-med.org/data/pdf/en_2008_01_1.pdf– March 2 2008

>- "The specific mechanism of ECs and CNR1 activity in the brain are currently being

delineated but it is well known that many psychiatric disorders, including ADHD, schizophrenia, PTSD, anxiety, and mood disorders have various memory and inhibition impairments. The potential involvement of reward systems in multiple psychiatric disorders, including ADHD, again suggests the plausible association of CNR1 and a range of conditions."
>- "These data provide support for a putative role of endogenous cannabinoids in ADHD, and PTSD.

Source for above 2 citations quoted above:"Association of the Cannabinoid Receptor Gene (CNR1) With ADHD and Post-Traumatic Stress Disorder"–Am J Med Genet B Neuropsychiatry Genet. Journal https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2685476/– published December 5 2008.

> -"Overall, existing preclinical evidence strongly supports the potential of CBD as a treatment for anxiety disorders.CBD exhibits a broad range of actions, relevant to multiple symptom domains, including anxiolytic, panicolytic, and anticompulsive actions, as well as a decrease in autonomic arousal, a decrease inconditioned fear expression, enhancement of fear extinction, reconsolidation blockade, and prevention of the long-term anxiogenic effects of stress.

Source for above citation:"Cannabidiol as a Potential Treatment for Anxiety Disorders"-Neurotherapeutics Journal, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4604171/-Published 2015

Consuming cannabis (by vaporisation, smoking, orally, topically, or in edibles) can both induce and reduce the symptoms of mental health, as both endocannabinoids (internally produced cannabinoids found in great quantities in breast milk) and phytocannabinoids (plant cannabinoids) act on the parts of the brain which is responsible for regulating, inducing, and reducing stress and anxiety.

There is a high concentration of endocannabinoids (cannabinoids produced by the body) found in human breast milk.

Human babies, when deprived of endocannabinoids, exhibit high amounts of stress and anxiety. This promotes feeding and ensures babies receive food and they don't die of starvation.

>- "The most abundant cannabinoid found in breast milk is called 2-arachidonoylglycerol (2-AG). This endocannabinoid also stimulates the same cell receptors that THC does.
>-"Even more interesting is that 2-AG appears to be critical in keeping newborns alive. It stimulates the suckling response and tongue muscles. CB1 receptors in the brain control these functions."
>-"Without these endocannabinoids, babies may develop a disease called "non-organic ability to thrive". This condition occurs when a baby cannot consume enough food to sustain itself."
>-"There is much that is not known, but novel findings suggest that decades of anti-drug "research" might in fact be wrong."

Source for above 4 citations quoted above: "Cannabis And Breastfeeding: How Cannabinoids Affect A Mother's Milk"–Royal Queen Seeds *(Article relies on academic journal articles to substantiate it's claims)* - https://www.royalqueenseeds.com/blog-cannabis-and-breastfeeding-how-cannabinoids-affect-a-mother-s-milk-n761?fbclid=IwAR1MZtlF1mUr6_WtzaGJz9Qx3BReZ1nE0vyM-InbWOdEwg6SEFPcj0eBnfw - Published 31 Jan 2018)

Upon a consuming breast milk, the endocannabinoids interact with the CB1, CB2 and 2-AG receptors in the brain and reduce anxiety and stress in babies.

THC, CBD and eCB (endocannabinoids) when interacting with the CB1 receptors also cause the lips to smack, which is why you might find yourself randomly smacking your lips together when you're administering your medication and why you might get the munchies as a result of smacking your lips, which causes signals to be sent to your stomach stimulating the production of stomach acid.

If human babies are deprived of breast milk, then anxiety and stress increases as a result of the deprivation of endocannabinoids.This has also been observed in mice studies which show that mice being deprived of endocannabinoids induces stress reactions, and this is why medical cannabis is good at relaxing patients, and treating stress and anxiety.

There is a line of reasoning to suggest that all animals with endocannabinoid receptors could benefit from physically consuming phytocannabinoid flowers and oils as food, and that the human diet is suboptimal without cannabinoids supplemented into it, as a deprivation of endocannabinoids can induce stress which can cause stress induced psychiatric disorders, as found in mice, and can cause the endocannabinoid system to become disregulated, and phytocannabinoids (THC, CBD, CBN, etc.) interact with the endocannabinoid receptors CB1, CB2 and 2-AG.

Having said that, a disregulated endocannabinoid system can also be caused by consuming too much phytocannabinoids (THC and CBD) for the individuals endocannabinoid system to tolerate, which also can induce or exacerbate anxiety or mental health symptoms, because endocannabinoids work on the areas of the brain which affect stress and anxiety responses.

Too little endocannabinoids (eCB) or phytocannabinoids (THC or CBD), or too much of the aforementioned, can both induce serious anxiety and stress.

Having the right amount reduces stress and anxiety, as the CB1, CB2 and 2-AG receptors in the brain directly affect stress and anxiety responses which CBD, THC and eCBs have been proven to modulate.

There is converging lines of evidence which promote the use of phytocannabinoids to treat stress induced psychiatric disorders, but everyone will react differently.

A 15-20% THC flower would not disregulate my endocannabinoid system due to tolerance, but more than that and it possibly could.

There are studies contained in the document above which show that some ADHD patients experience increased concentration, productivity and increased driving performance when medicated with THC, and studies which recommend the use of THC and CBD to manage Borderline Personality Disorder, but not CBD alone, as THC has shown to reduce the symptoms of BPD in BPD patients.

Having said that, there are people who haven't had cannabis very much who might have their endocannabinoid system disregulated from smoking or vaporising 15-20% THC flowers.

The more THC, which is the psychoactive compound, the greater perceptual change caused when consuming the cannabis which can induce anxiety and stress.

To answer the question of whether cannabis and phytocannabinoids can induce and exacerbate mental health symptoms in patients, there is no straight answer.

The clinical studies attached to these submissions show that a persons reaction to cannabis varies from person to person.

> - "Findings suggest that for some bipolar patients, marijuana may result in partial alleviation of clinical symptoms. Moreover, this improvement is not at the expense of additional cognitive impairment" (Sagar et al., 2016)."

Source for above citation: "Medical Marijuana for Depression, Bipolar Disorder, Anxiety & Mental Illness: Can It Help?" –Psych Central https://psychcentral.com/blog/medical-marijuana-for-depression-bipolar-disorder-anxiety-mental-illness-can-it-help/?fbclid=IwAR1QishTKwdbjpVkyGj6_1Svp6ay3VNCVZoYjxwQoZG7SNBJMKksx9JlQ2o– 8 July 2018

However cannabis containing higher concentrations of THC can cause perceptual change which as a result can induce anxiety in high doses, but this is often due to the person having extenuating life circumstances which cause stress and anxiety to begin with *(income issues or concerns, housing stability, job security, grieving the loss of a loved one, relationship or marital issues, custody issues, other legal issues, self doubt, etc.),* and fundamentally due to the persons inability to manage their own emotions and stress by having healthy mechanisms to emotionally regulate and to practice distress tolerance.

If a person doesn't have those distress tolerance skills, then consuming high concentrations of THC has a higher likelihood to induce higher symptoms of anxiety and stress.

Cannabis will likely not be the sole underlying cause though, it has to do with the individual persons underlying brain chemistry and learned behaviour, and possibly the amount of cannabis consumed could be the cause of the disregulation the individuals endocannabinoid system.

Cannabis tends to amplify what is already underlying in terms of the patterns of behaviour or concerns in a person's subconscious, when it comes to an individual's behavioural expressions after consuming cannabis. ***(e.g. if I vaporise medicinal cannabis and I'm lazy and I want to relax I'll be more relaxed. If I vaporise medicinal cannabis when I'm productive I'll do more work, if I vaporise medicinal cannabis when I'm anxious or depressed about real life heavy stuff that's going on and affecting me and if I don't know how to manage my emotions it can make me more stressed, anxious or depressed, but that's predominantly down to my inability to regulate my emotions, as well as the life circumstances mixed with consuming cannabis which can get the mind racing and worrying about existential things, and high THC cannabis can induce perceptual change which makes you perceive things differently and can give you worrying perspectives about anything, especially when you already have difficult

underlying problems/life circumstances to worry about.)***

I suspect those who are susceptible to anxiety attacks, panic attacks or psychosis when consuming cannabis who have those contraindications, if such mental health presentations are not caused by or related to an individual's life circumstances, they may be due to the individual's underlying brain chemistry already being predisposed to or currently experiencing anxiety/depression or stress, or already being diagnosed with a stress/anxiety or psychosis related psychiatric disorder, which is exacerbated by the perceptual change causing from consuming cannabis with high concentrations of THC, which has a concomitant effect of exacerbating anxiety in the presence of life or health related stressors, due to the perceptual change it causes, or such mental health presentations may be due to increased heart rate causing health concerns in the person, which is down to the person having a bad psychological and psychomatic reaction to cannabis due to the person having a lack of understanding how cannabis affects them as a result of not using cannabis very often or ever before, or because of a bad psychological response the individual may have to the physiological effects of consuming cannabis.

Ultimately, to note as well, that taking CBD with THC in the form of an oil or as a hemp flower like ANTG Eve, or a hybrid ruderalis cannabis cross strain that has CBD and THC, the psychoactive effect of THC is reduced as CBD and THC both fit in the CB1 receptors in the brain, which effectively causes CBD to "block the doorway" which THC would normally enter into your system, thereby reducing the psychoactive and intoxicating/incapacitating effect of THC, when CBD is consumed with THC.

> -"Being a negative allosteric modulator of the cannabinoid receptor-1, CBD can counter the psychotropic effects of THC when co-administered with THC. (Nichols and Kaplan, 2020)".

Source of above citation:"Immune Responses Regulated by Cannabidiol", Cannabis Cannabinoid Journal, www.ncbi.nlm.nih.gov/pmc/articles/PMC7173676/?report=reader, Feb 2020.

It is also prudent to note, that many studies on cannabis were conducted on illicit cannabis administered by the means of smoking via combustion, and therefore the results are not directly comparable to newer studies on medical cannabis in the years since medical cannabis was legalised.

The results are not directly comparable, as illicit cannabis is often grown with disproportionate quantities of THC, which can disregulate an individual's endocannabinoid system if consumed in quantity, where's medicinal cannabis is grown to optimise the therapeutic benefits and minimise the adverse effects by strain manipulation conducted by experts.

> -"We're Professional
> "Our state-of-the-art indoor growing facilities are precision controlled environments and some of the most technologically advanced in the world. We manipulate the key plant growth variables for each strain to ensure we consistently produce the highest quality products for patient’s needs."

Source for above citation: Beacon Medical website: https://www.beaconmedical.com.au/

It may also be noted that illicit cannabis is often grown with plant growth regulators (PGRs) such as palcobutrazol which have been associated with many negative health effects and negative physiological

and psychological effects, such a Cannabis Hypermesis Syndrome (which was a condition only discovered in 2004 shortly after the commercial use of illegal plant growth regulators in illicit cannabis which are not fit for use in products made for human consumption).

> "Cannabinoid hyperemesis: Cyclical hyperemesis in association with chronic cannabis abuse". Gut. 53 (11): 1566–70. doi:10.1136/gut.2003.036350, also available at
Source for above citation: https://pubmed.ncbi.nlm.nih.gov/15479672/, PMC 1774264. PMID 15479672." Allen, J H; De Moore, GM; Heddle, R; Twartz, JC, (2004)

> - "One of Green's concerns is that there is not much public information about the potential health effects of the chemical. According to his notice, the brand name is Cambistat, a plant growth retardant and fungicide. The active ingredient, Paclobutrazol, is classified as a toxic chemical by the EPA and the manufactures website says it is "used by arborists as the last step in the pruning process as a way to extend trim cycles and increase profitability."
Source for above citation:"Homeowners Concerned: PG&E Injecting Chemicals Beneath Trees On Private Properties", CBS Sacramento, https://sacramento.cbslocal.com/2020/01/30/pge-injecting-chemicals-trees-private-property/, Jan 30 2020

> - "LANSING, MI -- The Marijuana Regulatory Agency on Friday, Jan. 17, expanded a marijuana recall for product sold at 13 different dispensaries in nine different cities. An initial recall issued Jan. 10 identified nearly three pounds of marijuana sold at locations in Bay City in Detroit that failed testing for high levels of Paclobutrazol, a plant growth inhibitor."
Source for above citation:"Michigan expands recall to marijuana from 13 dispensaries in 9 cities", MLive News, https://www.mlive.com/public-interest/2020/01/michigan-expands-recall-to-marijuana-from-13-dispensaries-in-9-cities.html, January 20 2020.

It therefore necessarily follows that many studies conducted on illicit cannabis, which suggest or concluded that cannabis causes or is likely to cause negative mental health presentations are not directly comparable to medicinal cannabis pharmaceuticals, due to the inherent variance between potency, contaminants, and adulterants used in illegally sold black market cannabis, compared to legal medicinal cannabis, which must be compliant with strict standards and regulations to ensure minimal variance in product composition, as well as ensuring compliance to strict regulations towards the amount of allowed contaminants and adulterants which are approved for use in the manufacturing of medicinal cannabis products pursuant to TGO93 government standards; which all medicinal cannabis product manufacturers must ensure the compliance of their products to the aforementioned standards, as well as manufacturers of medical cannabis products having to ensure compliance with the TGO100 government standard as well before the products can be sold as registered and approved pharmaceutical medications in Australia.

> TGO93 Australian Government Standards for Medicinal Cannabis Medications, 2017.
Source: https://www.legislation.gov.au/Details/F2019C00328

> TGO100 Australian Government Microbiological Standards for Pharmaceutical Products, 2018.
Source: https://www.legislation.gov.au/Details/F2018L01685

There are a number of important studies for the Inquiry which I have included below as they relate to how cannabis affects the mind and body

> - "The guidelines will also need to recommend a dose that has been shown to be effective for neuropathic pain but does not cause cannabis intoxication. One controlled trial found that 25 mg (roughly equivalent to one inhalation) of 9% THC relieved neuropathic pain and caused minimal intoxication. 1,10 The duration of analgesic action of smoked cannabis is probably about three to four hours. In our view, the maximum safe dose, therefore, would be about one inhalation of 9% THC four times daily, or 400 mg of dried cannabis per day. (Health Canada allows prescriptions of up to 5 g/d.)."

Source for above citation: >New medical marijuana regulations: the coming storm", Canadian Medical Association Journal https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4150697/, Sept 2014.

> - "The systematic review of guidelines by Deng et al.8 recommends the use of cannabinoids as fourth-line treatment of neuropathic pain. The guideline by Hauser et al.[7] mentions that cannabis-based medicines can be considered as third-line therapy for chronic neuropathic pain.

Source for above citation: Medical Cannabis for the Treatment of Chronic Pain: A Review of Clinical Effectiveness and Guidelines, CADTH Rapd Response Report, https://www.cadth.ca/sites/default/files/pdf/htis/2019/RC1153%20Cannabis%20Chronic%20Pain%20Final.pdf, July 2019.

> Effects of Tetrahydrocannabinol in Man. (Conclusion: CBN increases the potency and interactivity of THC on the brain, but CBN is not psychoactive alone.) Journal of Pharmacology,

Source for above citation: www.karger.com/Article/Abstract/136944, 1975.

>Harvard: An unexpected link between cannabis and fertility. (Conclusion: Men who consume cannabis have sperm counts 1.5x as high as people who do not use cannabis)

Source for above citation: https://news.harvard.edu/gazette/story/newsplus/an-unexpected-link-between-marijuana-and-fertility/, Feb 2019.

>A controlled family study of cannabis users with and without psychosis. (Conclusion: Cannabis use does not cause schitzophrenia.)"

Source for above citation: https://pubmed.ncbi.nlm.nih.gov/24309013/, Jan 2014.

>Harvard: Marijuana doesn't cause schizophrenia.

Source for above citation: https://psychcentral.com/news/2013/12/10/harvard-marijuana-doesnt-cause-schizophrenia/63148.html, Aug 2018.

>Harvard : Environmental factors are related to gene expression. (Abstract: "the old ideas that genes are “set in stone” or that they alone determine development have been disproven. Nature vs. Nurture is no longer a debate—it’s nearly always both")

Source for above citation: https://developingchild.harvard.edu/resources/what-is-epigenetics-and-how-does-it-relate-to-child-development/

> The UN downscheduled Cannabis from being included on a list of the most dangerous drugs and narcotics, which included heroin, down to the status of being considered a "less dangerous drug" on or around 3 December 2020.

Source for above claim: https://www.nytimes.com/2020/12/02/world/europe/cannabis-united-nations-drug-policy.amp.html

Having regard to the study of "Endocannabinoid Signaling Collapse Mediates Stress-Induced Amygdalo-Cortical Strengthening"https://ir.vanderbilt.edu/bitstream/handle/1803/9850/MARCUS-DISSERTATION2020.pdf;jsessionid=AEAE66EE814F40377327C599BE03BC0E?sequence=1 - January 31, 2020, and it's academic conclusions;

It's clear that cannabis acts on the areas of the brain that can either induce or reduce symptoms of anxiety, depression and psychosis.

The clinical evidence I have provided shows that the endocannabinoid system works on the area of the brain responsible for modulating and reducing levels of anxiety and stress, and that an absence of endocannabinoids causes an increase of anxiety and stress symptoms, which may very well act as an evolutionary mechanism which promotes and encouraging feeding of breast milk in babies, as anxiety and stress levels increase in the absence of endocannabinoids in a babies diet, which thereby encourages feeding due to the crying and tantrums which babies experience when they are subjected to heightened levels of anxiety and stress.

Having regard to the above, it's clear that a disregulated endocannabinoid system can induce mental health presentations, but it's also clear that phytocannabinoids can assist in reducing mental health conditions on the basis that the CB1 and CB2 receptors in the brain are associated with anxiety and stress related behaviours, and that signalling collapse of the CB1 and CB2 receptors can cause stress induced psychiatric disorders to occur to patients.

There is only one study that I'm aware of which was cited above in these Submissions in which the evidence was derived from an animal model of evidence, which was the study "Endocannabinoid Signalling Collapse Mediates Stress-Induced Amygdalo-Cortical Strengthening" Source: DISSERTATION2020.pdf;jsessionid=AEAE66EE814F40377327C599BE03BC0E?sequence=1 - published on January 31, 2020.

The academics concluded in the above cited study that their results show that:

> -"These data suggest that the enhancing 2-AG-CB1 signaling], via MAGL inhibition for example, could represent an attractive therapeutic target for the treatment of stress-induced psychiatric disorders."(Chanda et al., 2019; Lisboa et al., 2017; Patel et al., 2017)."

The study cited above refers to three other journal article academic papers to substantiate the conclusion cited above; and Lisboa et. al. 2017, was a study does comparative studies between both human and animal models to anxiety.

In the event there would be any objection made to the validity of the evidence cited above, on the basis the evidence cited above was derived from animal models; I would appreciate if the following was noted to such an objection:
The conclusion cited above, made in the journal article "Endocannabinoid Signalling Collapse Mediates Stress-Induced Amygdalo-Cortical Strengthening", was correlated with other academic material, including Lisboa et. al. 2017, which compared human models of evidence to animal models of evidence in terms of how cannabinoid receptors affect stress and anxiety, and the results of both studies comparing animal models to human models of evidence on how cannabinoids affect and relate to stress and anxiety were consistent with each other.

I hereby also attach an expert obstrician report of Dr. on cannabis use to treat hypermesis gravitas, which is an expert report which was conducted pro bono but ordinarily cost in the realms of $10,000-$15,000. I confirm that I have redacted any personally identifying information from the report, which I have attached to my Submission for the Enquiry as a supporting document

For your convenience, I have extracted the summary and conclusion of the report below. You have my consent to present this report to parliament if it assists debate on the issue of health and safety implications of legalising cannabis.

Dr. Findings:

> "In brief summary Cannabis has been used during pregnancy for the treatment of hyperemesis gravidarum in many cultures for many centuries. With any treatment, an assessment of the risks to the unborn child that may be associated with exposure during pregnancy is appropriate. I have also been asked to compare the risks to the fetus of cannabis exposure and hyperemesis gravidarum during pregnancy."
>
> "Opinion: The current scientific data lacks any clear information in relation to whether cannabis use for nausea and vomiting is helpful for these symptoms. Furthermore, there is no firm data suggesting that prenatal exposure to cannabis has significant negative effects on pregnancy, neonatal or childhood outcome. There is sufficient data to state that hyperemesis gravidarum is a debilitating pregnancy symptoms that has longer term negative maternal and neonatal outcomes compared with those women who do not experience hyperemesis. These outcomes include behavioural issues that extend into adulthood. Cannabis has carried a significant social stigma, however medicinal use has now been legalised in Australia. The entire west coast of the United States have recently legalised the recreational use of cannabis. I have noted a number of pregnant women who have used cannabis for their personal treatment of hyperemesis over the past 30 years. On the balance of good versus harm, the current scientific data does not support denying this option to women who have not responded to other treatments for hyperemesis gravidarum, especially given the possible negatives long term outcomes associated with HG.

Thank you for your time and consideration with regards to reviewing the material contained in this submission.