



North Dakota House of Representatives

STATE CAPITOL
600 EAST BOULEVARD
BISMARCK, ND 58505-0360



Representative Steve Vetter

District 18
804 South 17th Street
Grand Forks, ND 58201-4241
smvetter@ndlegis.gov

COMMITTEES:

Judiciary (Vice Chair)
Government and Veterans Affairs

Madame Chairwoman and Senators of the committee, I am here to introduce HB 1203 which allows medical cannabis to be sold as edible product for those with a medical card.

My name is Steve Vetter from district 18. Grand Forks along the Red River to Manvel.

I stand before today with the medical cannabis bill that the House Human Service committee spent hours vetting and amended into the form you see before you today. It has all the safeguards for children and other worries of the opponents to the bill. Unfortunately, last session the bill needed 2/3 vote to pass and was a couple votes shy of 2/3. This session, the bill got over 2/3 vote in the House. If this bill becomes law, it would be the most conservative edibles law in the nation with the most safeguards. The safeguards for minors include rules on the looks of the container having to be black and white without any attractive pictures and many other considerations put into this bill.

Most common way of taking medications:

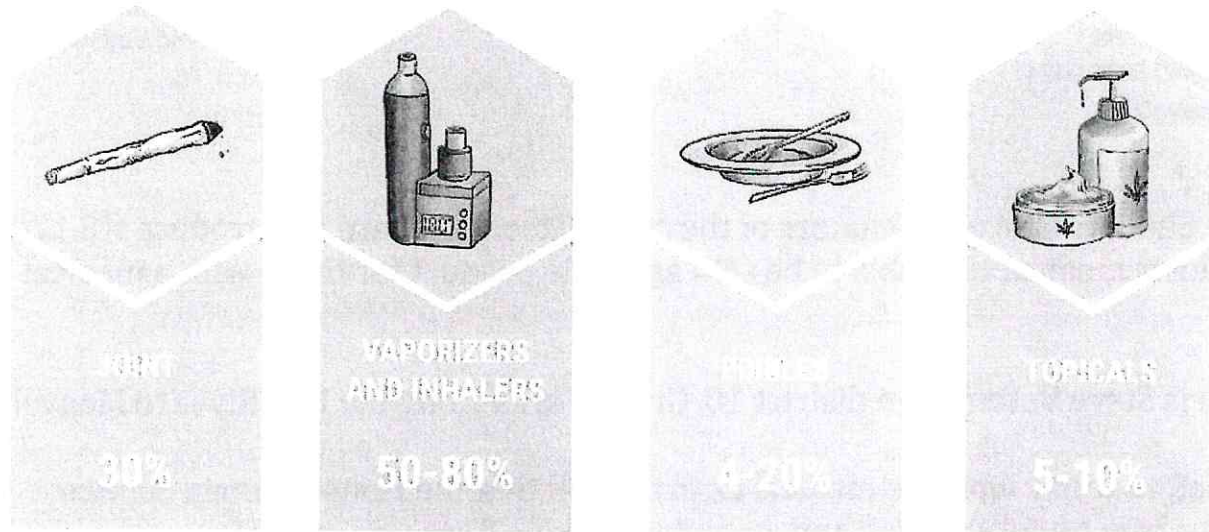
In today's world we are used to taking medications orally and have exact and consistent dosages. When edibles are made in home-made way using the current drops, it is not consistent. If this bill passes, the regulated manufacturer would be able to make consistent and exact dosages.

The medical cannabis community would really appreciate a form of cannabis that is more impactful, for certain types of conditions. Edibles allow for a more "extended release" form of medical cannabis with the dosage consistent and exact. This mainly is due to the bioavailability and rate of absorption of the edibles product.

***Bioavailability refers to the percentage of the chemical in question which ultimately is processed by the body and added to the blood-stream. Bioavailability as such determines the ultimate actual amount the body receives as opposed to weight based metrics, as these fail to take into account the inefficiencies in our biological processes. As an example, 100miligrams of medicine taken orally with a bioavailability

factor of 15%, would mean that the patient is only receiving 15 milligrams via that particular dosing mechanism, as opposed to the full 100.

BIOAVAILABILITY OF CANNABIS CONSUMPTION METHODS



*****Rate of absorption** refers to the speed at which bioavailability occurs. If you've ever been to the store for cold medicine you have seen pills labeled "Extended Release" in addition to conventional products. Extended release is designed to decrease the speed at which a chemical is absorbed into the body, allowing it to take more time and thereby extend the dosage over a longer period, albeit at a lower amount. Going back to our 100mg/15% example, if this was released over 6-8 hours via Extended release as opposed to 1 hour for normal release, this would allow for the medicine to be in your body for substantially longer, but at generally speaking lower concentrations. The lower the concentration of medicine in the system the less of an effect it has on the individual, which is useful for managing side-effects, and also can allow them more relief. If an individual only needs 3.75mg in their bloodstream at any given time, the extended release would allow them to get the full relief they need for a longer period of time. As a result, extended release is better for chronic pain if possible, assuming that the amount of the chemical needed to provide the relief can easily be converted into an extended release product.

Similarly, different mechanisms of intake have faster or lower rates of absorption proportional to the mechanism by which they are delivered. In general, medicine is delivered in one of five ways; Injection or continuous IV, Aerosol, Orally, and Topically, and these forms of delivery all change the rate of bioavailability and bioabsorption. Generally speaking I listed the medicines in the order by which they are absorbed, from

the fastest to the slowest. This is also why in hospitals you will typically see bags of fluid attached to a patient which contain medicine, as their goal is to get the fastest care possible.

The image below shows estimates of bioavailabilities of cannabis based on the best available data across multiple studies.

As you might now notice from an bioavailability perspective edibles actually rank rather low, so why would patients prefer them? Well the answer is simply the absorption rate. Remember when we talked earlier about the rapid release vs the extended release, quite frankly many patients do not need the levels of relief provided by smokeables or vaporized products, rather they are seeking long term relief on the same dosage. As a result, patients can report relief from edible products lasting far longer than they would for smokeables. In most circumstances it is estimated that edibles provide 6-8 hours of relief, whereas a smokable product typically provides 1 hour of relief for the average patient. This is in spite of the fact that the patient got more THC, its pain relieving effects are simply being wasted.

It's a Healthier Option:

Beyond the relief portion, edibles are healthier for the patient than a smokeable. Anything which is being smoked is not healthy for you as smoke itself frequently contains carcinogens or products known to cause lung cancer. While the amount of carcinogenic chemicals in marijuana smoke is controversial (as most studies focused exclusively on the black market), the findings of these studies show that it may be more carcinogenic than proportional tobacco smoke. Additionally, many patients do not enjoy the sensation of smoking, and can lead to coughing. Vapor marijuana products can also cause extreme bouts of coughing per puff, and lead to patient discomfort as they seeking relief. As a result, it is my position that North Dakota should allow for edible cannabis products both from a safety perspective, and a quality of life perspective.

Lastly, but by no means least, is the issue of tolerance. As we use any medicine or product our body adapts and becomes more tolerant of it. Since a smoker or vaper would be consuming potentially 3 times as much THC (after accounting for bioavailability), their body over-time become less sensitive to it, decreasing the levels of relief they would experience. As a result, given the rather harsh THC caps on medical

marijuana, they could potentially run out and be forced back onto the opioids or alternatives they were hoping to get off of. The comparatively lower dose would therefore allow an individual to enjoy meaningful relief for far longer, and as such they should be afforded that option.

In summary: This edible bill is good conservative bill with safeguards for minors. It allows for a healthier alternative product that decreases a patient's exposure to carcinogens, while ultimately increasing the period of relief they enjoy from their debilitating conditions. There is a reason most other medicines are given orally, and it makes sense for medical marijuana to follow that particular path. I will now stand for questions. I have experts testifying after me if you want to get into more technical questions.

1. Lower Bioavailability rate compared to other methods
2. Rate of absorption / extended release method
3. The method of taking medications society is used to
4. Healthiest and safest choice

Thank you for your consideration and please give HB 1203 a Do Pass recommendation.