Canadian Centre on Substance Use and Addiction
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Drug Per Se Laws

Key Considerations

- Despite the inherent difficulties associated with identifying drug concentrations at which impairment is evident in most drivers, many countries have set per se limits for various substances.
- Per se drug laws can form part of a comprehensive approach to drug-impaired driving that includes enhanced training of all police officers in the recognition of the signs and symptoms of drug use, a strong Drug Evaluation and Classification program, and the implementation of roadside oral fluid drug screening.
- A zero tolerance policy is appropriate for many drugs and certain categories of drivers.
- There is need for a standardized approach for assessing the road safety risk posed by commonly used medications and other drugs.
- It is necessary to retain an impairment standard for all psychoactive substances for which there is no per se limit, multiple drug use, and cases where impairment occurs at levels below the prescribed limit.

The Issue

There are two basic types of laws for dealing with impaired drivers. The first type is a behaviour-based impairment statute whereby it must be demonstrated that the driver's ability to operate a vehicle is impaired by alcohol or a drug or both. The second type is known as a "per se" law whereby it is an offence to operate a vehicle with a concentration of alcohol or drugs in the body in excess of a specified threshold value. A special form of per se law sets the threshold value at zero, which is often referred to as "zero tolerance."

Per se laws provide a legal shortcut, essentially eliminating the requirement to prove the driver's ability was impaired. Theoretically, it is only necessary to prove that the driver had an alcohol or drug concentration in excess of the statutory threshold. Per se laws for drugs are often viewed as a more efficient, effective means of dealing with drug-impaired drivers than a -system that requires evidence of impairment. A limitation of per se drug laws is that they usually require a blood sample be drawn by a qualified person and tested at a forensic toxicology laboratory.

Background

Canada has had an alcohol per se law since 1969. Paragraph 320.14(1)(b) of the *Criminal Code* makes it an offence for a driver with a blood alcohol concentration (BAC) equal to or exceeding 80 milligrams of alcohol in 100 millilitres of blood (80 mg/dL) to operate, or have care or control of, a

vehicle.* Extensive research has demonstrated that this level of alcohol is consistent with significant psychomotor impairment and increased risk of crash involvement.

Achieving this same standard of evidence has proven more challenging for establishing per se thresholds for other drugs. This difficulty is especially true for cannabis. Impairment produced by tetrahydrocannabinol or THC (the primary psychoactive component of cannabis) is quite different from that due to alcohol. Moreover, the extent of impairment caused by the use of cannabis can vary widely, not only between individuals, but also within the same individual on different occasions. Attempts to establish the risk of crash involvement are limited by the extent and quality of data on THC blood concentrations in both crash-involved and control groups of drivers. Complicating the situation further is the fact that THC blood concentrations can change dramatically over a short period such that the drug concentration at the time of testing can be considerably lower than when driving occurred.

Per se laws not only simplify the adjudication process, they can facilitate enforcement and enhance deterrence. The relative simplicity of per se laws, their widespread acceptance for dealing with alcohol-impaired driving and the demonstrated effectiveness of alcohol per se laws have bolstered the call for similar per se limits to be established for other drugs.

Current Status

Driving under the influence of narcotics was first added to the *Criminal Code* in 1925. In 1951, amendments to the *Criminal Code* changed driving "under the influence" or "while intoxicated" to driving "while impaired" and the term "narcotic" was expanded to include "any drug."[1] Despite the long history of laws on drugs and driving, in the absence of a procedure to systematically assess impairment and collect bodily fluid samples for analysis, it was often difficult to gather sufficient and compelling evidence to charge and/or convict offenders.

In July 2008, the Drug Evaluation and Classification Program (DECP) was formally recognized in the *Criminal Code*. The DECP is systematic and standardized procedure used by officers who have been trained and certified as Drug Recognition Experts (DREs)† to assess impairment by drugs. The introduction of the DECP enhanced the ability of police to investigate suspected drug-impaired drivers. Nevertheless, there remained challenges. The time and cost required to train and certify officers as DREs as well as the complexity of the evaluation and the adjudication of cases have led to calls for a simpler, more efficient method of dealing with drug-impaired driving comparable to that used to deal with alcohol-impaired driving — that is, drug per se laws.[2]

Recent amendments to the *Criminal Code* established a new offence for operating or having care and control of a vehicle with a blood drug concentration equal to in excess of the concentration specified by regulation. Table 1 lists the ten different drugs for which a limit has been set.

* It is also an offence to operate a vehicle while one's ability to do so is impaired by alcohol (regardless of BAC), a drug, or a combination of alcohol and a drug (paragraph 320.14(1)(a) of the *Criminal Code*).

† Also known as Drug Recognition Evaluators.

Table 1. Per se drug limits in Canada

Drug	Per se Limit
Tetrahydrocannabinol (THC)	2 ng/mL of blood
Tetrahydrocannabinol (THC)	5 ng/mL of blood
Lysergic Acid Diethylamide (LSD)	Any detectable level
Psilocybin	Any detectable level
Psilocin	Any detectable level
Phencyclidine (PCP)	Any detectable level
6-Monoacetylmorphine	Any detectable level
Ketamine	Any detectable level
Cocaine	Any detectable level
Gamma hydroxybutyrate (GHB)	5 mg/L of blood
Methamphetamine	Any detectable level

There are two limits for THC: 2 nanograms in 1 millilitre (2 ng/ml) of whole blood, but less than 5 ng/ml (summary conviction offence), and 5 ng/ml or more THC in whole blood for a hybrid (summary conviction or indictable) offence. It is also a hybrid offence to have 2.5 ng/ml or more THC combined with 50 mg (or more) of alcohol per 100 mL blood.

The only other drug for which there is a non-zero limit is gamma hydroxybutyrate (GHB). The per se limit for GHB is set at 5 mg/L in whole blood. GHB is s a central nervous system depressant prescribed to treat sleep disorders but can be used illicitly. GHB also occurs naturally in the body. Hence, it is essential to distinguish between low levels of GHB that could be endogenous and higher levels of GHB that are more likely impairing and the result of illicit use.

In addition, it remains an offence to operate a vehicle while one's ability is impaired by alcohol, drugs or a combination of alcohol and drugs. This offence requires evidence of impairment from observations of driving, general behavioural observations, evidence from a drug influence evaluation by a DRE or all of the above. The evaluation includes a demand for a sample of blood, urine or oral fluid to be analyzed at a toxicology laboratory to determine the presence of drugs. Together, these elements can provide the evidence required to prove the offence.

What the Evidence Says

A per se law is essentially a legal shortcut used to simplify the adjudication of offenders by eliminating the need to prove the driver's ability to operate a vehicle safely was impaired. In the case of alcohol, without the burden of having to prove the accused was impaired by alcohol, the prosecution can focus on two elements: was the person driving and was their BAC 80 mg/dL or greater. The apparent simplicity of per se laws streamlines adjudication, facilitates enforcement and enhances deterrence. Together, these factors have had a positive impact on the prevalence of impaired driving and alcohol-related crashes. Research has determined that alcohol per se laws are associated with an 8 to 15% reduction in alcohol-related fatal crashes.[3] While it is often assumed that per se laws for drugs would have similar effects, to date there is a lack of empirical evidence to support this hypothesis.

Limitations and Gaps

On the surface, implementing drug per se laws appears to be a reasonable approach. Unfortunately, the situation is considerably more complex than it seems. Foremost, the 80 mg/dL limit for alcohol was derived from years of experimental and epidemiologic research demonstrating that this level of alcohol was associated with considerable impairment of many of the skills and abilities necessary for the safe operation of a motor vehicle in virtually all drivers. This research also showed that the risk of crash involvement was significantly increased among drivers who had an alcohol concentration of this magnitude.

The strength and consistency of the evidence is not available for many other substances — illegal drugs, psychoactive prescription drugs and over-the-counter remedies — that have the potential to impair the ability to operate a motor vehicle safely. Few of these substances have been subjected to rigorous experimental testing to determine their effects on driving or have been included in epidemiological research to establish the risk of crash involvement. Establishing a scientific basis to justify a per se limit for each substance would require an extraordinary amount of time and resources.

There are many factors that complicate the establishment of per se limits for drugs. The mechanisms by which different substances are absorbed, distributed and metabolized in the body (i.e., pharmaco-kinetics) are more complex than for alcohol. The observed effects of the drug at different concentrations (i.e., pharmacodynamics) depend on the gender, weight, age, disease state of the individual and the extent of acquired tolerance to the substance. Some drugs form active metabolites (e.g., diazepam) that can have impairing effects even after the level of the parent drug has waned. Per se laws would have to take into account the metabolic breakdown patterns of such substances. The concomitant use of more than one substance is also common. It is possible that the concentration of no single drug exceeds the per se limit, but the combination of drugs creates significant impairment. Establishing per se laws that cover even the most common drug combinations would be challenging and these would be best dealt with by impairment-based statutes.

Measuring drug concentrations can also be considerably more complicated than measuring alcohol concentration. Unlike alcohol, which can be readily and reliably measured using breath samples, drug testing requires a sample of blood, urine or oral fluid. Because drug concentrations are not equivalent across the different sample media, in the absence of validated conversion factors, separate limits would have to be determined for each type of fluid or a preferred type of fluid would have to be specified. Blood is generally considered to be the “gold standard” for determining drug concentrations because it reflects the amount of active drug circulating in the body. The primary difficulty is that drawing blood is an intrusive procedure and it must be done by a qualified individual. A further difficulty is the time required to transport the suspect to a facility and wait for a qualified professional to collect the sample. The time delay can be substantial and, depending on the drug involved, can be sufficient for the concentration of the drug to have fallen below the threshold value for charges. Samples must also be tested at a forensic toxicology laboratory, which can lead to significant delays before results are available.

What Other Countries Are Doing

Many countries in Europe (e.g., France, Sweden, Belgium and Portugal) have established zero tolerance laws for illegal substances, whereby any amount of the substance in the body of a driver is an offence. Others (e.g., Spain and Italy) have behaviour-based statutes that require evidence of impairment to prove the offence.[4] Norway has taken a somewhat different approach and established numerical thresholds for 20 substances, including some pharmaceuticals.[5] These limits were determined by an expert panel that reviewed the scientific literature and used their experience,

expertise and judgment to establish what were deemed to be drug concentrations that would produce a degree of impairment comparable to that associated with a BAC of 20 mg/dL. In March 2015, the United Kingdom adopted a zero tolerance approach for eight illegal substances (i.e., cannabis, cocaine, benzoylecgonine [a metabolite of cocaine], ketamine, LSD, methamphetamine, MDMA [ecstasy] and heroin) with non-zero limits that reflected the "lowest accidental exposure limit." Limits were also established for eight pharmaceutical drugs (i.e., clonazepam, diazepam, flunitrazepam, lorazepam, methadone, morphine, oxazepam and temazepam) based on a road safety risk approach. A limit for amphetamines was subsequently established in an attempt to balance illicit use with its use for medical purposes. Evidence of impairment is still required for the use of substances for which no per se limit has been established.

Several states in Australia have *de facto* zero tolerance laws for certain substances (i.e., cannabis, amphetamines and ecstasy). The limit is essentially determined by the detection threshold of the oral fluid screening device used at roadside. Charges are based on the confirmation of the presence of the drug by a toxicology lab.[6]

In the United States, there is a range of different drug-driving laws. Currently, 18 states have enacted some form of zero tolerance drug-driving law for controlled, scheduled, restricted or illegal substances. Some states exclude cannabis (e.g., Minnesota, Kentucky and Wisconsin) whereas others (e.g., Arizona, Delaware and Georgia) include drug metabolites. In addition, four states (California, Colorado, Kansas and West Virginia) have zero tolerance laws for "drug addicts" or "habitual users." Three states (Nevada, Virginia and Ohio) have set non-zero limits for some substances and Colorado,‡ Montana. Illinois and Washington have set a 5 ng/mL limit for THC. Ohio and Nevada have established a limit of 2 ng/mL for THC and Pennsylvania has a limit of 1 ng/mL.[7]

Options for Improvement

There are several approaches for establishing drug per se laws. The first is zero tolerance. This approach has been taken by several countries in Europe and is being promoted by the Office of National Drug Control Policy and others in the United States. The rationale is relatively straightforward and compelling: if the substance is illegal to possess, it should be illegal to drive after using it. However, this approach extends beyond the domain of impaired driving and enters the domain of drug control in that it has the potential to target individuals who use drugs who might have very low residual levels of drugs and who pose little risk to road safety. It also does not recognize that drivers can be impaired when using psychoactive prescription drugs or over-the-counter medicines.

A variation on the zero tolerance approach is to acknowledge that the use of psychoactive substances is incompatible with the safe operation of a vehicle and establish a policy in the interests of public safety that strongly discourages driving after the use of such substances. The limit need not be zero, but should be set low enough to reflect a zero tolerance policy without including trace or inconsequential amounts. This approach clearly sets the standard of no use while driving, but does not necessarily sanction those who test positive at very low concentrations without evidence of impairment.

A common approach to determining per se limits for drugs involves the search for a drug concentration that is associated with a degree of impairment or risk equivalent to that caused by a specified concentration of alcohol (e.g., 80 mg/dL). While the apparent logic is compelling, establishing this equivalence of evidence has been elusive. This approach requires a criterion on which to assess impairment across all substances, an approach that belies the differences in drug effects. To this end, an expert panel convened by the National Highway Traffic Safety Administration outlined a

‡ Colorado's statute provides a "reasonable inference" of impairment and is not a true per se law.

structured and standardized protocol for assessing the impairment risk of all types of drugs.[8] Adoption of this approach would help identify the degree of risk posed by all types of substances.

Another alternative is to establish a hybrid approach that involves establishing a zero tolerance policy for illicit substances (with low but not necessarily zero limits), per se limits for psychoactive substances for which there is sufficient evidence to support a specific limit, and an impairment standard for all other circumstances — for example drugs without a limit, multiple drug use, novel psychoactive substances or evidence of impairment at drug concentrations below the per se limit.

Whatever approach to drug-driving laws is implemented, detecting drug use and drug impairment in drivers will continue to be of paramount importance. Detection begins with establishing a "reasonable suspicion" of drug use. However, the signs and symptoms of drug use can differ dramatically from those of alcohol use. Special training and experience are required for officers to become proficient in the recognition of the signs and symptoms of drug use.

Once suspicion has been established, the officer can request the driver complete the Standardized Field Sobriety Test (SFST). The SFST is a widely used test of impairment that has three components: Walk and Turn, One-Leg Stand and Horizontal Gaze Nystagmus. Although this test battery has been validated as a measure of alcohol impairment, its validity has never been firmly established for impairment by all drugs. Further research demonstrating the validity of the SFST for drugs other than alcohol would be beneficial in establishing a standard to assess drug impairment.[9] In addition, roadside oral fluid drug screening equipment could also prove beneficial for police officers in identifying the use of certain types of drugs by drivers. These devices can detect some of the most commonly used drugs in a sample of oral fluid collected at roadside. A positive drug screen or poor performance on the SFST could lead to a drug influence examination by a DRE or a blood test or both.

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