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DATAC

2024 Quarterly Newsletter

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COMPANY SPOTLIGHT

TRIPLE S SAFETY

This quarter our spotlight looks way up to see what is happening in northern British Columbia. There, in the small rural community of Fort Nelson we will find Lisa Gustafson and her company, Triple S Safety. Lisa has been a part of the drug and alcohol testing industry since 2006 where she started out as an employee sending workers to various third party administrators for testing. When the owner of that business was ready to move on Lisa saw the gap in her community that still needed to be filled and, since she enjoyed working in the industry, took it upon herself to start up her own business doing drug testing.

It is always so insightful and interesting to hear about the differences in the testing landscape, depending on where in Canada you are set up, and the various obstacles that may need to be overcome. We are so thankful to Lisa Gustafson and Triple S Safety for choosing to train with us and for being a valued member since 2019! We can't wait to see how Triple S Safety continues to grow and service the Fort Nelson area.

Lisa decided, from the beginning, to work with DATAC over some of the other players after being given the runaround about obtaining training and getting herself set up as a third party testing company. One of the great things about training with DATAC is that we are always able to help connect our new trainees with other useful companies, such as Verify Diagnostics, that will help with all of the non-training related set up requirements for a new drug testing business. For Triple S Safety this connection was a game changer as Lisa found the excellent resource she needed to figure out the ins and outs of the drug testing industry and make sure she was getting set up properly.

When working in rural communities there are some obstacles that are different from those working in the city, and Lisa said that this was something that took learning to navigate. These obstacles include things like very basic logistics, such as difficulties getting to sites to do the testing, sometimes requiring 4 hour drives on dirt roads, and choosing what type of testing to do in these situations.

Lisa made sure she set herself up for success with the proper training she received from DATAC, making sure to follow the procedures she learned from DATAC to ensure legal defensibility and best practices. Triple S Safety set up to be capable for both mobile testing as well as inhouse testing, and added a number of other services such as Safety Consulting and Safety Audits. In this way Lisa was able to fill a number of different roles within the industry to round out her business and make it profitable within. In fact when I asked Lisa for words of wisdom for building a drug and alcohol testing business she said "Here (in rural areas) you need an add-on, and things don't just happen right off the hop".

Lisa let us know that the type of testing she does the most is point-of-care testing using Vericheck cups, and interestingly most of the businesses will not do laboratory confirmation testing. The point-of-care cups are the perfect choice for the mobile testing, particularly when she is required to go in backwoods country as no other analyzers or equipment is needed. Lisa mentioned that some companies have started looking at using oral fluid testing instead of urine, to try and keep testing to only recent use, but this change is happening very slowly. Lisa did point out another change has been that some companies are no longer looking for results for THC in their testing programs, and have simply removed it as a tested metabolite.

PRODUCT SPOTLIGHT

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KEY OUTCOMES EXPLAINED FROM LARGEST ADDICTION PREVENTION AND TREATMENT IMPLEMENTATION STUDY TO DATE

According to the results of a new large prevention and treatment implementation study carried out, there was no statistically significant difference in overdose deaths between the intervention (treatment) and control communities. The HEALing Communities Study (HCS) is the largest addiction prevention and treatment implementation study conducted to date. The study was initiated in 2019 and carried out in 67 communities in Kentucky, Massachusetts, New York, and Ohio, which have been significantly impacted by the opioid crisis.

The research was launched by the U.S. National Institute on Drug Abuse (NIDA) and the Substance Abuse and Mental Health Services Administration (SAMSHA) to evaluate the impact of specific evidence-based interventions for preventing opioid overdose and treating opioid misuse and addiction disorders in high-risk communities.

When examining the period between July 2021 and June 2022, the researchers found no significant differences in opioid-related overdose deaths in the intervention group and the control group (47.2 deaths per 100,000 population vs. 51.7 per 100,000 population). Moreover, the effect of the intervention on the rate of opioid-related overdose deaths did not significantly differ according to state, urban or rural category, age, sex, race or ethnic group.

As part of the treatment intervention used in the study, both community coalitions and researchers collaborated on three primary evidence-based practices and implemented strategies across health care, criminal justice and behavioral health settings. This included providing expanded access to overdose prevention education and the overdose-reversal medication naloxone, effective delivery of medication for opioid use disorder and improved prescription opioid safety practices. In addition, the intervention also involved a series of communication campaigns to reduce stigma and increase awareness of lifesaving resources.

“The study’s results were not what we hoped. We wanted to see an effect. However, there are lessons here. The first is one that I hope all scientists keep in mind — that we should not be doing science that is simply confirmatory of our hypotheses,” said Dr. Josh Barocas, a professor at the University of Colorado (UC) and one of the study’s investigators in a press release published by UC. “The difficult questions are the ones worth going after. That’s what moves the needle. Maybe it was overly ambitious to say that this would reduce overdose deaths by 40%, but given the state of overdose in the U.S., we have to take big swings.”

Dr. Barocas also added that the COVID-19 pandemic and increasing fentanyl use have added unforeseen challenges that likely diminished the impact of the intervention.

“Because of the pandemic, the study’s intervention period was extended, because there was no way to do this process in this shortened time period. It was already a crunched timeline without the COVID-19 pandemic. Study leadership as well as NIDA leadership saw the need to adapt to the restrictions of the pandemic, “ said Dr. Barocas, “At the same time, we can’t forget that fentanyl usage skyrocketed. Although some communities had already been grappling with fentanyl for a while, it wasn’t quite as ubiquitous as it is now. The expansion of fentanyl was a game changer, and not in a good way.”

After the study’s publication, the researchers are continuing to evaluate the project’s impact on overall overdose deaths, deaths with specific drug combinations such as opioids and stimulants, and nonfatal overdoses. “Our findings demonstrate that implementing these evidence-based practices through community-engaged strategies and partnerships can make a meaningful impact on combating overdoses, even amid the rapidly evolving opioid epidemic and unprecedented disruptions like the COVID-19 pandemic,” said Dr. Sharon Walsh, one of the study’s principal investigators, and professor in the College of Medicine and College of Pharmacy and director for the Center on Drug and Alcohol Research at the University of Kentucky. “Our goal now is to thoroughly analyze the data and translate the effective strategies into sustainable solutions for the opioid epidemic that can be replicated across Kentucky and the nation.”

CURRENT HARM REDUCTION STRATEGIES IN CANADA: A REVIEW

Between January 2016 and March 2024, there was a total of 47,162 apparent reported opioid toxicity deaths. From January to March 2024, 84% of the accidental apparent opioid toxicity deaths in Canada occurred in British Columbia, Alberta, and Ontario. What's more, of all accidental apparent opioid toxicity deaths recorded over this period in 2024, 81% involved fentanyl.

In 2016, the federal government first introduced the Canadian Drugs and Substances Strategy (CDSS) as a new and comprehensive approach to target harms related to the growing incidence of substance use and addiction in Canada. The CDSS was implemented as a replacement of the previous National Anti-Drug Strategy and was last updated in 2023, and was designed as a framework to address the complex issues related to substance use in Canada.

Since its introduction, the CDSS has played an important role in Canada's harm reduction strategy during the ongoing opioid crisis. Some of its key measures included increasing access to harm reduction services, such as supervised consumption sites, making amendments to regulations to permit easier access to addiction treatment programs, and increasing public awareness regarding the risk of opioids.

Prevention and education

This approach involves educating the public (while also specifically targeting youth) regarding the risks of substance use and providing community-based programs that help prevent the onset of substance use disorders. This aspect of CDSS also includes working with partners to address the root causes of substance use harms, including housing, employment, and economic development.

Evidence

CDSS also prioritises the collection, analysis, and dissemination of data, as well as carrying out research to guide evidence-based decision making in order to address the overdose crisis and substance use harms. The process of ongoing collection, analysis, and reporting of data is used to evaluate the scope of the overdose crisis and broader substance use-related harms in Canada.

Specifically, the CDSS is focused on several main aspects including prevention and education, substance use services and supports (treatment, harm reduction, and recovery), evidence, and substance controls, while emphasizing public health and reducing the stigma linked to substance use.

Substance use services and supports (treatment, harm reduction and recovery)

CDSS aims to improve equitable access to substance use services through investments for provinces and territories with the goal of improving health care services for Canadians, such as by providing funding to the Canada Health Transfer. In addition, the Substance Use and Addictions Program was created with the goal of providing funding to other levels of government and organizations to create innovative evidence-based treatment, harm reduction, and recovery projects targeting at-risk and disproportionately impacted populations. Finally, this approach also aims to improve equitable access through regulatory and legislative actions, such as by implementing "targeted amendments" to the Controlled Drugs and Substances Act (CDSA).

Substance controls

This foundational element of the CDSS is focused on "authorizing activities with controlled substances and precursor chemicals for legitimate purposes," including clinical trials and medical uses, while providing law enforcement and border control authorities the necessary tools for law enforcement and for addressing the harms of the illegal drug trade. This foundational element of the CDSS also includes collaborating with law and border enforcement partners across Canada to address the role of organized crime in the production, diversion, and trafficking of toxic illegal drugs "by supporting major drug enforcement operations both domestically and internationally and the dismantling of illegal drug labs."

The strategy also highlights the following components:

- federal legislation and regulation
- national surveillance and research
- services and supports for populations served by the federal government
- funding for projects that help address substance use and prevent related harms

Importantly, the CDSS also has four guiding principles: compassionate, equitable, collaborative, and comprehensive. "Substance use is complex and there is no one-size-fits-all solution to preventing or reducing its harms. This is because substance use exists across a spectrum with varying stages of benefits and harms. Substance use is different from one person to another and a person's pattern of use can change over time," states the CDSS website. "The strategy brings together partners across health and social systems, the criminal justice system, and law and border enforcement. This contributes to providing a range of services and supports that address the unique needs of people in Canada."

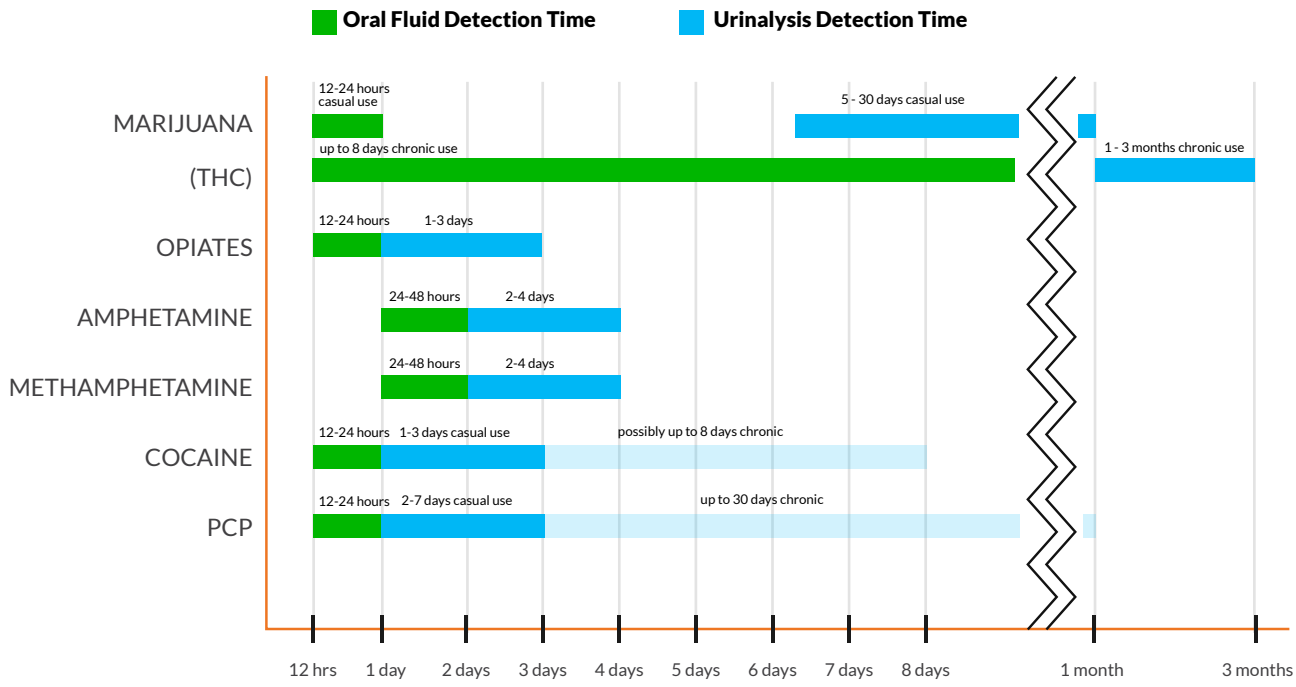
https://www.canada.ca/en/health-canada/services/substance-use/canadian-drugs-substances-strategy.html

DETECTION WINDOW TIMES

The detection window of a drug is the term used to define how long the substance is detectable within a specimen. How long any particular drug is detectable depends on a number of factors, the first two being the sample being tested and the half-life of the drug itself (meaning how long it takes the body to metabolize it and excrete it). However those two factors are not the only factors as there are other variables which come into play, including:

- the metabolism of the individual being tested
- potency of the drug taken (ie. any street drug can have a high percentage of the actual drug in it or a low percentage, cannabis can have high or low THC amounts in the plant)
- whether they are a chronic user of that drug or a recreational (now and again) user of the drug.

DETECTION WINDOWS FOR ORAL FLUID & URINE



The chronic use of any drug means that it will show up longer than normal for whatever sample type is being tested.

THC is an outlier with the length of time it is detectable, even for recreational users, and certainly for chronic users as it stores in the fat cells. Due to storage of cannabis metabolites in fat cells, it means that it can "reappear" when someone loses weight, as fat cells are broken down the metabolite is re-released into the bloodstream. The metabolite released is NOT an impairing one, however it WILL cause the individual to test positive for cannabis use.

You will find that there is a fair bit of variation even in the academic articles for detection times as there are those variables discussed above that make it impossible to pinpoint it 100%.

https://www.ncbi.nlm.nih.gov/books/NBK64092/
https://www.bccsu.ca/wp-content/uploads/2022/06/Detection-Time-of-Substances-in-Urine.pdf
https://academic.oup.com/jat/article/40/7/479/2364062

THE EMERGING THREAT OF NITAZENES, HISTORICAL CONTEXT AND MODERN IMPLICATIONS

Nitazenes are a type of man-made opioid that most people don't know about which were first made in the 1950s, though they didn't get much attention until now. Recently, nitazenes have started showing up in illegal drug markets making it important for those in harm reduction and drug testing to learn what they are all about. This text explains what makes nitazenes special, their history, and why they are becoming popular again.

Nitazenes are a group of drugs created in the 1950s as painkillers, but they were never sold to the public.

We don't know much about how to treat a nitazene overdose or how these drugs react with other things like alcohol. Because of this, experts want more public health efforts to teach street drug users, first responders, healthcare workers, and everyone else about the dangers of these "new old drugs."

These drugs are very strong, much stronger than morphine and fentanyl. Recently, some types of nitazenes have been found in illegal drugs. These strong drugs are causing more overdose deaths. People often don't know that these drugs are mixed with fentanyl or other substances, which makes them very risky.

In the late 1950s, the synthesis of 2-benzylbenzimidazole opioids led to the creation of several compounds now known as nitazenes. Despite not technically meeting the current United States Adopted Name (USAN) definition of an "azene," these compounds became of interest due to their unique chemical structure. Unlike traditional morphine-like drugs, nitazenes were developed as potential painkillers but never received therapeutic approval. Their strong effects and street appeal have often led to comparisons with fentanyl, even though they differ structurally.

As law enforcement agencies like the Drug Enforcement Administration (DEA) and Food and Drug Administration (FDA) have become more skilled at identifying and regulating fentanyl analogs, chemists have revisited old pharmacological research to exploit early synthetic opioid attempts, leading to the re-emergence of nitazenes. These new psychoactive substances (NPS), including nitazenes, are largely responsible for the recent rise in overdose deaths in the United States. Despite their identification in illegal drug supplies, awareness among doctors remains low, posing significant challenges for emergency medicine.

NPS are synthetic agents with morphine-like or other psychoactive effects that are not currently regulated by national or international law. Their

ambiguous legal status, combined with potent effects and low production costs, makes NPS appealing as street drugs. Legal frameworks are typically specific to each agent, allowing new substances to regularly emerge in the street market, complicating law enforcement efforts. Although the DEA has recently scheduled many nitazenes as illegal, new analogs can bypass these regulations. Benzimidazole and its derivatives, known for their use in treating infections in animals and humans, have shown morphine-like effects on the human central nervous system due to their selective affinity for the μ-opioid receptor. Compounds like etonitazene and clonitazene were never commercialized for medical use but remained of academic interest in opioid research. This interest persisted until the re-emergence of synthetic nitazenes in the illegal drug market renewed focus on their effects.

Isotonitazene, one of the most well-known street nitazenes, was identified in Europe in 2019 and has since been linked to multiple overdose deaths across Europe and North America. Another analog, metonitazene, appeared in the street drug market during the early stages of the COVID-19 pandemic. Both compounds have been mixed with other drugs, such as fentanyl, benzodiazepines, and hallucinogens, leading to fatal overdoses. Metonitazene, in particular, was found to be a contributing factor in a significant number of overdose deaths in Knox County, Tennessee, further highlighting the public health risk.

The scarcity of information on the effects and behavior of street nitazenes complicates the response to their overdose. Reports show that nitazenes might work differently with the μ-opioid receptor compared to traditional opioids like morphine. Some nitazenes are even stronger than fentanyl, though we don't have a lot of data and what we do have is sometimes confusing. For example, studies on isotonitazene suggest it is as strong as fentanyl, and its metabolite, N-desethyl isotonitazene, is even more powerful.

Nitazenes ended up in illegal drugs mainly because old research papers were easy to find. Although reports of these substances have risen, there are probably more cases than we know about because testing for them is hard. Even with efforts to stop their spread, nitazenes are still a big problem. Illegal drug makers keep finding new ways to get around the laws.

Public health agencies and law enforcement are having a tough time dealing with this growing issue. It is very important to teach everyone—drug users, first responders, healthcare workers, and the general public—about the dangers and effects of these super-strong synthetic opioids.

Thanks for reading!

If you would like more content like this, head over to DATAC.ca where we post frequent articles on the latest drug & alcohol testing news.

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