



2017 Emergency Services Foundation Scholarship

Identify and examine world's best practice in safety, training, response & investigative techniques of clandestine drug manufacturing involving Fentanyl and synthetic opiates.

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Executive Summary

There is a growing interest in fentanyl and its analogues or Fentanyl Type Substances (FTS) in Victoria due to the extent of harm caused by such drugs in recent years, particularly in North America.

FTS is like no other illicit drug that has been encountered in Victoria previously. Not only is it a light powder that can easily become airborne, it also carries the added risk of transdermal exposure meaning it can breach the barrier of protection provided by the skin.

For emergency service personnel in Victoria, the risks are not wholly known or understood. This could lead to dangerous situations where the hazards are not known and first responders could subsequently be exposed to potentially life threatening situations.

There are significant intelligence gaps in awareness, training and response to the risks around FTS among Victoria's Emergency Services. None of our Emergency Services currently have any policies, training systems and response procedures to specifically deal with synthetic opiates.

Having exhausted the limited research avenues from within Australia and online, I identified relevant materials and opportunities abroad. I completed a study tour within Canada and the US in order to identify and examine world's best practice in safety, training, response & investigative techniques of clandestine drug manufacturing involving Fentanyl and synthetic opiates.

This study tour engaged with multiple health care providers and Law Enforcement Agencies (LEA's) from both North America and UK, with a particular focus around detection, safe handling and decontamination.

The study tour highlighted the benefits of multi-agency information sharing, the need for correct personal protective equipment (PPE) and quick access to opiate counter-measures such as Naloxone.

Background

Fentanyl was first synthesized in the late 1950's by Janssen Pharmaceutica. It was introduced into medical practice in 1963 and is used in anaesthetics and as a strong post-operative pain reliever.

In 1979, clandestine production of fentanyl led to the first deaths in Southern California; where it was being marketed as "China White" heroin.

In the early 1980's, 15 deaths in California were associated with fentanyl overdoses. In 1988 over 200 overdoses were linked to fentanyl with 18 of those fatalities. This was as a result of a single clandestine laboratory located in Pittsburgh, Pennsylvania.

Since 2000 there have been 2 major waves of fentanyl overdoses in the US. The first wave was between April 2005 and March 2007 there was over 1000 overdose deaths linked to a single 'Clan Lab' in Mexico.

The latest wave started in 2013 and is still on-going in epidemic proportions in both the US and Canada. There has been a 1043% increase in fentanyl submissions to the DEA laboratory for analysis. Along with those submissions came a 526% increase in fentanyl related overdose deaths. This all occurred while fentanyl prescriptions dropped. Unlike the previous instances where the overdoses were able to be linked back to a single 'Clan Lab', fentanyl is coming from laboratories in China and Mexico and is then being clandestinely cut and distributed. On the street it is being sold as heroin, synthetic heroin, oxycodone and China White among others. It is also being cut into other narcotics to increase their potency.

There are currently around 200 different analogs of fentanyl that have been identified, with varying potency of 50 – 50,000 times stronger than morphine. There is the potential for another 1400 analogs to be produced.

Along with fentanyl there is also an increase in the detections of 'W' compound synthetic opiates. They were first discovered at the University of Alberta, Canada in 1982. There are 32 'W' compounds with 'W-18' being the most toxic. It has potency 100 times stronger than fentanyl. These compounds are also being clandestinely cut and marketed on the street as other illicit or prescription drugs.

Dangers of Fentanyl

Due to its potency a single dose of fentanyl is approximately 125 micrograms, which is the equivalent of 2 grains of salt. A lethal dose is roughly 2 milligrams, which is about 32 grains of salt or 7 poppy seeds. As a result of the minute levels required, it is extremely difficult to control the dosage when fentanyl is being cut clandestinely and not in a controlled scientific laboratory.

Fentanyl is unlike any other illicit narcotic we have previously seen. In its pure form it is a light fluffy white powder that is undisguisable from other drugs; because of this it can easily become airborne and inhaled.

It is also transdermal; meaning it can easily be absorbed through the skin. It is highly lipid soluble and has the potential to be absorbed into the body. Depending on the dose, symptoms can be felt within minutes. This poses a real threat to all first responders regardless of their agency as purely being in the vicinity of fentanyl can be enough to trigger an overdose.

There has been numerous exposure occurrences in both the US and Canada to first-responders. Some of these incidents were during traffic stops, when dealing with minor amounts of powder.

The fentanyl Material Safety Data Sheet (MSDS) specifies the required Personal Protective Equipment (PPE) as full seal chemical protection goggles, shielded respirator mask (gas-mask type), elbow length PVC-coated gloves; for quantities over 500 grams, disposable coveralls. The MSDS recommends the use of fume hoods and fume cabinets.

The MSDS-prescribed minimum level of PPE for fentanyl may or may not be sufficient for significantly more potent fentanyl derivatives. FTS are highly toxic lightweight powders, and are capable of being absorbed by inhalation as well as transfer through the skin, mucosal membranes and the eyes.

A spill of FTS in powder form would amount to a hazmat incident posing potential lethal danger to examining officers. The emergency action code for fentanyl, HAZCHEM 2X, calls for the use of full chemical protection suits and breathing apparatus by incident responders.

Current Australian Situation

Since 2011, there has been an increase in detections of FTS at the Australian border. The majority, arrived via international mail, and the remaining in the air cargo stream. These detections include several shipments of bulk fentanyl in the order of 500 grams to slightly over 1 kilogram. The majority of these detections originated from China.

1 kilogram would equate to 8 million individual doses of fentanyl. This makes an enticing prospect for those seeking to make large profits in drug dealing for minimal outlay.

Fentanyl has been associated with three deaths in South Australia in late 2015 and early 2016. FTS has also been linked to a series of 10 deaths in Victoria in late 2015, after being identified by toxicologist Assistant Adjunct Professor Luke Rodda from The Victorian Institute of Forensic Medicine (VFIM). Of note was that the overdose deaths were in 2 specific clusters being Richmond and Dandenong; areas historically known for high opiate abuse in Victoria.

| Case ↕ | Date of death in 2015 | Sex | Age | Region* | Circumstances |
|--------|-----------------------|-----|-----|---------|--|
| 1 | September (late) | M | 57 | A | Methadone permit |
| 2 | September (late) | F | 37 | A | 10-year heroin user. Methadone permit |
| 3 | September (late) | M | 46 | A | Syringe in close proximity |
| 4 | September (late) | F | 23 | B | GHB and alprazolam user, drug paraphernalia at scene |
| 5 | October (early) | M | 25 | A | Recent heroin user |
| 6 | October (early) | M | 34 | B | 20-year heroin user |
| 7 | October (mid) | M | 37 | A | Syringe in close proximity |
| 8 | October (late) | M | 32 | B | Syringe found in situ |
| 9 | November (late) | M | 52 | A | Unconscious in toilet block |
| 10 | November (late) | M | 37 | A | Heroin user. Methadone permit. Syringe in proximity |

* A = Richmond area, B = Dandenong area

Source: Rodda LN, Pilgrim JL, Di Rago M, Crump K, Gerostamoulos D, Drummer OH. A Cluster of Fentanyl-Laced Heroin Deaths in 2015 in Melbourne, Australia. *J Analytical Toxicology*. 2017 May 1;41(4):318-324.

The Victoria Police Forensic Services Centre (VPFSC) has received a number of submissions of fentanyl, with the most recent submissions being a mixture of methylamphetamine and fentanyl. This mixture is referred to as “Goofball” in Canada and the USA; with users suffer uncontrollable seizures when overdosing.

Study Tour Objectives

This study tour took a holistic approach to the fentanyl epidemic that is sweeping North America. Particular focus was given to the safety of first responders who deal with fentanyl on a day to day basis and obtain knowledge of:

- Investigative techniques for the detection of FTS.
- Training and awareness packages delivered to first responders.
- Response procedures used by varying agencies when responding to a FTS based incident.
- Any other relevant SOP's used by these agencies.
- Engagement and collaboration between agencies in relation to FTS.

The following organisations were visited in order to achieve these objectives:

- Calgary Police Service
- Providence Health Care - Crosstown Clinic
- Insight Clinic
- Vancouver Police Department
- Health Canada – Drug Analysis Laboratory
- Royal Canadian Mounted Police – British Columbia CLEAR Team
- Clandestine Laboratory Investigators Association 2017 Conference

This report summarises the purpose and key findings from each of these engagements. Recommendations are based on personal opinion and have been made based on observations, research and specialist knowledge obtained from the study tour and 10 years of policing service based mainly in drug investigation.

Study Tour Engagement

1. Calgary Police Service

The Calgary Police Service (CPS) was formed in 1885 and is the municipal police force for the City of Calgary in the province of Alberta. Calgary has a population of approximately 1.3 million people and covers an area of about 825km². The current Chief Constable is Roger Chaffin who is supported by 3 Deputy Chief Constable who oversee a number of units each. CPS has approximately 2400 sworn personnel. Calgary was the first location to see FTS in Canada, before it spread to other provinces.

Detective Collin Harris was my contact at the Calgary Police Service. Collin has been with CPS for 30 years working in Uniform Patrol, 4 years as an undercover operative, Patrol Sergeant and an undercover Sergeant. He has also worked in Major Crimes focussing on homicides. Collin currently works as part of the CPS Drug Unit and is the only drug expert. He has performed this role for the last 10 years. He attends court for approximately 400 drug cases per year.

Collin is the CPS leading expert in terms of FTS. He was able to give me valuable insights into the drug, as well as safe handling, PPE and the use of Naloxone.

Collin took me on a tour of the CPS headquarters, which had been relocated from downtown to much larger facility on the outskirts of Calgary. Collin took my through the Drug Unit and the CPS drug handling area. This area is self-contained and is a designated 'dirty' room so to speak. It contains ductless fume hoods for use whilst handling illicit drugs. There is also ready access to Naloxone. Whilst in the Drug Unit I also had the opportunity to speak with a number of undercover operatives in regards to their protocols for the safe handling of FTS.

Collin took me on a tour of the city including a visit to the area of Calgary's temporary supervised drug consumption site. From November 2017 to January 2018, the site saw 2,500 visits from approximately 300 clients. It also was able to assist and prevent 55 overdose deaths from occurring at the site. The consumption site is the latest step from the government in the fight against the opioid crisis which saw the province have a 37 percent jump in overdose deaths in 2017 from 348 in 2016 to 569 in 2017.

Key observations:

Calgary is suffering from the highest rate of overdose deaths in the Alberta Province, with there also being a spike in the number of deaths to the most powerful of the FTS family being Carfentanil. CPS have shut down a number of commercial scale laboratories including one capable of producing 120,000 tablets a day in recent months.

FTS is going to be a long term issue in the city and CPS have developed a number of ways to protect its frontline staff. Of particular note is the use of a dedicated drug processing room, PPE and the access to Naloxone for all officers.

2. Providence Health Care - Crosstown Clinic

Crosstown Clinic is the first clinic in North America to offer supervised injectable opioid assisted treatment (IOAT) within a supervised clinical setting to people with chronic substance abuse issues.

The clinic offer medical-grade heroin (diacetylmorphine) and the legal analgesic hydromorphone to their patients. They have an on-site pharmacy, and doctors, nurses, social workers and addictions counsellors are available. They also offer life-skills counselling, housing referrals and direction to legal assistance.

The clinic in the previous site of the North American Opiate Medication Initiative (NAOMI) trial, which evaluated the effectiveness of heroin assisted treatment between 2005 and 2008. It was also housed the Study to Assess Longer-term Opioid Medication Effectiveness (SALOME) which ran from 2011 to 2014.

The clinic currently has 125 patients on IOAT, who attend the clinic up to 3 times per day and average 6900 visits per month. The average age of the patients is 44, with about 30% being women. The average years of illegal opioid abuse in patients is 15 years, with 86% having contracted Hepatitis C and 67% having had an unintentional overdose.

At the clinic I met Dr Scott MacDonald. Dr MacDonald is the lead physician at the Crosstown Clinic; he supervises the IOAT program at the clinic. Dr MacDonald and his team are the first physicians in the world to prescribe Diacetylmorphine or Hydromorphone for the treatment of substance use disorder. He has been the lead physician since 2010. Dr MacDonald and Nurse Julie Foreman took me through the clinics protocols for use of the supervised injecting area including safety, cleaning and decontamination.

Decontamination of the injecting areas includes the wiping non porous areas with alcohol based wipes, which absorb any of the contaminants and can then be disposed of. The clinic also has on hand Naloxone should any exposure to staff occur.

The clinic doesn't see a lot, if any, illegal narcotics come through its doors as the patients are on IOAT. Anecdotal evidence shows that the patients on IOAT have a significant drop in the use of illegal opioids and reduction in crime.

I also attended a forum the following day at St Paul's Hospital, Vancouver, where Dr MacDonald was one of the presenters along with 2 IOAT patients. The presentation was sponsored by The British Columbia Centre for Substance Abuse. It was an interesting insight hearing how the program had positive effects on the patients undertaking treatment.

Key observations:

FTS is having a significant impact on the community in Vancouver, particularly in the Downtown Eastside (DTES). It's quite evident of the effects to the area from just walking the streets. It was a great opportunity to hear about how the opioid crisis was affecting people from a user's perspective. It was also very interesting to speak to Dr MacDonald and hear how they are treating as a medical condition and not just as an addiction.

PPE precautions for staff and the relatively simple methods of decontamination at the clinic were also of note.

3. Insite Clinic

Insite is the first legal supervised drug injection site in North America, located at 139 East Hastings Street, in the Downtown Eastside neighbourhood of Vancouver, British Columbia.

The DTES had 4700 chronic drug users in 2000 and has been considered to be the centre of an "injection drug epidemic". The site provides a supervised and health-focused location for injection drug use, primarily heroin. The clinic does not supply any drugs. Medical staff are present to provide addiction treatment, mental health assistance, and first aid in the event of an overdose or wound.

In 2017, the site recorded 175,464 visits (an average of 415 injection room visits per day) by 7,301 unique users; 2,151 overdoses occurred with no fatalities, due to intervention by medical staff. The site also offers a free checking service so clients can check their substances for FTS.

Insite also serves as a resource for those seeking to use a harm reduction approach for people who inject drugs around the world. The building is also home to 'Onsite', which provides a live in detox program, post-detox support and transitional housing programs. Tim Gauthier is the clinic's co-ordinator and took me on a tour of the clinic facilities.

On the day I attended the clinic was providing drug testing by way of gas chromatography. I was able to watch the analysis take place for a period of time and every sample tested was found to contain FTS. Even though the clinic's clients were being informed that the drugs they had contained potentially lethal FTS, it didn't deter any of them from using what was just analysed.

Whilst at the clinic I was also able to observe clients utilizing the supervised injection area. This was a very unusual experience for me from a law enforcement perspective. It was certainly a new experience to stand back and watch people inject illicit substances without stepping in.

Tim took me through the clinic's philosophy as well as the protocols and procedures for staff to reduce the risk of contamination. The clinic is very much based on a harm reduction philosophy and provides clients with access to clean injection equipment, including syringes, sterile cookers, filters, water and tourniquets. They also provide Naloxone to patients to further help in effort to reduce overdose deaths when they are out of the clinic.

After injecting, participants move to a post injection room, where they can have a juice or coffee and hang out with staff in a safe environment. Insite staff are able to help connect them to other services including wound treatment, housing needs and referral to treatment services such as withdrawal management and opiate replacement. Staff can also refer participants directly to Onsite detox, located right above Insite.

Key observations:

The use of PPE is crucial to protecting Insite's staff members from any form of potential exposure. Again this PPE is basic in that it nitrile gloves and goggles. Decontamination of the injecting booths is undertaken after each client has finished and is again mainly based on the use of alcohol wipes to wipe down the non-porous areas.

What really was notable was the fact that even though they were being informed that the drugs they intended to use contained FTS, it wasn't the slightest deterrent to use.

4. Vancouver Police Department – Beat Enforcement Team

The Vancouver Police Department is governed by the Vancouver Police Board under the authority of the British Columbia Police Act. The Police Board consists of the Mayor and other representative citizens of the city.

Sworn police officers are empowered to enforce the criminal law, other Federal statutes, Provincial laws, municipal by-laws and to generally maintain law and order within Vancouver. The Vancouver Police Department is divided into three divisions, with a Deputy Chief Constable commanding each division and reporting to the Chief Constable. There are approximately 1700 sworn officers.

The Downtown Eastside (DTES) is a neighbourhood in Vancouver. The area, one of the city's oldest, is notorious for its levels of drug use, poverty, mental illness, sex work, homelessness, and crime. The Beat Enforcement Team consists of six squads of officers who are responsible for working exclusively in the Downtown Eastside, conducting patrols of the area, primarily on foot.

It was here that I met Constable Brad Chichak from Beat Enforcement Team 1. Brad had previously spent 10 years working for the Calgary Police Service, where he spent most of his time working in drug investigations. He then moved to British Columbia where he worked for the New Westminster Police Department before moving to the Vancouver Police Department in 2016. Throughout his 14 year law enforcement career, he's completed a number of courses around drug investigations and knowledge. He has recently qualified as a drug expert.

Brad and his team took me for a walk around of the Downtown Eastside area. During the tour the level of drug abuse in the area was clearly evident. There are a number of supervised injecting sites within DTES as well as needle exchange centres. Despite the best efforts of the city council the streets and laneways are littered with used syringes. The area is home to a number of single resident occupancy hotels (SRO's), which are generally in a filthy condition. There are also high levels of homelessness with many people living in tents throughout DTES. It also gave me the opportunity to speak directly with users on the street and hear about things from their perspective.

Brad also recounted to me an FTS exposure he had suffered. Brad and his team had seized a large quantity of powder they believed to be drugs. In the haste to find out what was in the package the package was opened in an area away from the dedicated drug handling room. As a result Brad felt himself overcome became faint and collapsed to the floor. Brad wasn't carrying Naloxone with him on this occasion as at the time he didn't like how it sat on his belt, something he has since rectified and now carries it every day. He was transported to hospital and didn't suffer any long term effects. Brad explained that even though he had 14 years' experience, he had become too complacent after dealing with FTS day in day out.

Key observations:

FTS is a highly potent and dangerous drug as highlighted by Brad's exposure; it has the real potential to kill first responders. Drug recognition, safe handling and following correct procedures and protocols will ultimately save lives. It highlighted the fact that simple PPE such as nitrile gloves, face mask and goggles are key elements to preventing exposure.

The prevalence of Naloxone throughout DTES was clearly evident. It is handed out at all the supervised injecting sites as a harm reduction strategy. Almost every person you pass on the street have a Naloxone kit hanging off their belt or bag. It is also a key element of equipment carried by first responders in the area and is arguably the most important as evidenced by Brad's exposure and lack of Naloxone being present.

5. Health Canada – Drug Analysis Service Laboratory

Health Canada is responsible for helping Canadians maintain and improve their health. It ensures that high-quality health services are accessible, and works to reduce health risks. It also regulates drugs and health products to support public safety.

The Drug Analysis Service (DAS) provides scientific and technical services to help Canadian law enforcement agencies in their activities involving illegal drugs.

Their services include:

- **Identifying:** Identify controlled drugs and substances listed in the Controlled Drugs and Substances Act. Each year they receive over 120,000 drug samples from law enforcement agencies.
- **Measuring:** To find out how much of a drug is present in a sample.
- **Reporting:** Provide a Certificate of Analyst to report on results for every drug sample submitted. These can be used by police in investigations and as evidence in Canadian courts. They also share statistics and trends based on the drug samples submitted for analysis.
- **Dismantling illegal laboratories:** They help police forces safely dismantle illegal drug laboratories.
- **Advising and training:** Teach police forces how to recognize drugs and other substances found during their investigations or at illegal laboratories. They also provide information and training on:
 - drug trends and analysis
 - safely dismantling an illegal laboratory
 - sampling evidence for investigations or court purposes

DAS operate laboratories in:

- Toronto
- Montreal
- Vancouver

At the laboratory, I was introduced to Chemist Adrienne Law. The laboratory had just recently undertaken an independent risk assessment into their handling procedures for potent and high energy chemical substances, with the main focus being on FTS.

Adrienne took me through DAS' safety procedures for handling FTS, which start with pre-screening every item submitted to the laboratory with Raman spectrometry. The pre-screening then dictates what level of PPE is then required during analysis. What was most notable was the amount of Naloxone stations spread around the laboratory.

We also experimented in making inert tablets with a tablet press to show how difficult it is to regulate FTS when operating in a clandestine manner. The FTS component was substituted with blue sugar which resulted in huge variances in the colour of the tablets as they came out of the press, indicating a wide variety in the amount of potentially lethal FTS in each tablet.

Key observations:

The use of Raman Spectrometry in pre-screening samples is a key component in protecting DAS staff from accidental exposure. In combination with the laboratories minimum standards of PPE and the use of fume hoods the chance of an accidental exposure at the laboratory is unlikely, however in the event it does occur the multiple access points to naloxone nasal spray could quickly counteract the event. The comprehensive safety review the laboratory undertook and subsequent recommendations shows that basic PPE consisting of nitrile gloves, goggles and long sleeve lab coats, whilst being simple appears to offer the best level of protection.

Decontamination of work areas was again undertaken with the use of multiple wipe downs of non-porous surfaces with alcohol, similar to that used at both the Crosstown and Insite Clinics.

6. Royal Canadian Mounted Police – British Columbia CLEAR Team

The Royal Canadian Mounted Police is the Canadian national police service and an agency of the Ministry of Public Safety Canada.

The RCMP is unique in the world since it is a national, federal, provincial and municipal policing body. They provide a total federal policing service to all Canadians and policing services under contract to the three territories, eight provinces (except Ontario and Quebec), more than 150 municipalities, more than 600 Aboriginal communities and three international airports.

Whilst in Vancouver I met with Staff Sergeant Darin Shepard of the British Columbia Clandestine Laboratory Enforcement and Response (CLEAR) Team.

The RCMP CLEAR Team's operate in a similar nature to the Victoria Police Clandestine Laboratory Squad do. They provide a 24 hour response to any clandestine laboratory incident as well as conducting their own investigations. The response is not only to RCMP incidents, they also provide a response in support of municipal police services throughout the country.

For the RCMP in British Columbia, getting fentanyl training out quickly and effectively was critical for officer safety.

After several police officers were exposed to the drug in 2016, the RCMP released an awareness video warning first responders and the public about the dangers of fentanyl, and reminding officers to wear personal protective equipment: a respirator, doubled-up nitrile gloves and, if necessary, a hazmat suit to avoid skin contact.

To prepare for the worst-case scenario, the RCMP also released a national mandatory training course for naloxone, an FTS antagonist. More than 13,000 naloxone nasal spray kits were distributed to detachments across Canada and are now carried by on-duty officers in case of accidental exposure, or for first aid treatment on the public.

Another hurdle the RCMP faced was finding a way to identify if they were handling fentanyl, or a less toxic white powder. Common field tests — NIK and NARK kits — are not always accurate at detecting the drug. These tests can give a false positive indicator for the presence of other drugs instead of fentanyl, which can lower an officer's risk assessment and put them in danger.

After months of testing, the RCMP is rolling out a new technological solution: portable spectrometry. The instruments, which can be handheld, can perform a trace analysis on scene to determine if an area is contaminated with FTS without having to send a sample to a lab. It allows for quicker identification and a faster response time improving officer safety.

Key observations:

Early recognition and detection, combined with the correct PPE was a reoccurring theme with every agency I was meeting with. Safety and awareness training for first responders is key component to the early recognition and should form part of all services training packages going forward. Access to Naloxone to help prevent any adverse effects of an unintentional overdose is also a key component of every agencies response to the opioid crisis.

7. Clandestine Laboratory Investigators Association – 2017 Conference

The Clandestine Laboratory Investigators Association (CLIA) is a non-profit organisation dedicated to providing training, technical support, legislative assistance and expert testimony to all law enforcement, prosecutors and emergency personnel.

The annual conference provides updated information on investigations, safety, new drug trends, legislation, site safety officer training and information needed by first responders, investigators, fire services, criminalist and prosecutors. CLIA is made up of a board of directors comprising of U.S.A. based police personnel, representatives from NES Global and representatives from the DEA.

NES Global is a world-wide leader in clandestine laboratory safety training for first responders in law enforcement, hazmat, firefighter, and civil support teams. NES Global provides training programs and products for first responders to clandestine laboratories, chemical suicides, marijuana grow houses, marijuana extraction labs, and other potentially hazardous material sites. NES Global developed the 'Basic Clan Lab and Site Safety Officer' programs for the U.S. Department of Justice and DEA and continues to present these to all federal, state, and local law enforcement agencies throughout the United States.

DEA is a U.S. federal law enforcement agency tasked with combating drug trafficking and use within the United States. DEA has sole responsibility for coordinating and pursuing U.S. drug investigations both domestically, and abroad. It maintains 21 domestic field divisions with 221 field offices and 92 foreign offices in 70 countries including Australia.

The 2017 conference was held in Omaha, Nebraska and had 80 attendees from the USA, Canada, United Kingdom and Australia.

The key presentation at the conference on fentanyl was by Brian Escamilla from NES Global.

Brian's primary responsibilities with NES, are developing, scheduling, and updating all Clan Lab courses and field guides. Brian has been an instructor with NES since 2002 and has trained thousands of personnel across the United States in various narcotics related classes.

He has researched and manufactured methamphetamine, PCP, MDMA, methcathinone, fentanyl, euphoria, and various other drugs in a controlled laboratory setting.

His knowledge and opinions are sought after by such eminent disseminators of information as Wall Street Journal, Washington Post, and CBC News. He has published over 35 papers, conducted over 70 workshops, and given over 15 conference presentations related to narcotics and clandestine laboratories at conferences throughout the United States.

Brian is a retired Criminalist after serving 19 years with the Sacramento County District Attorney's Laboratory of Forensic Services. While serving as Lead Criminalist with Sacramento County in the Controlled Substances section, he has responded to and analysed the evidence for over 200 clandestine laboratory scenes.

Key observations:

FTS is still an emerging trend in parts of the USA and Canada. New and updated information is being released at a frequent rate. It was quite evident that FTS will continue to evolve and become more and more prevalent as new analogs are synthesized. Brian reinforced the learnings from earlier in

the study tour with early recognition and detection, combined with the correct PPE is the key to protecting our first responders. An opiate antagonist like Naloxone is a must for every first responder to have immediate access to, preferably carried personally. Naloxone nasal spray is the quickest and easiest way to self-administer. This is the preferred method adopted throughout Canada and the USA.

The other key point raised by Brian was how alcohol based hand sanitiser actually increased the rate at which FTS can permeate through the skin, therefore speeding up the overdose time if you get FTS on your skin unknowingly.

The use of FTIR and Ramen technology needs to be expanded in Victoria, in particular access to it for Victoria Police Uniform personnel. A review of Victoria Police drug handling procedures should be conducted with consideration being given to dedicated drug handling areas inside police stations; with the use of self-contained fume cupboards.

Recommendations

1. Fentanyl Type Substances Awareness Package to be developed and delivered to all Victorian First Responders. This should include:
 - Hazard identification
 - Risk mitigation
 - Use of appropriate PPE
 - Response notifications
 - Exposure symptom recognition
 - FTS first-aid measures

2. Formulation of a multi-agency response plan in relation to Clandestine FTS Laboratories. This should include input from:
 - VicPol
 - AV
 - MFB
 - CFA
 - SES

3. Every Victorian First Responder to be given access to Naloxone kits. Enquiries should also be made with the manufacturer and the Therapeutic Goods Administration to have Naloxone Nasal Spray registered in Australia, due to its ease of use and ability for rapid deployment in the instance of an exposure.

4. Formation of a National FTS Strategy Working Group to allow for all states to provide a co-ordinated approach. This will allow for:
 - Streamlined information sharing
 - Development of a National Response Plan
 - Cross jurisdictional use of resources if required

5. Increased drug and clandestine drug laboratory recognition training for all Victorian first responders with a particular focus to go to:
 - AV
 - CFA
 - MFB
 - SES

Due to the minimal training currently provided to those organisations.

6. Host a CLIA conference in Melbourne to allow Victorian first responder's access to world leading experts in the field of FTS.

Conclusion

Fentanyl type substances pose a higher risk of drug users overdose than other opioids such as oxycodone and heroin due to their higher potency. In recent years, the global drug market has seen an increase in the supply of illicit fentanyl and the emergence of a variety of highly potent fentanyl analogs that pose further risk of harm. Such drugs were seized at the Australian border and within Victoria in recent years which have indicated some demand from overseas supply and current market exploration by traffickers.

In the future, prevalence of FTS in Victoria could likely increase due to two main reasons. Firstly, any regulatory changes which restrict access for users who are likely to misuse pharmaceutical fentanyl could potentially increase demand for illicit fentanyl including analogues. It is likely that restrictions on low dose codeine medicines and introduction of real-time prescription monitoring system introduced in 2018 could have an impact. Secondly, increase demand for high quality heroin could enable traffickers and dealers to sell illicit fentanyl and mix FTS in other drugs to increase potency and create greater profits. Such trends have been observed overseas where FTS is also been found in oxycodone and hydrocodone counterfeit pills.

The risks to first responders are very real as shown by Constable Brad Chichak's exposure and have recently been highlighted by some recent exposures in the USA.

The first incident took place during a multi-agency investigation and involved an officer from the Louisville Metro Police Department. He became ill after searching the vehicle and had to be treated with Naloxone before being taken to hospital for treatment.

The second instance occurred in West Virginia which saw 5 members of the Bluefiled Police Department exposed to FTS with one requiring immediate treatment with Naloxone and all requiring hospitalisation, again after a routine traffic stop. This incident also caused exposure to 6 members of the Bluefiled Fire Department; however none of them required any further treatment.

The findings from this study tour indicated the need for access to Naloxone for first responders. It also clearly shows the need for safety and awareness training to all emergency service personnel and the use of correct PPE and handling procedures when dealing with FTS.

The study tour also highlighted the need for Victoria to be part of a broader national FTS Strategy Group to allow the flow of new and updated information as it comes to hand. Creating clear information pathways with both international and domestic agencies will be key to protecting Victoria's frontline emergency services personnel going forward.

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- British Columbia Centre on Substance Abuse
- Health Canada
- Royal Canadian Mounted Police – British Columbia CLEAR Team
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CALGARY
POLICE
SERVICE



List of Abbreviations

| | |
|--------|---|
| AV | Ambulance Victoria |
| BET | Beat Enforcement Team |
| CFA | Country Fire Authority |
| CLEAR | Clandestine Laboratory Enforcement and Response Team |
| CLIA | Clandestine Laboratory Investigators Association |
| CLS | Clandestine Laboratory Squad |
| CPS | Calgary Police Service |
| DAS | Drug Analysis Service |
| DEA | Drug Enforcement Agency |
| DTES | Downtown Eastside |
| FTIR | Fourier-Transform Infrared Spectroscopy |
| FTS | Fentanyl Type Substances |
| IOAT | Injectable Opioid Assisted Treatment |
| LEA | Law Enforcement Agency |
| MFB | Metropolitan Fire Brigade |
| MSDS | Material Safety Data Sheet |
| NAOMI | North American Opiate Medication Initiative |
| RCMP | Royal Canadian Mounted Police |
| SALOME | Study to Assess Longer-term Opioid Medication Effectiveness |
| SES | State Emergency Service |
| SRO | Single Resident Occupancy Hotel |
| VicPol | Victoria Police |
| VIFM | Victorian Institute of Forensic Medicine |
| VPD | Vancouver Police Service |
| VPFSC | Victoria Police Forensic Services Centre |