

Nova Scotia Antidote Program

2020 Quarterly Report #4
Oct 1, 2020 to Dec 31, 2020

The Nova Scotia Antidote Program is pleased to present another Quarterly Report, which provides information on changes and trends in antidote therapy and reports ongoing Provincial Antidote usage.

Antidote usage Oct 1 to Dec 31, 2020						
Western Zone	Northern Zone	Eastern Zone	Central Zone	IWK	Quarterly Total	Year to Date
5	8	13	14	0	40	176

Antidote usage 2020 FULL YEAR					
Western Zone	Northern Zone	Eastern Zone	Central Zone	IWK	2020 total
30	44	33	68	1	176

Highlights of antidote use during the past 3 months

A total of **40 antidotes** were reported to be used in **34 different patient cases**. Of these, 2 antidotes were used by community hospitals, 29 in regional facilities and 9 in tertiary hospitals.

- Because “poisoned” patients can present to any facility, Antidote Kits are found in ALL Emergency Departments across Nova Scotia.
- Use of Naloxone was reported for 19 patients. **To ensure we are tracking opioid overdose and naloxone use, please report cases where naloxone is used to the Poison Centre at 1-800-565-8161**

Reported Antidote Use in Nova Scotia 2020 – Year in Review

- *Fomepizole* was used in 20 patients with potential toxic exposure to methanol or ethylene glycol.
- *Digoxin Fab Fragments* were reported to be used in 6 patients with chronic digoxin toxicity.
- *Flumazenil* was used in 3 patients with exposure to benzodiazepines (although its use is generally not recommended in polydrug overdoses).
- *High dose insulin* was used in 7 patients with calcium channel blocker or beta-blocker toxicity.
- *Sodium Bicarb* was used in 9 patients with ASA toxicity and 34 patients with wide QRS and drug toxicity

In 2020, an antidote was used once every 2 days in an emergency department in Nova Scotia. If we exclude naloxone (the most commonly reported antidote), an antidote is used every 3.4 days.

FLUMAZENIL and NOVEL BENZODIAZEPINES

There have been reports of novel benzodiazepines (i.e. flualprazolam) in street drugs in Nova Scotia. These may be more potent benzodiazepines, causing CNS and potentially respiratory depression.

Flumazenil is a benzodiazepine (BZD) reversal agent that has been used to reverse the CNS depression from BDZ administration. For all BZD overdoses, including these novel compounds, **the risk of using flumazenil generally outweighs the benefit** due to the potential complications involved. Supportive care, including airway management, is recommended.

The use of flumazenil has been associated with seizures, cardiovascular effects and precipitation of withdrawal. Contraindications include polydrug overdose, TCA overdose, a history of epilepsy, benzodiazepine dependence, or ingestion of seizure-inducing drugs (e.g. antidepressants, cocaine). For detailed administration guidelines please refer to the Provincial Antidote Program (www.iwkpoisoncentre.ca).

PHYSOSTIGMINE – NOW AVAILABLE IN ALL ANTIDOTE KITS!

Physostigmine, indicated for agitation and delirium due to anticholinergic toxicity, is now available in all antidote kits. Please contact the Poison Centre if you are considering using this newly available antidote.