



# 2018 Annual Report

Québec Poison Control Centre

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Centre intégré universitaire  
de santé et de services sociaux  
de la Capitale-Nationale

# **2018 Annual Report**

## **Québec Poison Control Center**

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Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale

2018 – 2019 Edition

# TABLE OF CONTENTS

PRESENTATION.....	1
OUR MISSIONS.....	2
Clinical Mission.....	2
Educational Mission .....	2
Research Mission.....	2
OUR TEAM .....	3
OUR SERVICES AND ACTIVITIES.....	4
GENERAL INTOXICATION STATISTICS.....	5
Age and Intoxication Type .....	5
Distribution of Cases by Region.....	6
Balance Sheet .....	7
ACTIVITIES RELATED TO THE CLINICAL MISSION .....	8
ACTIVITIES RELATED TO THE EDUCATIONAL MISSION .....	9
ACTIVITIES RELATED TO THE RESEARCH MISSION .....	10
CONCLUSION .....	11

# PRESENTATION

Since 1986, the Québec Poison Control Centre (QPCC) has been providing bilingual services 24/7 to the public and health professionals concerning acute exposures to potentially toxic substances. From 2008 to 2018, the QPCC helped an average of 46,250 cases per year. However, this number is constantly increasing: 47,375 in 2016, 48,912 in 2017 and 49,062 in 2018 (in addition to responding to 920 requests for information). Among callers, 70% are from the public and 30% are health professionals.

# OUR MISSIONS

The QPCC's missions are the following:

## Clinical Mission

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- 24/7 telephone response to the population and health professionals throughout Quebec concerning cases of real or apprehended acute poisoning by personnel specialized in toxicological information.
- Telephone consultation service by on-call toxicologists to guide health professionals in the diagnosis and treatment of complex poisoning.
- Toxicological analysis service to support centres that are insufficiently equipped in analytical terms. Two laboratories have been mandated for this purpose by the ministère de la Santé et des Services sociaux (MSSS).
- Participation in acute poisoning prevention and surveillance activities.

## Educational Mission

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- To be a leader in the Québec medical community in the education of acute toxicology for residents, physicians in practice, medical and paramedical professionals in practice.
- Evaluate and improve the management of intoxicated patients.

## Research Mission

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- Contribute to the advancement of knowledge in toxicology by developing better tools for monitoring, prevention, prognosis and treatment.
- Based on evidence, contribute to the efficient organization and delivery of acute toxicology healthcare.
- Develop ways to promote effective knowledge transfer to the public and health professionals.

## OUR TEAM

We currently have about 20 nurses trained in toxicology. Four toxicologists (Dr. Sophie Gosselin, Dr. Martin Laliberté, Dr. Alexandre Larocque and Dr. Maude St-Onge) are on call 24/7 with the help since early 2019 from Dr. Anne-Éricka Vermette-Marcotte and a toxicologist from Nova Scotia, Dr. Nancy Murphy. A pharmacist, Audrée Éliott, has also recently joined the team. The QPCC also has three administrative officers.

The Medical Directorate is ensured by Dr. Maude St-Onge and the Administrative Management by Ms. Eve Pilon. Guillaume Bélair recently took over Ms. Anne Letarte's position as assistant to the immediate superior. The former Medical Director Dr. René Blais is still involved with the team in teaching, mentoring and reviewing protocols.

## OUR SERVICES AND ACTIVITIES

First, with respect to the provided clinical services, among the 49,062 cases of actual or apprehended acute toxic exposure assessed and managed in 2018, the ratio of men and women was 48:52, a stable trend over the years. Just under one-third of the patients were aged 0-5 years old (31.46%), 23.15% were aged 20-39 years old and 13.49% were over 60 years of age.

Poisoning involved medication in 56.78% of cases (acetaminophen being the most frequently encountered molecule followed by antidepressants, antipsychotics and then benzodiazepines). They were most often involuntary (55.03%), followed by voluntary actions (18.06%), therapeutic errors (16.05%), workplace accidents (5.66%) and drug-related exposures (2.54%). The most common route of exposure was oral (75.52%) followed by inhalation (8.43%) and then eye exposure (5.9%).

# GENERAL INTOXICATION STATISTICS

## Age and Intoxication Type

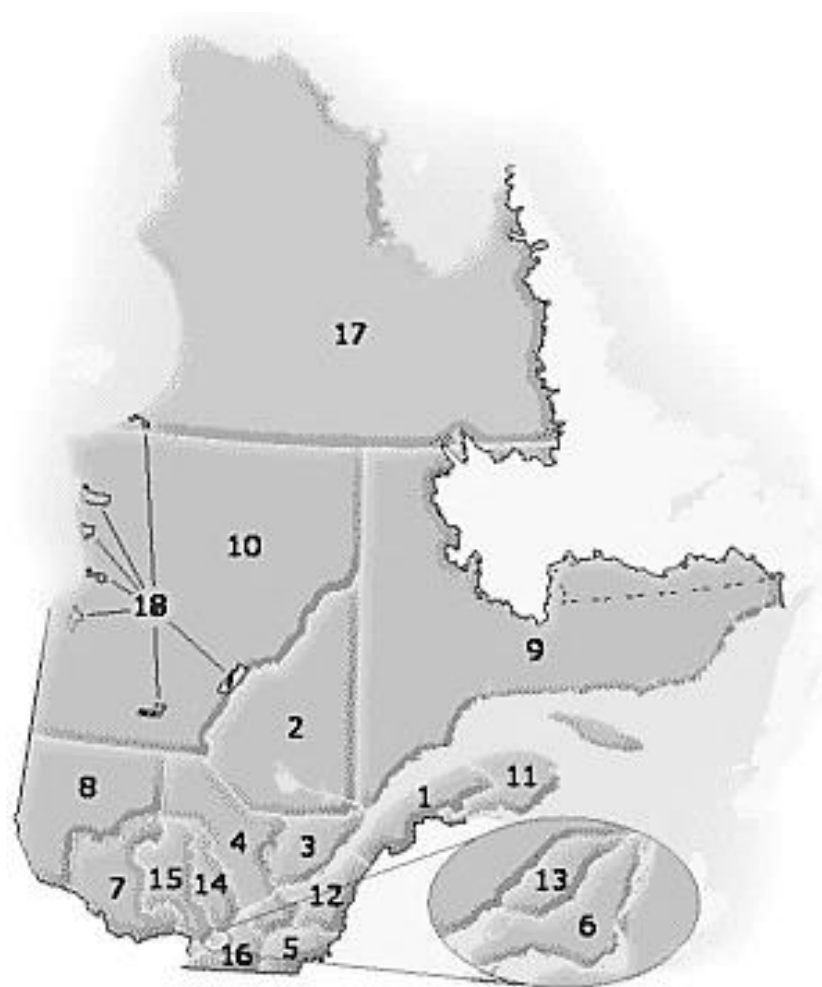
The following Table describes the exposure types by age group.

Age	Type								TOTAL
	Other	Therapeutic Error	Side Effects	Unintentional	Food Poisoning	At Work	Drug Addiction	Intentional	
0 to 5 years old	49	1 059	16	14 206	15	0	0	0	15 345
6 to 12 years old	24	716	10	1 585	4	0	0	93	2 432
13 to 19 years old	75	459	28	901	10	205	342	1 954	3 974
20 to 29 years old	137	662	68	2 096	24	843	353	2 086	6 269
30 to 39 years old	105	655	50	2 005	29	605	200	1 409	5 058
40 to 49 years old	113	622	24	1 479	16	461	100	1 116	3 931
50 to 59 years old	89	801	27	1 314	13	401	56	1 024	3 725
> 60 years old	202	2 762	50	2 551	25	119	33	878	6 620
Child	0	1	1	34	0	0	0	2	38
Adult	55	77	17	508	11	85	144	220	1 117
Unknown age	15	61	4	322	0	56	16	79	553
<b>TOTAL</b>	<b>864</b>	<b>7 875</b>	<b>295</b>	<b>27 001</b>	<b>147</b>	<b>2 775</b>	<b>1 244</b>	<b>8 861</b>	<b>49 062</b>



## Distribution of Cases by Region

1	Bas-Saint-Laurent	Frequency : 1348 Percentage : 2,75
2	Saguenay-Lac-Saint-Jean	Frequency : 2081 Percentage : 4,24
3	Québec	Frequency : 5081 Percentage : 10,36
4	Mauricie-Centre-du-Québec	Frequency : 3823 Percentage : 7,79
5	Estrie	Frequency : 2466 Percentage : 5,03
6	Montréal	Frequency : 8253 Percentage : 16,82
7	Outaouais	Frequency : 2135 Percentage : 4,35
8	Abitibi-Témiscamingue	Frequency : 1086 Percentage : 2,21
9	Côte-Nord	Frequency : 704 Percentage : 1,43
10	Nord-du-Québec	Frequency : 168 Percentage : 0,34
11	Gaspésie-Île-de-la-Madeleine	Frequency : 506 Percentage : 1,03
12	Chaudière-Appalaches	Frequency : 2519 Percentage : 5,13
13	Laval	Frequency : 1817 Percentage : 3,70
14	Lanaudière	Frequency : 3053 Percentage : 6,22
15	Laurentides	Frequency : 3973 Percentage : 8,10
16	Montérégie	Frequency : 8069 Percentage : 16,45
17	Nunavik	Frequency : 205 Percentage : 0,42
18	Terre-Cries-de-la-Baie-James	Frequency : 272 Percentage : 0,55



## Balance Sheet

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Although a majority of cases were assessed as non-toxic or had a minimal to mild clinical effect, 60.46% of patients were symptomatic. Nevertheless, 62.96% of cases were observed at home with the QPCC advice without having to consult a hospital centre. Among the most symptomatic, 1,824 patients had a moderate effect, 680 patients had a severe effect and 41 patients died. Despite the increase in the number of cases over the years, the number of deaths has remained stable (41 in 2017 and 42 in 2016). Among the deceased patients, almost all were adults (except one four-year-old child) including ten people aged 65 years and over. More than half of the deaths were voluntary exposures (n=21), three involved substance abuse and two involved occupational exposures.

# ACTIVITIES RELATED TO THE CLINICAL MISSION

- Since the beginning of 2019, the QPCC has had a new electronic patient record.
- In 2019, the QPCC will have a new telephone system that will improve the waiting time information and the number of lost calls. A specific hospital access line will be available, allowing health professionals to skip part of the greeting message.
- The QPCC regularly reports to public health authorities the incidents that may involve more than one person, has actively participated in the preparation of G7 events and responds on a regular basis to media requests on a variety of topics.
- The QPCC holds scientific meetings four times a year, where, among other things, cases of morbidity and mortality are reviewed, protocols discussed and ways to improve the provided care. Toxicologists, telephone response staff, residents on internships or in toxicological subspecialization, consulting pharmacists, partners such as the toxicology laboratories of the Centre hospitalier Sainte-Justine and the Centre de toxicologie du Québec are invited to attend.
- Staff responding to the QPCC receive ongoing training every six to eight weeks to ensure the maintenance of expertise.
- The QPCC has created, through the allocated funds from the Canadian Safety and Security Program, the Canadian Emergency Toxicology Anti-Doping Guide in collaboration with other Canadian poison control centres (<https://www.ciusss-capitalnationale.gouv.qc.ca/antidotes>). This bilingual guide is available on the Web and as a free downloadable mobile application.
- The QPCC has also created a bilingual poster to guide toxicological intensive care. Health professionals can download it free of charge in 8 1/5 x 11" and 24 x 32" dimensions from the QPCC Web section dedicated to health professionals (<https://www.ciusss-capitalnationale.gouv.qc.ca/centre-antipoison-du-quebec/capq-professionnels-sante>).

## ACTIVITIES RELATED TO THE EDUCATIONAL MISSION

- In 2018, the QPCC received 39 resident physicians for a one-month internship in clinical toxicology. They come from universities across the province, whether in specialized emergency medicine, complementary emergency medicine training, intensive care (adult or pediatric), pediatrics, internal medicine, family medicine or public health.
- Pharmacy residents regularly conduct observation days or projects, particularly in collaboration with the contribution of Mr. Pierre-André Dubé of the Institut national de santé publique. In 2018, the QPCC received ten pharmacy residents, including a group that worked on the prevention of acute paediatric cannabis poisoning.
- In addition, the QPCC participates in ad hoc projects, particularly with high school students (e.g. lead poisoning in Flint), colleges (e.g. meeting chemistry students to discuss toxicology) or other university programs (e.g. industrial design for cannabis packaging, pharmacy for poison prevention measures for children).
- The QPCC has made 15 hours of free toxicology webinars available to health professionals (<https://www.ciusss-capitalenationale.gouv.qc.ca/centre-antipoison-du-quebec/capq-professionnels-sante>). These presentations will be updated in 2019.
- For the general public, the QPCC's new Website ([www.antipoison.ca](http://www.antipoison.ca)) offers relevant information on first aid in the event of poisoning, prevention tips, educational documentation and links to other resources and to our partners.

# ACTIVITIES RELATED TO THE RESEARCH MISSION

- The QPCC staff and the Medical Director contribute to the Toxicological Information Newsletter published by the Institut national de santé publique.
- The QPCC collaborates with several public health authorities (regional and provincial) in opioid surveys, but also in the surveillance of emerging synthetic drugs.
- The QPCC is collaborating with other Canadian poison control centres and Health Canada on a national toxicovigilance project.
- The QPCC is collaborating with the British Columbia Poison Control Centre on a research program regarding the use of naloxone in opioid poisoning.
- Several research projects for medical residents are supervised by the QPCC (e.g., association between the media coverage of the suicidal act and the incidence of the intoxication type, the influence of the distribution of a protocol on the management of an intoxicated patient, validation of the "Poison Severity Score", factors influencing the use of the QPCC's services and/or the use of an antidote, etc.)
- The Medical Director is working on two research programs endorsed by the QPCC: (1) "Activated CHARcoal in Poisoned Patients" and (2) "CARE for Indigenous Poisoned Patients" with the contribution of a master's student and a PhD student from Laval University.

## CONCLUSION

In conclusion, the QPCC actively works to accomplish its clinical, educational and research missions. In 2019, the QPCC will invest in the implementation of its computer and telephone work tools while continuing to update its guides, including the Canadian Anti-Doping Guide in Emergency Toxicology. It also plans to recruit additional staff to the response, as well as trained toxicologists. The QPCC will continue to be an educational environment for residents, pharmacy residents and will aim to welcome nursing students on a more regular basis. The research mission is also continuing, which will be facilitated by the implementation of the new computerized patient record.

For any non-urgent questions not involving patient management, please contact us on the executive phone line: 418 654-2731.

**The QPCC remains available 24/7 for both the public and the private sector  
for health professionals at 1 800 463-5060.**

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universitaire de santé  
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**Québec**

