

Unintentional Poisoning

Every day, more than 6 Ontarians unintentionally poison themselves and are admitted to hospital and more than 100 people call the Ontario Regional Poison Information Centre in Toronto for advice.

Results

In Ontario, there were 2,365 unintentional poisoning hospitalizations during the 2002/03 fiscal year. A similar number of hospitalizations were observed among males and females. By age, a peak was observed in the number of hospitalizations among children 1-3 years of age (Figure 1).

The most frequent type of unintentional poisoning hospitalization was poisoning with a medicine (Figure 2). Antiepileptic, sedative-hypnotic, antiparkinsonism, and psychotropic drugs, such as tranquilizers, barbiturates, and antidepressants, were most common.

The highest number of unintentional poisoning hospitalizations was observed in October. The lowest numbers of hospitalizations were seen from December to February.

In Ontario, the age-standardized hospitalization rate for unintentional poisonings was 20.1 per 100,000 population (Table 1). By region, the highest rate was observed in the North and the lowest rate was seen in Toronto. In terms of absolute numbers, the South West region experienced the highest number of unintentional poisoning hospitalizations and the lowest was seen in the East region.

The Ontario Regional Poison Information Centre in Toronto is one of two provincial poison centres that serves the general public and healthcare professionals throughout Ontario. The primary role of the centre is to provide telephone information and advice about exposures to poisonous substances for people of all ages. During the 2002/03 fiscal year, 43,818 calls (about 80% of calls) were received for unintentional poisonings. More than 60% of the calls were treated at the site of the exposure, preventing unnecessary medical visits. The leading routes of exposure for unintentional poisonings were: ingestion, inhalation, dermal, and ocular.

Cases of children under 6 years of age accounted for 48% of the calls, followed by 16% of calls concerning young people 6-19 years of age (Figure 3). The top 5 exposure categories varied by age group (Table 2). However, analgesics, such as acetaminophen and ibuprofen, and cleaning products, such as bleach and laundry detergent, were one of the leading exposure categories in all of the age groups examined.

FIGURE 1. Unintentional poisoning hospitalizations by age and sex (Ontario, 2002/2003)

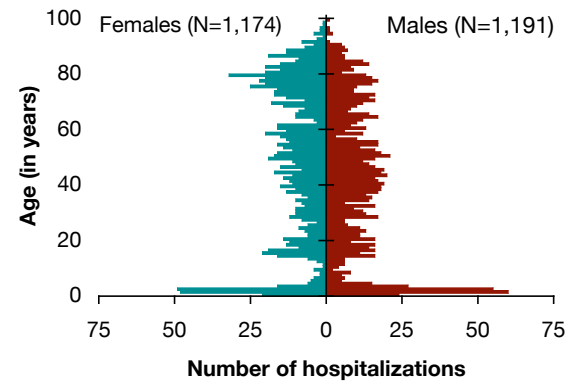


FIGURE 2. Type of unintentional poisoning hospitalization (Ontario, 2002/03)

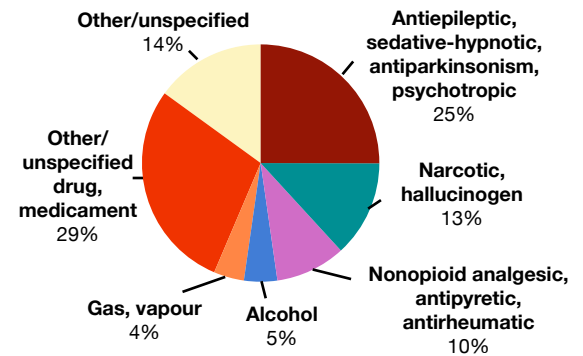


FIGURE 3. Age distribution for calls to the Ontario Regional Poison Information Centre in Toronto (2002/03)

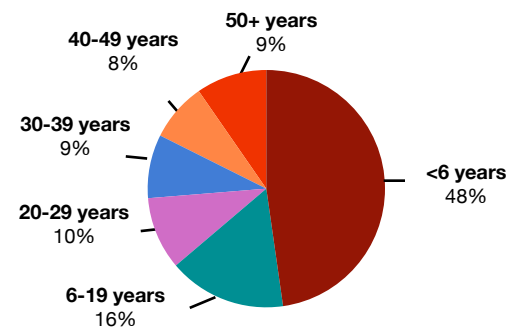


TABLE 1. Regional comparison of unintentional poisoning hospitalizations (Ontario, 2002/03)

	South West	Central South	Central West	Central East	Toronto	East	North	Ontario
Number	421	277	356	379	295	272	348	2,365
Rate per 100,000 ^a	26.1	23.7	18.3	20.5	11.4	16.8	38.5	20.1
Average age (in years)	48	41	42	44	45	49	43	44
% male	51	53	52	48	51	52	48	50

a. Age-standardized rate per 100,000 population. Note: Region of residence unknown/outside of Ontario for 17 hospitalizations.

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TABLE 2. Top 5 poisoning exposure categories by age group (Ontario Regional Poison Information Centre-Toronto, 2002/03)

Age	Exposure category
<6 years	Analgesics (e.g., acetaminophen, ibuprofen) Cosmetic and personal care products (e.g., toothpaste, shampoo, perfume, nail polish remover) Cleaning products (e.g., bleach, laundry detergent) Cough, cold, allergy medicines Vitamins
6-19 years	Analgesics Antidepressants Sedatives Cleaning products Stimulants/street drugs
20+ years	Sedatives (e.g., sleeping pills) Analgesics Antidepressants Cleaning products Alcohols

Discussion

This Compass highlights patterns of unintentional poisonings in Ontario and its regions. A bulletin by the Canadian Institute for Health Information reported that about 20% of all hospitalized poisoning cases are unintentional in nature.¹

More than 2,000 people are unintentionally poisoned and admitted to hospital each year in Ontario. However, hospitalizations represent only one dimension of unintentional poisonings. Each year, more than 40,000 telephone calls are received from the general public and healthcare professionals at the Ontario Regional Poison Information Centre in Toronto. The poison centre is an important resource that provides advice and information about potential or real exposures to poisonous substances that may or may not require treatment in a hospital or emergency department.

Unintentional poisonings are more frequent among young children, but all age groups are affected. Several other research studies have also examined common patterns of poisoning.^{2,3} Many different factors are associated with unintentional poisonings, such as improper labelling, storage, or handling of medicines and other substances and inadequate child supervision. Care should be taken to minimize the risks of poisoning, as several products and medicines have potentially poisonous attributes even if small quantities are ingested.³

Methods

This Compass includes acute care injury hospitalizations for unintentional poisonings in Ontario. These data were obtained for the 2002/03 fiscal year from the Discharge Abstract Database at the Canadian Institute for Health Information. In-hospital deaths are included (fewer than 2% of unintentional poisonings died during their hospital stay). Unintentional poisonings were classified according to the International Classification of Diseases, 10th revision (ICD-10). Regions were defined according to Ontario Ministry of Health Region Codes for place of residence.

This Compass also includes information on calls received at the Ontario Regional Poison Information Centre in Toronto (located at the Hospital for Sick Children) for the 2002/03 fiscal year. It is important to note that these data represent only one of the two poison centres in Ontario and should not be considered population-based.

Managing the risk

Many Ontarians underestimate risks for unintentional poisonings, especially from common household products. It is important to recognize potential poisons and select appropriate and effective prevention strategies to ensure that an unnecessary tragedy does not occur. Some approaches for preventing poisonings include:

- ❖ Lock up all medicines at home, such as over the counter medicines, prescriptions, vitamins, and natural or homeopathic remedies. Remember to include medicines from all family members (pets too!). All medicines may be harmful if taken in large enough amounts. Keeping medicine in a high, unlocked cupboard is not safe, but may entice children to climb and access the medicine.
- ❖ Store all household chemicals, such as cleaners, automotive products, and garden chemicals, in a locked cupboard. Use child-safety latches, but remember they do not offer a guarantee.
- ❖ Do not rely on child-resistant packaging as no container is child-proof. Child-resistant packaging is designed to slow a curious child down, but if left unsupervised any child will be able to find a way to open the container.
- ❖ Store all products in original containers. Many adults and children are poisoned when products are moved into empty water bottles or other beverage containers and then mistakenly consumed. The label contains details that can be used if someone is poisoned and can also help to ensure that an unsuspecting person does not mistake the product for a beverage.
- ❖ Poisonings often occur during times of stress or when normal daily routines are disturbed (e.g., holidays, illness, when friends or family come to visit). Be aware of the increased risk of poisonings at this time.
- ❖ Read all medicine labels carefully to ensure that the right person is taking the right medicine in the right dose and at the right time!
- ❖ For poison information and advice call the Ontario Regional Poison Information Centre, Hospital for Sick Children at 416-813-5900 or toll free at 1-800-268-9017 or the Children's Hospital of Eastern Ontario at 613-737-1100 or toll free at 1-800-267-1373.

For Further Information

Ontario Regional Poison Information Centre in Toronto
www.sickkids.ca/poisoninformationcentre
Canadian Association of Poison Control Centres
www.capcc.com/index.html
Safe Kids Canada
www.sickkids.ca/safekidscanada
SMARTRISK Catalogue of Best Practices
www.smartrisk.ca/ListingSections.aspx?dd=4&sd=207

References

1. Canadian Institute for Health Information (CIHI). *National Trauma Registry Bulletin: Poisoning Injury Hospitalizations in Canada, 1999/2000*. Toronto: CIHI; 2002.
2. McGuigan MA. Common culprits in childhood poisoning: epidemiology, treatment and parental advice for prevention. *Paediatr Drugs* 1999;1:313-24.
3. Michael JB, Sztajnkrzyer MD. Deadly pediatric poisons: nine common agents that kill at low doses. *Emerg Med Clin North Am* 2004;22:1019-50.