



Safe Kids Canada Position Statement Poison Prevention

Poisoning is a much larger public health issue than is generally recognized, with children being particularly vulnerable to unintentional poisoning. *Researchers estimate that **half** of all poison exposures occur among children younger than five years of age.*

Poison prevention interventions are effective in preventing severe illness and potential deaths in young children as a result of unintentional poison exposures. Passive interventions are the most effective in preventing unintentional poisoning, along with measures that ensure the public has timely access to poison information and assistance when exposure does occur. Although there has been measurable progress in the area of childhood poisoning prevention due to initiatives like the introduction of child-resistant packaging and the development of provincial poison centres, more remains to be done.

Safe Kids Canada recommends the following initiatives and measures to reduce the rate of unintentional poisonings in children:

- A comprehensive approach that incorporates education, enforcement and engineering.
- A focus on public awareness and poison prevention education for families.
- Messaging emphasizing the need to safely store potentially toxic substances.
- The implementation of regulations to limit the quantity of potentially harmful over-the-counter drugs that can be purchased in a single package.
- Mandatory installation of carbon monoxide alarms in all residences.
- The establishment of a national phone number for poison information.
- The establishment of a national data surveillance and collection system.

Burden of injury due to unintentional poisoning

Although poisoning is a leading cause of unintentional injury, currently there is no comprehensive poison prevention and control system in Canada. Not only has the magnitude and cost of the poisoning problem been underappreciated, but so has the diverse nature of poisonings.

*For Canadians of all ages, **poisoning is the fourth leading cause of injury deaths and permanent total disability and the fifth leading cause of injury hospitalization, non-hospitalization, and permanent partial disability.** Cost estimates show that in 2004 the economic burden of unintentional poisonings in Canada was approximately **\$771 million.**(1)*

Focus is placed on children as they are particularly vulnerable to poisoning.

It is estimated that:

***Half** of all poison exposures occur among children younger than five years of age **Seven** children aged 14 years and younger die every year in Canada from poisoning, Another **1,700** are hospitalized for serious injuries.*

*Poison centres across Canada receive about **160,000** phone calls each year Close to **80,000** of those calls come from frantic parents concerning children younger than six.*

Children are at particular risk of poisoning due to their growing curiosity and inexperience – as they begin to climb and reach new things they don't necessarily have the experience to know what to avoid.

Medication is involved in 67 per cent of all unintentional poisonings of children age 14 and under.(2) The remaining poisonings are caused by a wide range of products such as household cleaners, alcohol, plants, fertilizers, pesticides, paint thinner, antifreeze and beauty products. While adults may be deterred from consuming a substance by its bad taste, this is not the case with young children.(3) Their sense of taste is different than an adult's, resulting in the ability to drink substances like windshield washer fluid without the taste being a deterrent.

Recommendation 1: A comprehensive approach

Prevention of poisoning is best accomplished through a multifaceted approach combining education, enforcement and environmental modifications including: enactment and enforcement of regulations and legislation, economic incentives, involvement of local health care providers, community empowerment and program evaluation.

Recommendation 2: Poison prevention education for families

Integrating public education and awareness in to a multifaceted approach is critical to improving the success of poison prevention efforts. Home safety education that includes poison prevention, especially when child safety locks and poison centre phone number stickers are

provided free or at low cost, is effective in increasing poison prevention practices like safe storage of medicines and cleaning products.

Key messages to parents should include:

- Locking up medications in a locked box (a toolbox, or tackle box with a combination lock or padlock, works well)
- Storing household cleaners, garden and automotive products in locked bins or cupboards
- Keeping all medications and other potential poisons in their original containers
- Regularly gathering expired and unused medications (including over-the-counter medications and nutritional supplements and vitamins) and taking them to a pharmacy for proper disposal

Recommendation 3: Safe storage

Messaging to parents should be particularly focused on the safe storage of potentially poisonous substances.

Child-resistant packaging is required by law for certain medications⁽⁴⁾ and has been shown to be significant in reducing death and injury.⁽⁵⁾ The standards required for child-resistant packages state that packages be difficult for children younger than five years of age to open and consume a toxic amount within a reasonable time.⁽⁶⁾

However, child-resistant packaging is not child proof. Packaging for dangerous material is considered child-resistant when up to 20 per cent of young children may be able to open containers in short periods of time, and more if given longer periods of time.

Storage of poisonous substances in a location that is inaccessible to children is therefore essential – both up high and locked up. Products no longer in their original container pose a higher risk of ingestion. Accessibility to the product container and the ability to open it are also factors related to the rate of ingestion of a product.⁽³⁾

Safe storage of poisonous substances requires vigilant behaviour by adults in all homes that children live in or visit. The key message for the safe storage of toxic materials is to keep all toxic substances in their original child-resistant packaging and to store all materials in locking boxes, bins or cabinets, including medications, cleaning supplies, and other toxic substances.

Recommendation 4: Safer medication quantities

In the event that a child does gain access to harmful substances like medication, stiffer regulations should be implemented to limit the quantity of potentially harmful over-the-counter drugs that can be purchased in a single package. Reducing the content of containers to non-lethal doses would protect children from unintentional over consumption and add a layer of protection against potentially severe illness and death.

Recommendation 5: Mandatory carbon monoxide alarms in all residences

Layers of protection are essential to effective poison prevention, particularly in the case of carbon monoxide poisoning. Carbon monoxide is referred to as “the silent killer” because it is colourless, odourless, and tasteless, making it undetectable by individuals. Furthermore, it is produced by sources that run many common household appliances and heating sources. The majority of unintentional carbon monoxide exposures occur in the home.

Children are at increased risk of carbon monoxide poisoning because of their particular biology.(7) Children have smaller bodies, process carbon monoxide differently than adults and may be more severely affected by it.(8)

However, alarms provide a critical early warning of carbon monoxide exposure, enabling people to escape safely before the gas impairs their judgment and disables their motor skills. *Importantly, studies have shown that **half** of all carbon monoxide poisoning deaths could be prevented by carbon monoxide detectors.*(9)

Legislation should be implemented in every province requiring the mandatory installation of carbon monoxide alarms in all residences. Public awareness and messaging on carbon monoxide alarms should emphasize that they should be installed on all levels of a home, particularly near sleeping areas and a home's heating source, and that they should be replaced as recommended every five to seven years.

Recommendation 6: A national phone number for poison information

*Poison centres across Canada receive about **160,000** phone calls each year. Close to **80,000** of those calls come from frantic parents concerning children younger than six. Although the majority of parents in a survey said they would call the poison centre first for advice if their child was exposed to poison at home, just as many do not know the number of their local poison centre or have it easily accessible (i.e. posted on the fridge or stored in their home or cell phone.)*

Phone-in centres are effective in helping parents determine whether a child is at risk from a potential poisoning and what actions the parent or caregiver should take. Poison centres can result in considerable cost savings by diverting appropriate cases from emergency rooms if the public is well informed about them.(10) *One report from a single poison centre found that **86 per cent of calls would have gone to emergency rooms** were it not for the information provided by the phone-in centre.*(11)

The establishment of a single national phone number for poison information would help the public gain access to timely information and assistance in the event of poison exposures. It would also help the public gain access to information and assistance by providing a single resource as the ‘go to’ source for assistance in poison prevention in Canada.

Recommendation 7: Establish and coordinate data surveillance and collection

Surveillance consists of the systematic and ongoing collection, analysis, and interpretation of health data for use to prevent and control disease. An effective surveillance system should have the attributes of simplicity, flexibility, data quality, acceptability, positive predictive value, representativeness, timeliness, and stability.

Across the country poisoning data collection can vary. As poison centres are funded provincially, each province has different reporting requirements and formats. At present, only one province (Ontario) is completely electronic in their data collection. Two provinces have purchased computer-based systems (British Columbia and Nova Scotia); the remainder of the centres continue to record information manually on paper-based systems. Although most of the centres produce some type of report, either annually or by request, this is not standardized across the country. Due to the differences in data collection, data is not easily combined to give a clear view of the issue in Canada as a whole.

To gain this clarity, a pan-Canadian, coordinated system for collecting and analyzing data on poisoning is essential. Doing so will be instrumental to poison prevention efforts across Canada.

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