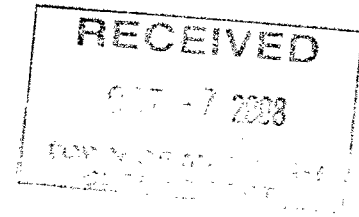




Health Services Department
Public Health Branch

September 23, 2008

Mayor Frank Scarpitti
Town of Markham
101 Town Centre Boulevard
Markham, ON
L3R 9W3



Dear Mayor Scarpitti:

Re: Four-Sided Pool Fencing Enclosure

On September 18, 2008 the Council of The Regional Municipality of York adopted a report on four-sided pool fencing enclosure from the Health and Emergency Medical Services Committee with the recommendation that the Medical Officer of Health circulate this report to the area municipalities and that the letter contain additional clarification and explanation to assist the area municipalities for their review.

Drowning is the second leading cause of injury-related deaths for Canadian children ages 1 to 4 years old, almost half of these occur in adequately fenced backyard swimming pools. Based on evidence from a number of systematic reviews, four-sided pool fencing could prevent 7 out of 10 drowning incidents of young children in home swimming pools. Demica Research conducted a national survey and found that 81% of Canadian parents would approve changing laws to make four-sided fencing around home swimming pools mandatory.

Currently, all municipalities in the Region require only three-sided fencing and allow the residential building to serve as the fourth side. We urge municipalities to review their by-laws to adopt safer pool fencing regulations, using recommendations from experts in the field such as Safe Kids Canada, a national injury prevention program of the Toronto Hospital for Sick Children.

Attached please find a copy of the Council report on the subject matter, sample diagrams of four-sided pool fencing and a briefing document from Safe Kids Canada.

Our staff from York Region Public Health Branch are available to provide any consultation and support in this matter.

September 23, 2008
Four-Sided Pool Fencing Enclosure

Thank you for your consideration of this matter.

Sincerely,

A handwritten signature in black ink that reads "Karim Kurji". The signature is written in a cursive style with a horizontal line underneath the name.

Dr. Karim Kurji MBBS, Msc, MRCPGP, FFPHM, FRCPC
Medical Officer of Health

Attachment 1: Council Report on Four-Sided Pool Fencing Enclosure

Attachment 2: Pool fencing diagrams from Safe Kids Canada

Attachment 3: Briefing document on Pool Drowning and the Need for Safer Pool Fencing from Safe Kids Canada

Clause No. 2 in Report No. 6 of the Health and Emergency Medical Services Committee was adopted, without amendment, by the Council of The Regional Municipality of York at its meeting on September 18, 2008.

2

FOUR-SIDED POOL FENCING ENCLOSURE

The Health and Emergency Medical Services Committee recommends that:

- 1. Recommendation No. 1 be amended to reflect that the Medical Officer of Health circulate this report to the area municipalities and that the letter contain additional clarification and explanation to assist the area municipalities with their review.**
- 2. The balance of the report, August 25, 2008, from the Commissioner of Community and Health Services be adopted.**

1. RECOMMENDATION

It is recommended that:

1. The Regional Clerk circulate this report to area municipalities for review to determine whether their pool fencing bylaws should be amended.

2. PURPOSE

This report provides an overview of the importance of safer pool fencing and recommends York Region municipalities consider adopting safer pool fencing by-laws.

3. BACKGROUND

Drowning is the second leading cause of injury-related death for Canadian children ages 1 to 4 years old, almost half of these occur in inadequately fenced backyard swimming pools

Unintentional injuries are the leading cause of death for young Canadians. Drowning is the second leading cause of injury-related death for Canadian children ages 1 to 4 years old. Canadian Red Cross Society (2006) reported 368 drownings for this age group in Canada from 1991 to 2000. Almost half of all drownings occur in inadequately fenced single-unit home swimming pools. Children ages 1 to 4 years old account for the highest percentage of drownings in backyard pools and hospitalization for near drownings among all age groups. Most of these drowning incidents occur when children were playing or walking near water during a momentary lapse in adult supervision.

Any drowning or near-drowning incident is devastating

The annual costs for drowning for all ages in Canada have been estimated at over \$250 million, based on data from Safe Kids Canada and Canadian Red Cross in 2006. There are also significant indirect costs associated with both drowning and near-drowning. Some children suffer severe neurological impairments following a near-drowning incident and often require ongoing specialized care. The emotional and financial burden for the individual and family can be enormous.

In York Region, the incidents of swimming pool-related drowning and near drowning are low. Although the rate of pool drowning of young children in Canada is decreasing and pool drownings are not numerous in York Region, any drowning or near-drowning incident is devastating to a family and community from such preventable tragedy. Adequate preventative measures in a built environment can reduce avoidable child drowning and near-drowning.

Four-sided pool fencing could prevent 7 out of 10 drowning incidents in home swimming pools for children under the age of five

A retrospective Australian study found that children (younger than five years) who lived or visited a house with three-sided fencing were almost twice as likely to drown compared with children who lived or visited households with four-sided fencing surrounding their pools. Of the drownings that occurred in four-sided fencing pools, all were the result of either a pool gate being propped open or a fault with the self-closing/self-latching mechanism of the pool gate.

With the introduction of four-sided pool fencing legislation in New Zealand, the unintentional child drowning incidents declined more than 50% over a 20-year period. Evidence from a number of systematic reviews conducted in Canada and the United States also indicated that four-sided pool fencing is the best strategy for reducing the drowning risk for young children in home swimming pools, it is estimated that four-sided pool fencing could prevent 7 out of 10 such drowning incidents.

National survey found 81% of Canadian parents support changing pool fencing laws

A national survey conducted by Decima Research and Safe Kids Canada, a national injury prevention program of the Hospital for Sick Children, found that 81% of Canadian parents would approve changing laws to make four-sided fencing around home swimming pools mandatory.

Safe Kids Canada is a member of Safe Kids Worldwide, a global network in 16 countries around the world dedicated to preventing unintentional injury to children. Their work is guided by their National Expert Advisory Committee to ensure evidence-based research is turned into best practices.

4. ANALYSIS AND OPTIONS

Safe Kids Canada recommends four-sided pool fencing for all above and in-ground pools over a depth of 0.6 metres

Safe Kids Canada has been advocating for safer pool fencing and legislative enforcements. It recognizes that although three-sided fencing has been shown to reduce drownings due to trespassing, it is not effective in protecting children who live in or are visiting a home in which they may gain access to the pool directly from the house. It recommends that pool fencing by-law should require four-sided fencing at a minimum height of 1.2 m (4 ft), with self-closing and self-latching gate that completely separate the pool from the house for all types of pools with a depth of over 0.6 m (2 ft). The pool enclosure should also be constructed of material and design that inhibits climbing.

The current pool fencing standards in the nine York Region municipalities do not meet the pool enclosure safety standards recommended by Safe Kids Canada

Current York Region municipal standards specify three-sided fencing and allow the residential building to serve as the fourth side. Most neighbouring municipalities of the Region have similar by-laws. Ontario municipalities that have passed a by-law requiring four-sided pool fencing include Wellington North, Montague, Brockton, North Perth and Toronto. The public health units of Middlesex-London, Ottawa and Halton Region are considering proposals for changes to pool enclosure by-laws in their municipalities to include four-sided pool fencing.

Municipal governments are well positioned to prevent swimming pool related deaths and injuries through passive measures such as enacting four-sided isolation pool fencing by-laws.

Additional costs to homeowners would correlate to the addition of one side of fencing, estimated at between \$300 to \$500 depending on the material and length of fence and not including any additional municipal charges.

York Region Public Health Branch continues its role through education, media campaigns and policy advocacy

The York Region Public Health Branch is mandated by the Ministry of Health and Long-Term Care to collaborate with community partners to promote child health and prevent unintentional childhood injuries through education, media campaigns as well as policy advocacy and development. Public Health staff will continue to promote water safety practices among York Region residents and be available to provide assistance to area municipalities in evaluating possible amendments to their current bylaws in backyard pool fencing.

5. FINANCIAL IMPLICATIONS

There are no financial implications to the Region in recommending all York Region municipalities adopt safer pool fencing by-laws. The health promotion and consultation activities by York Region Public Health staff are components of their routine responsibilities and are accommodated within the current budget.

6. LOCAL MUNICIPAL IMPACT

Over the last decade, all York Region area municipalities have passed laws requiring the fencing of private and public pools. This report recommends area municipalities review and consider amendments to their current bylaws to adopt safer pool fencing by-laws.

7. CONCLUSION

This report outlines the importance of four-sided pool fencing as an effective injury prevention strategy to reduce and prevent drowning deaths and near drowning incidents in York Region. Protecting the lives of children should outweigh additional fencing costs and aesthetic considerations. It is recommended that municipalities consider adopting safer pool fencing by-laws. York Region's Community and Health Services Department's Public Health Branch staff are available to provide consultation and resources including draft bylaws.

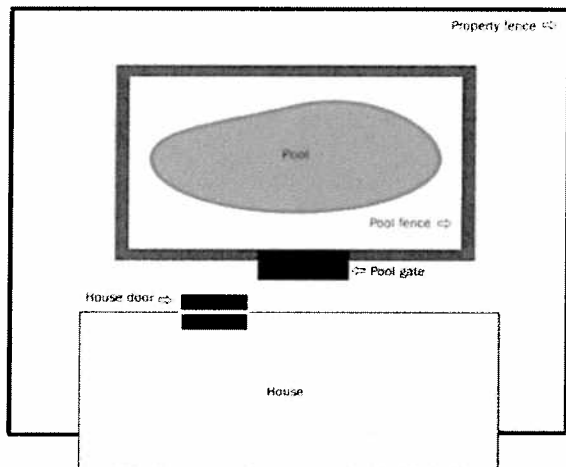
For more information on this report, please contact Dr. Karim Kurji, Medical Officer of Health at Ext. 4012.

The Senior Management Group has reviewed this report.

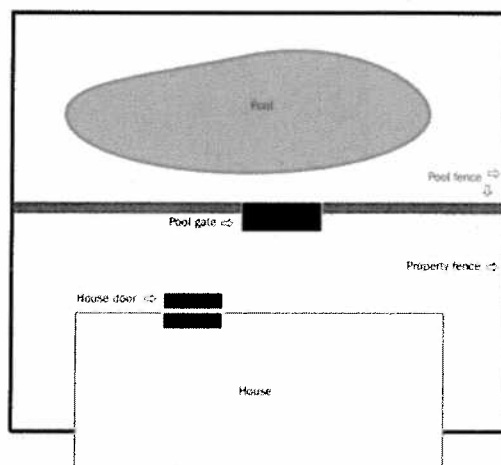
APPENDIX A

Pool Fencing Diagrams

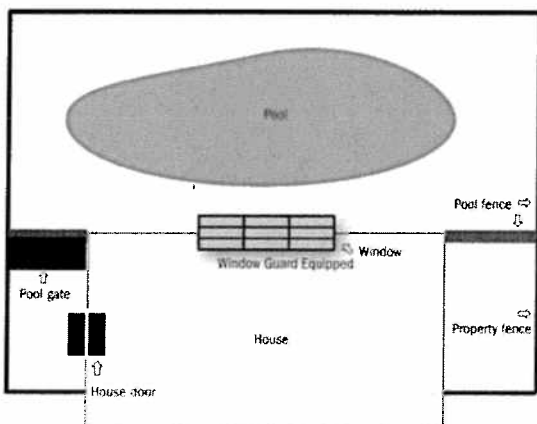
Fencing Layouts



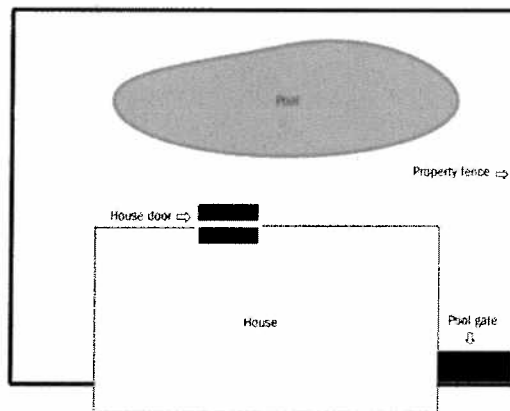
Four-sided Isolation Fence
Recommended ✓



Four-sided Fence
Recommended ✓

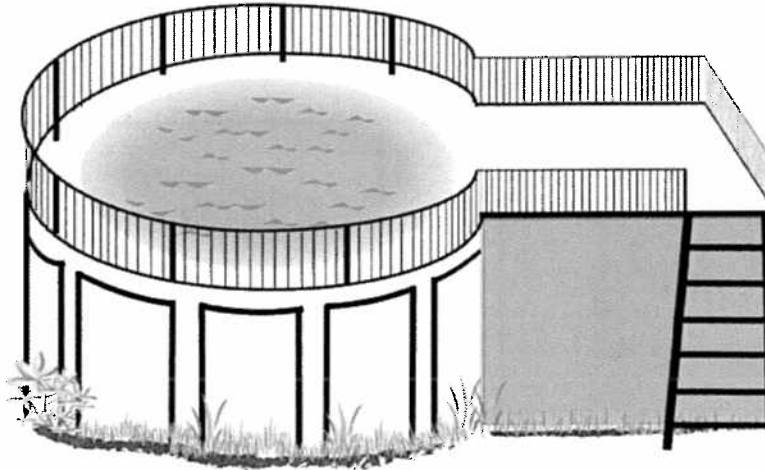


Four-sided Fence
Recommended ✓

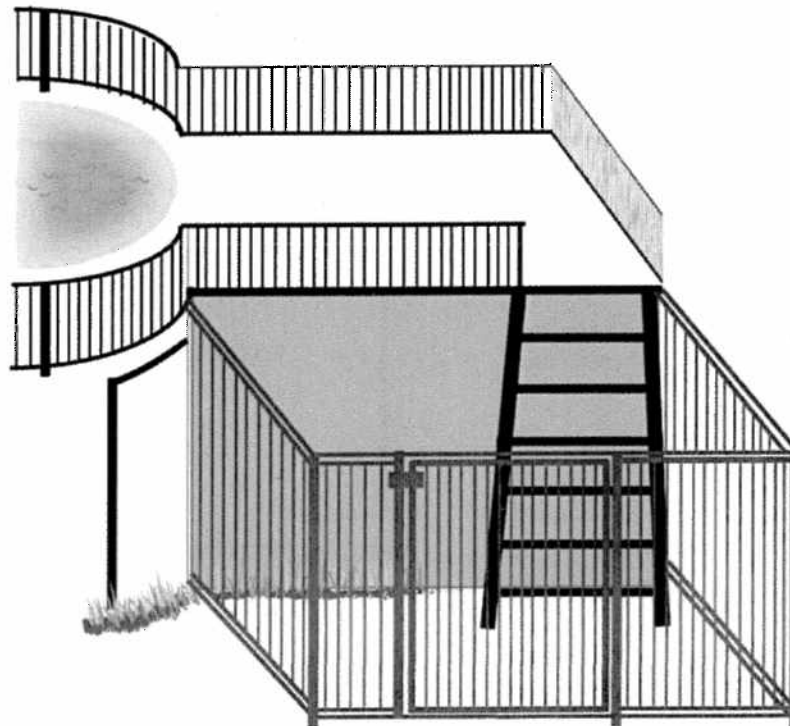


Property Fence
Not Recommended ✗

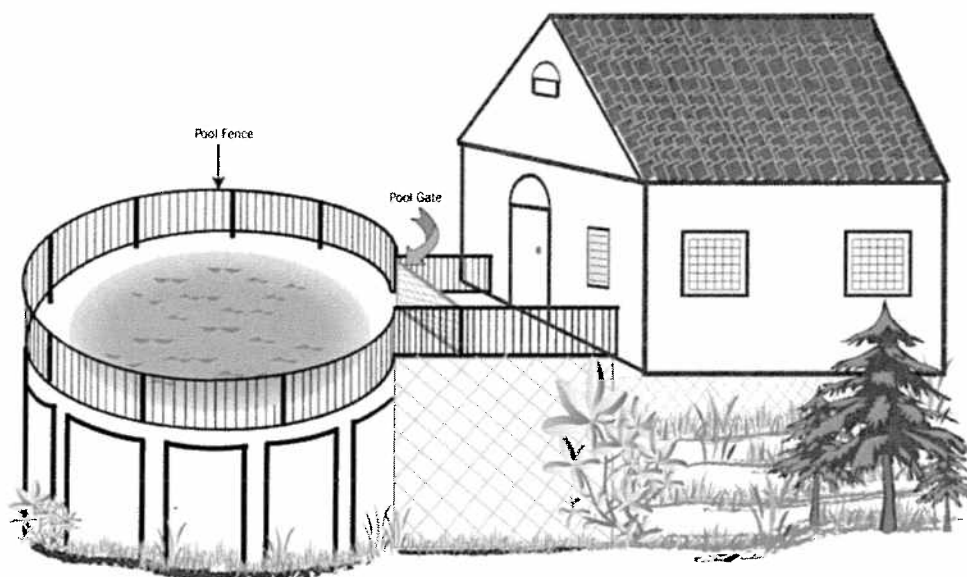
Above-ground pool with sides at least 1.22m (4 feet) high and with a removable ladder – Not Recommended



Above-ground pool with a properly fenced ladder area - Recommended



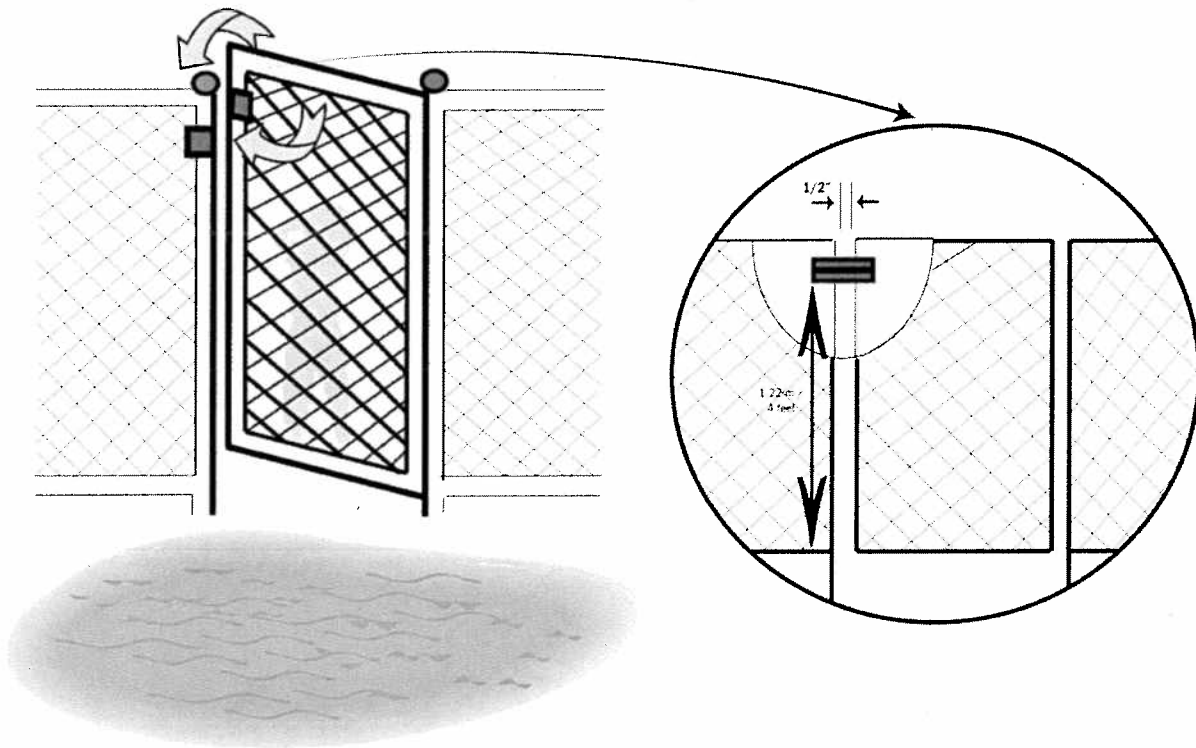
Above-ground pool with self-closing and self-latching gate restricting access to the pool from the house - Recommended



**Above-ground pool connected to a deck that is attached to home
Not recommended**

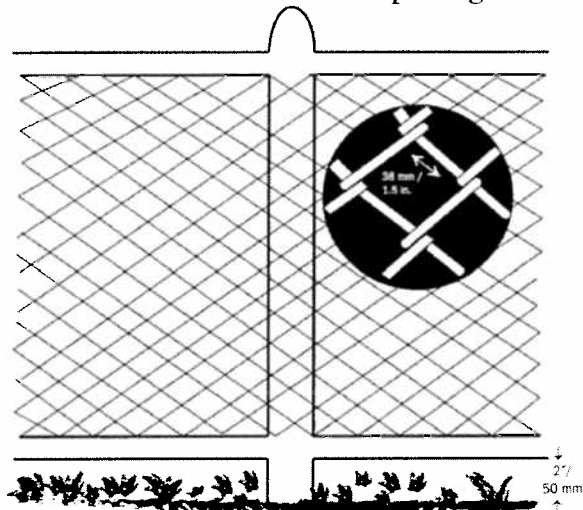


Self-closing and self-latching gate that cannot easily be accessed by young children

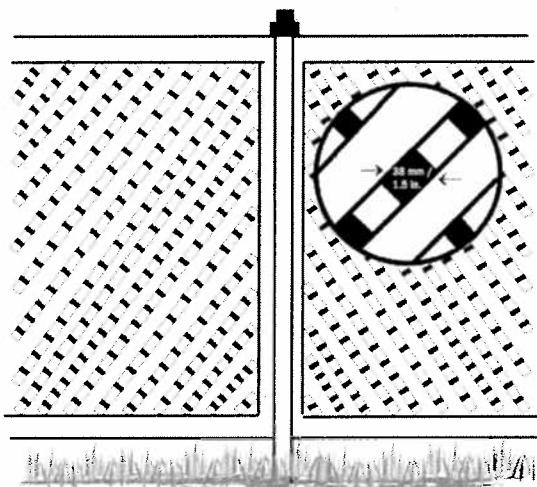


Pool Fencing Types

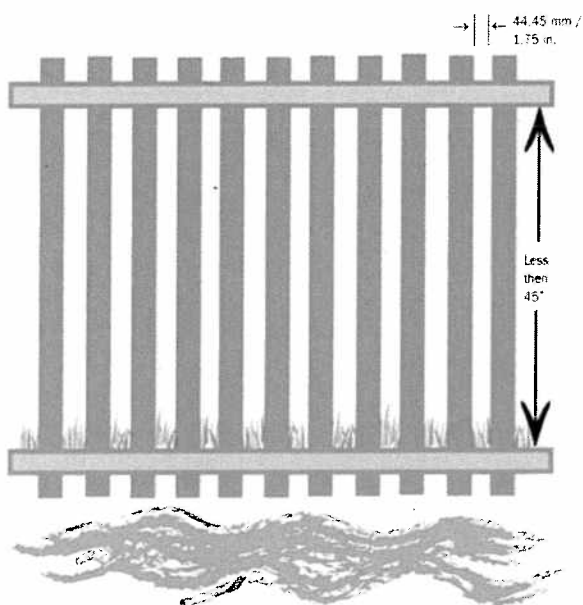
Recommended chain link opening



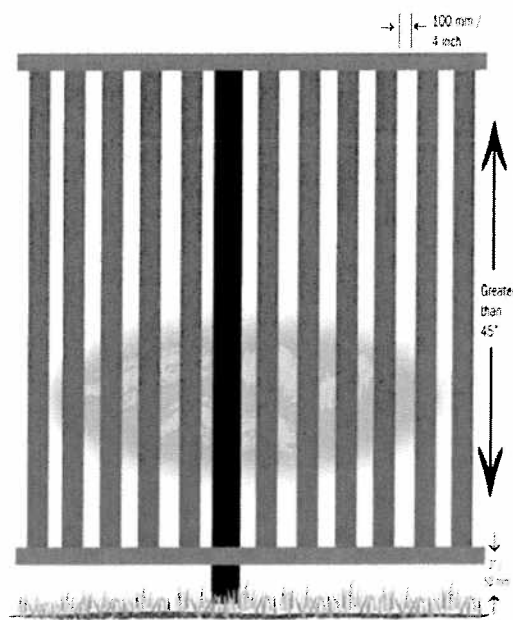
Recommended wood lattice opening



Recommended vertical bar spacing if horizontal bars are less than 114.3cm (45 in) apart



Recommended vertical bar spacing if horizontal bars are greater than 114.3cm (45 in) apart



Pool Drowning and the Need for Safer Pool Fencing

SUMMARY

Safe Kids Canada recognizes that safer pool fencing can prevent the disability and death of young children as a result of unintentional drowning. Researchers estimate that safer pool fencing could prevent 7 out of 10 pool drowning incidents for children under five.

Safer pool fencing works by completely separating the pool from the home – with a four-sided fence and self-closing, self latching gate(s). This prevents child drowning that can happen when a young child slips unnoticed into the backyard from the home – and into the pool.

Pool fencing laws should be established and enforced in municipalities across Canada to protect young children from drowning and near-drowning in home pools. Pool fencing by-laws should require *at minimum* 1.2 m (4 ft) high, four-sided fencing with self-closing, self-latching gates for homes with pools. Local by-laws should be supported with education and by minimum standards of provincial and territorial legislation.

Safer fencing should protect children from water hazards around the home. All home pools with a depth of over 0.6 m (2 ft) should be properly fenced. Safer fencing should be installed to protect children from accessing home swimming pools, including in-ground, above-ground, portable, inflatable and hydro-massage pools, hot tubs and spas as well as decorative ponds.

BACKGROUND

Drowning

Unintentional injuries are the leading cause of death for young Canadians. Drowning is the second leading cause of injury-related death to Canadian children.¹ An estimated 58 children age 14 and under drown each year in Canada, while another 140 are hospitalized for near-drowning.² This is equal to about two elementary school classrooms of children dying *every year*. The annual economic cost for drowning in Canada has been estimated at over 250 million dollars.³

Pool Drowning

Safe Kids Canada supports healthy active and safe living. Since swimming pools are involved in nearly half of all drowning and near-drowning incidents for children under 14 years,⁴ measures must be taken to reduce drowning in these environments. Both in-ground and above-ground pools are a potential hazard.⁵ Many drowning deaths happen in private homes with unfenced or inadequately fenced swimming pools and spas.⁶ In most drowning cases the pools (95%) have inadequate safety gates.⁷

Pools are a particular hazard for children under five years old because they are attracted to water but lack a clear sense of danger.⁸ Drowning of young children often occurs when the child is walking or playing near water, not when they are swimming or intending to go in the water.⁹ Most happen when the child gets near water during a momentary lapse in adult supervision.¹⁰ The rate and number of young children who drowned in backyard pools varies across Canadian regions with higher incidence in Ontario and Quebec.¹¹ This is likely related to a higher number of pools in these provinces.

Prevention

Researchers estimate that proper fencing could prevent 7 out of 10 drowning incidents in home swimming pools for children under age five.¹² Safer pool fencing should be *at minimum* 1.2 m (4 ft) high, four-sided and with self-closing, self-latching gates. The fence should be constructed in a way that makes it difficult for young children to climb.¹³ For example, vertical fence slats are preferable to horizontal designs. A four-sided fence should completely separate the pool from the home. This fencing is a passive or 'built-in' measure that helps to keep children away from the pool and can prevent unintentional drowning.

In most places in Canada, safer pool fencing is not yet required. Municipal residential pool fencing laws, where they exist, often require only three-sided fencing. While three-sided pool fencing has been shown to reduce drowning due to trespassing,¹⁴ three-sided fencing does not protect the children who live in or are visiting the house since they may gain access to the pool directly from the house.

Safer pool fencing laws put in place in other jurisdictions has helped to prevent drowning.¹⁵ For example, drowning has been reduced in *public* pools since fencing requirements have been put in place.¹⁶ Other countries, including Australia, New Zealand and France have had success with legislation requiring safer fencing for home pools. If Canada had

mandated four-sided pool fencing with self-closing, self-latching gates for home pools as many as 292 drowning and near-drowning incidents of children under the age of five could have been prevented during the 10 year period from 1994-2003.¹⁷

THE PROBLEM – DROWNING IN HOME POOLS

Who is at Risk and Why?

Drowning is the second leading cause of injury-related death to young children.¹⁸ A child drowns quickly and silently and children who survive a near-drowning (submersion injury) frequently suffer serious long-term effects from brain injury due to a period of time without breathing.¹⁹ Surveys have shown that parents may underestimate children's vulnerability to water hazards and hence may not perceive drowning to be a risk.²⁰

Drowning risks are closely tied to child development. Children under age five are attracted to water but lack a sense of danger. Also, children in this age range tend to be top heavy and vulnerable to falling into the water, increasing their susceptibility to unintentional drowning. Young children's lungs are also significantly smaller than adult lungs and, as a result, fill quickly with water. Consequently, young children can drown quickly in as little as five centimeters (two inches) of water. Toddler pool drowning tends to occur at their own home or at another pool lacking fencing, having inadequate fencing, or due to propping or leaving gates open.²¹

When and Where Does Drowning Occur?

Swimming pools are the location of close to half of all drowning and near-drowning incidents for children age fourteen and under.²² Pools are a particular hazard for children under five years of age. Many drownings happen in private homes with unfenced or inadequately fenced swimming pools and spas.²³ According to a recent Canadian Red Cross report, half of pool drowning incidents in single-unit homes involved children aged one to four years, making it the most frequent location for drowning of young children. Nearly all of these in pools (95%) had inadequate safety gates.²⁴ The Red Cross report also found that pool drownings of one to four year-olds occur in both in-ground and above-ground pools. Pools with easy access from the home are a particular concern.

Quebec, with approximately 24 per cent of Canada's population, accounted for 47 per cent of pool drownings of children aged 1 to 4 years.²⁵ In Quebec, pools are often joined to a living area like patio or deck, making them more accessible to young children.²⁶ The rate and number of young children who drowned in home pools varies across Canadian regions with higher incidence in Ontario as well as in Quebec.²⁷ This may be related to exposure to home pools.

As a cool relief during hot Canadian summers, home pools are attractive to many families. Whereas pools were once a significant financial investment there are now many types of low-cost 'temporary', inflatable, above-ground pools currently available on the market. There is concern among the injury prevention community that drowning risk for young

children could increase across Canada due to increased exposure to home pools. Though these pools are not necessarily designed to be permanent fixtures, they are increasingly large in size and water capacity. Due to this large size they may be kept filled with water rather than emptied out after use. Since the pools are less expensive and may not be considered permanent. There is a concern that they will not be considered less of a hazard and not be adequately permanently fenced and gated. As such these pools present a significant drowning risk for young children.

The Burden of Drowning – Economic and Social Costs

Annual economic costs for drowning for all ages in Canada have been estimated at over 250 million dollars.²⁸ There are also significant indirect costs associated with both drowning and near-drowning. Children with severe neurological impairment following a near-drowning incident often require ongoing specialized care. This may result in serious financial hardship for the family.

Pain and suffering are also a serious consideration related to death and disability resulting from a preventable tragedy. Drowning injury can result in reduced healthy life years lived. Another way to consider burden from premature death is in terms of potential years of life lost (PYLL). When a child dies many anticipated years of living are cut short. For example, a child who dies at the age of four is missing over seven decades of potential life years due to premature, preventable death.²⁹

THE SOLUTION – SAFER POOL FENCING

Safer pool fencing works by completely separating the pool from the home – with a four-sided fence and self-closing, self latching gate(s). This prevents child drowning that can happen when a young child slips unnoticed into the backyard from the home – and into the pool. This ‘safer’ fence affords a child a critical layer of protection against drowning related injury and death.

Since swimming pools are the site of nearly half of all drowning and near-drowning incidents, measures must be taken to reduce drowning in these environments. The most effective way of preventing unintentional injury is with a combination of the three ‘Es’ - public education, environmental changes, and enforcement of necessary legislation. Systematic reviews have concluded that safer pool fencing is the best strategy for reducing the drowning risk for young children in home swimming pools.³⁰ Safer pool fencing laws, in conjunction with enforcement and complementary public awareness campaigns can reduce drowning.

While parental supervision remains a vital means of preventing unintentional drowning while in water, it may be unrealistic to expect parents to be within arms’ reach of their children at all times when not swimming or intending to swim. Studies show that caregiver supervision alone is not enough to prevent drowning.³¹ Therefore, drowning prevention is

better facilitated through layers of protection including passive injury prevention measures.

Since the absence of adequate fencing surrounding home swimming pools is the main contributing factor in drowning,³² awareness about the problem of child drowning in home pools should be raised along with knowledge about recommended fencing safety practices. 'Built in' safeguards which provide passive protection are necessary.³³ Research shows that risks to drowning in the home environment can be dramatically reduced through 'built-in' or passive protection. The **only** passive prevention strategy that has been shown to significantly reduce drowning in backyard pools is safer pool fencing.³⁴ Researchers estimate that proper fencing could prevent the majority of drowning incidents in home swimming pools for children under age five.³⁵

In a smaller, illustrative study in Australia, drowning in two communities of similar size and composition were compared. In Mulgrave, the community had passed and enforced safer pool fencing by-laws. In the neighboring community, Cairns, swimming pool fencing was unregulated. Within the ten years studied, Cairns, without a fencing by-law, had ten drownings while Mulgrave had only three incidents. Just one of the Mulgrave drowning incidents resulted in a fatality. Interestingly, this death happened in a pool that had been exempted from the fencing regulations.³⁶

Current Status of Pool Fencing Legislation for Home Pools

Internationally, several countries have taken steps to protect children through safer pool fencing legislation. Jurisdictions in France, Australia and New Zealand have all put in place requirements for passive measures. Pool fencing laws have led to fewer fatalities and near-drowning injuries when compared to jurisdictions without legislation.³⁷ Installation of safer fencing that isolated the pool from the house and the yard has been shown to reduce the number of pool immersion injuries among young children by over half.³⁸ In New Zealand, unintentional child drowning incidents have continued to decline following the introduction of safer pool fencing legislation with approximately ten drowning deaths pre-legislation (1980-1987) to about six between 1987-1995, five between 1995-2000 and about four drowning incidents between 2000-2005.³⁹

In most places in Canada, safer pool fencing is not yet required. If Canadian jurisdictions had mandated four-sided pool fencing for home pools similar to New Zealand and Australia, as many as 292 drowning and near-drowning incidents could have been prevented during the 10 year period 1994-2003 for children under five.⁴⁰

Pool fencing by-laws are an example of a child injury prevention intervention that can be put in place by municipalities. Municipal authorities regulate private home pools and building permits. Local by-laws can be supported by education and by minimum standards established by provincial/territorial legislation. Pool fencing laws are enforced at the municipal level.

Briefing document – Pool Drowning and the Need for Safer Pool Fencing

In Canada there is a patchwork of municipal legislation that relates to pool fencing. Municipal residential pool fencing laws, where they exist, often require only three-sided perimeter fencing. Three-sided fencing does not protect the children who live in or visit the house since they may gain access to the pool from the house.

Municipal pool fencing laws should require *at minimum* 1.2 m (4 ft) high, four-sided fence with self-closing, self-latching gates. All municipalities should enact and enforce safer fencing by-laws for homes with pools. Provinces and territories should work with municipalities to support minimum standards of legislation, education and enforcement.

Provincially, Manitoba has incorporated mandatory pool fencing in the Manitoba Building Code. However, the pool enclosure requirement in the Building Code does not currently specify four-sided pool fencing. Building construction in each province is regulated by a provincial building code established by the Building Standards Act or provincial building code. Each province or territory either adopts the National Building Code of Canada by referring directly to it (e.g. Yukon) or adapts it into an Act based on the Building Code of Canada (e.g. Alberta).⁴¹ The provincial building codes and standards are enforced through municipal permitting.

In Quebec, *Institut national de santé publique du Québec* has made detailed recommendations for mandatory four-sided fencing for all home pools.⁴² Safe Kids Canada endorses these comprehensive recommendations for drowning prevention. Similarly, Safe Kids Canada supported the private members bill introduced in Ontario in 2006 that called for minimum pool fencing standards.⁴³

**Table 1: Summary of characteristics of safer pool fencing laws:
Canadian (proposed) and international (established) pool fencing legislation.**

Canada						
Jurisdiction	Specifies 4-sided fencing	Specifies self-closing and self-latching gate	Specifies minimum height of 1.2m (4 ft)	Includes in-ground, above-ground and inflatable pools	Specifies fence construction that inhibits climbing	Requires retrofitting of 4-sided fencing for existing pools
Municipal	Pool fencing by-laws vary across Canadian municipalities (Check your local pool fencing by-laws for more details)					
Ontario (Bill 74 proposed - Not passed)	✗	✗	✗	✗	✓	✗
Quebec (Recommendations only – No proposed legislation to date)	✓	✓	✓	✓	✓	✓
Manitoba (Manitoba Building Code s. 10)	✗	✓	✓	✓	✓	✗
International						

Briefing document – Pool Drowning and the Need for Safer Pool Fencing

Jurisdiction	Specifies 4-sided fencing	Specifies self-closing and self-latching gate	Specifies minimum height of 1.2m (4 ft)	Includes in-ground, above-ground and inflatable pools	Specifies fence construction that inhibits climbing	Requires retrofitting of 4-sided fencing for existing pools
Queensland, Australia	✓	✓	✓	✓	✓	✓
New Zealand	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✗	✓	✗

Pool Fencing Standards

Safer fencing saves lives and should be mandated. According to the Canadian Red Cross report (1991 to 2000) in only 5 per cent of swimming pool drownings, involving children aged 1 to 4 years, was the pool reported to be equipped with a safer fencing with a self-closing and self-latching gate.⁴⁴

In order to prevent access by young children, four-sided isolation fencing should be at a minimum height of 1.2 m (4 ft) and completely separate the pool from the house, preventing direct access of a child. The pool enclosure should also be constructed of material and design that inhibits climbing. A self-closing and self-latching gate should regulate all access points through the four-sided pool fence. When installed correctly, a self-closing and self-latching gate will prevent unintended access of young children into the pool area by automatically closing and latching every time the gate is opened.

Guidelines developed for safer pool fencing include New Zealand's pool fencing standards entitled *Safety barriers for young children around swimming pools spas and hot tubs*. This standard is referenced in New Zealand's pool fencing legislation, *Fencing of Swimming Pools Act 1987*.⁴⁵

Safe Kids Canada has drafted model safer fencing legislation based on an Oakville, Ontario by-law. This model can be used as a reference for local communities seeking to improve the safety of their municipalities for young children. Complementary tools developed include sample diagrams and brochures. These resources can be found at safekidscanada.ca.

The Consumer Product Safety Commission (CPSC) in the United States is working with American Society for Testing and Materials (ASTM) to develop a standard for portable pools that would cover the increasingly popular inflatable pools available in the market. Inflatable pools pose the same drowning risks as other pools and must be properly fenced with a self-closing and self-latching gate. Standards for these pools would mitigate risks related to health and safety including sanitation/bacteria, and hair and clothing entrapment as well as product reliability concerns such as liner bursting. Standards should

also require warnings that would warn parents about drowning risks in these pools. Warning labels should encourage best practices including strong recommendations about installing safer fencing.

Safer fencing - Costs and Other Concerns

With pool ownership comes many related expenses. For example, additional expenses can include chemical and heating costs. Safer fencing should be considered as part of the cost of owning a pool.

Costs for fencing and gates naturally vary according to the construction and material selected. Fencing costs start at approximately five dollars per linear foot for a 'do it yourself' fence. There are many variables that can affect the total installation cost of a four-sided pool fence including total footage, the number of gates, corners and end posts required, as well as site conditions. Therefore, many fencing companies require an on-site visit to determine an accurate quote. Total installation for a four-sided fence can range between five hundred to several thousand dollars depending on the above variables. This price is a fraction of the cost of building an in-ground pool.

Retrofitting an existing perimeter fence, by adding a fourth side and appropriate gate(s), is also an option to consider. Retrofitting a backyard fence to add a fourth side and appropriate gates may be a feasible solution for existing pools. The retrofit option may also be much less expensive than new construction.

A concern that may be raised related to fencing is aesthetic considerations. Pool owners may be reluctant to obscure the view of their pool. However, the pool area can be designed to be both visually appealing and safe. There are many options for pool fencing currently on the market that are aesthetically pleasing. Newer types of fencing may also be available in transparent materials.

Another concern that may be raised is that not all pool owners have small children living in the home. However, few could guarantee that a small child would never visit. Victims of backyard drownings include the young children of pool owners or of people visiting a relative or friend with a pool.⁴⁶ Home owners are subject to many safety requirements. Pool fencing is similar to installing railing on decks and balconies in that it is 'built-in' protection designed to prevent unintended falls and potentially life-threatening injury. Just as we manage other risks, such as adding secure railings to decks and stairs, water risks need to be managed.

Contrasted to the burden of installing safer fencing, or making existing fencing safer, is the cost of doing nothing. As stated above, drowning costs Canadians millions of dollars every year. It is Safe Kids Canada's position that the value of children's lives saved is greater than the cost of fencing.

Support for Safer Fencing Laws

Supporters of the call for safer pool fencing legislation include many national organizations (please see the growing list below). Safe Kids Canada worked with Decima Research to understand how Canadian parents feel about mandatory safer pool fencing. Participants

were asked: “Would you approve changing laws to make four-sided fencing around swimming pools mandatory?”. The national survey results show that a resounding 81 per cent would approve changing laws to make four-sided fencing around home swimming pools mandatory. Nearly half (48 per cent) of Canadian parents polled have a pool, a spa, or a hot tub.⁴⁷

Supporters of Safer Pool Fencing Laws Include

- Safe Kids Canada
- Safe Kids Worldwide
- The World Health Organization⁴⁸
- Canadian Red Cross
- Life Saving Society
- Pool And Hot Tub Council of Canada
- Safe Communities Canada
- SMARTRISK
- ThinkFirst Canada
- Institut national de santé publique du Québec
- MPP Lou Rinaldi, Northumberland, Ontario
- AHSC Trauma Program
- Alberta Centre for Injury Prevention and Control
- Atlantic Network for Injury Prevention
- IMPACT, Manitoba
- BC Injury Research and Prevention Unit
- Plan-it-Safe, Children’s Hospital of Eastern Ontario
- Child Safety Link, Nova Scotia
- Canadian Parents (81% majority of those polled)

RECOMMENDATIONS

Based on current research available for drowning prevention and safer pool fencing, Safe Kids Canada makes the following recommendations.

Recommendations for municipal governments

- Municipal governments review and amend existing or enact safer pool fencing by-laws within their jurisdictions.
- Safer pool fencing is four-sided with a minimum height of 1.2 m (4 ft) and completely separates the pool from the house, preventing direct access of a child. The pool enclosure should also be constructed of material and design that inhibits climbing. A self-closing and self-latching gate should regulate all access points through the four-sided pool fence.
- Safer pool fencing legislation should cover all artificial bodies of water with a depth of over 0.6 m (2 ft/24 in) including in-ground pools, above-ground pools, portable pools, inflatable pools, hydro-massage pools, spa, hot tubs and decorative ponds
- By-laws should be complemented by education and enforcement.

Recommendations for provincial and territorial governments

- Provincial and territorial government should work with municipalities to ensure that there is a minimum standard of pool safety legislation. Provincial and territorial governments enact province-wide minimum pool safety legislation, including the requirement of four-sided pool fencing with self-closing and self-latching gates, within their jurisdictions.
- Complementary education and enforcement should also be supported.

Recommendations for pool owners

- Four-sided pool fencing should be installed to protect children from accessing private residential swimming pools, including in-ground, above-ground, portable, inflatable and hydro-massage pools, hot tubs, spas and decorative ponds.
- Self-closing, self-latching gate(s) should regulate all access points through the four-sided pool fence. Gates should be installed so that the latch cannot be easily accessed by young children. Gates should be installed to open in the direction away from the pool area. Four-sided pool fencing should be constructed of materials that inhibit climbing by young children.
- Owners of private residential swimming pools may opt to use door locks, pool covers, pool alarms, etc. however, they should never be relied on as the primary means of preventing unintentional child drowning.
- All pool owners should be trained in swimming, first-aid and CPR as these skills can bridge the gap of time between the rescue and the arrival of paramedics on the scene.

Recommendations to parents and caregivers

- Supervise young children within sight and reach for any child under age five – or any older child who does not know how to swim well – when he or she is in the water or playing close to the water. Older swimmers still need to be watched carefully.
- Supervisors of children in pools should be familiar with local emergency response contact information. Supervisors should also be trained in swimming, first-aid and CPR as these skills can bridge the gap of time between the rescue and the arrival of paramedics on the scene.
- Choose a lifejacket or personal floatation device (PFD) approved by Transport Canada and that fits your child's weight and chest size. Buckle it up every time, and use all of the required safety straps and buckles on the lifejacket. A child can slip out of a lifejacket or PFD that does not fit properly or is not buckled up properly.

Recommendations for the pool and spa industry, fence and pool retailers and product standards

- Encourage consumers to install safer pool fencing.
- Advocate for drowning prevention measures including safer pool fencing.

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