



HASTINGS PRINCE EDWARD
Public Health

Backyard Pool Safety



Situational Assessment Results

June 2016

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Introduction

The focus of this report is to provide information regarding drowning prevention within Hastings and Prince Edward Counties, thus meeting the Board of Health Outcome stipulated in the Ontario Public Health Standards for the Prevention of Injury and Substance Misuse that states:

“Policy-makers have the information required to enable them to amend current policies or develop new policies that would have an impact on the prevention of injury and substance misuse” (p33).⁵

The goal of this report is to help policy makers make an informed decision on how to prevent drowning in backyard pools. In particular, it explores whether safer pool fencing bylaws are an effective part of a comprehensive drowning prevention strategy. The thoughts and opinions expressed are those of the author and do not necessarily reflect the opinions of the Board of Health for Hastings Prince Edward Public Health.

Rationale

Currently in Canada, drowning is the second leading cause of death amongst children 14 years of age and under.⁶ In 2010, Ontario had a 260% increase in drowning deaths for children less than five years of age compared to previous years.⁷ For children under 5 years of age, private backyard pools present the greatest danger and account for 49% of water-related deaths in this age group.⁷

Safer pool fencing is an important risk management tool to prevent drowning amongst children.^{6,9} The findings from the Office of the Chief Coroner’s⁷ report on drowning lead to the conclusion that “The Office of the Chief Coroner does not support any bylaw aside from one that mandates four sided fencing” (p15).⁷ Safe Kids Canada estimates that 7 out of 10 drowning incidents can be prevented with safer pool fencing laws.⁹

Within Hastings and Prince Edward Counties (HPECs), there are three municipalities without fencing bylaws in place. The remaining municipalities have fencing bylaws in place that usually only require three-sided fencing. Best practice suggests that four-sided-pool-fencing is the safest for the prevention of drowning and thus should be explored as a bylaw option for municipalities within HPECs.^{7,9} As such, Hastings Prince Edward Public Health sought to assess the community readiness and awareness for this type of personal and municipal risk management tool to prevent drowning in children age 1-4 years.

Research Question

The situational assessment explores the question, “What is the community readiness in Hastings and Prince Edward Counties for a bylaw proposal for safer pool fencing?”

Methods

The methods used to conduct the situational assessment included key informant interviews with municipal Chief Building Officers and managers/owners of local pool retailers, and an online survey to engage residents of Hastings and Prince Edward Counties on the subject.

Municipal Chief Building Officers and pool retailers were contacted by telephone. The questions were developed and reviewed by Hastings Prince Edward Public Health (HPEPH) staff. The resident survey was also developed by HPEPH staff and was used to assess the support for four-sided pool fencing from residents within Hastings and Prince Edward Counties. While the survey was promoted online through

both HPEPH Twitter and Facebook accounts, promotion was primarily through Facebook. A link to the survey was also made available to residents through the HPEPH website on its water safety page.

During the summer of 2015, an awareness campaign was also implemented alongside the situational assessment. The goal of the campaign was to raise awareness regarding the importance of safer pool fencing for the prevention of drowning in children four years of age and younger. The awareness campaign used the following methods of providing information to the general public:

- radio advertisements,
- social media campaign,
- media release,
- Fence It Up web domain,
- HPEPH website, and
- the distribution of posters and pamphlets to daycares, Ontario Early Years Centres, municipalities, family health teams, community health centres and pool retailers.

The social media campaign included a total of ten ads created to post and boost on the Hastings Prince Edward Public Health (HPEPH) Facebook page during the month of July 2015. An eleventh ad was created to promote the survey. The same posts were also used on HPEPH's Twitter account.

Results

Awareness Campaign

There were over 3000 pamphlets and over 140 posters distributed throughout Hastings and Prince Edward Counties. Posters and pamphlets were distributed to daycares, family health teams, community health centres, pool retailers, and municipal offices. Media outlets that covered the topic included Quinte News and the Belleville Intelligencer.

Using the analytics feature within Facebook, the following results were obtained regarding the social media part of the awareness campaign. The survey post received the most action overall with over 1,000 likes, shares, comments or clicks. Once the survey results were removed, the following patterns emerged for the remaining ten ads. The ad titled, "Did you know drowning is the second leading cause of death," generated the most results with 206 people taking action. Actions include likes, shares, comments or clicks. When the actions are broken down, this same ad took the lead with the most likes ($n=102$) and the most shares ($n=31$). For comments, the ad titled "Did you know 81% of parents support bylaws" generated the most comments ($n=16$). The ad that generated the most website clicks was "Thinking of getting a pool?" ($n=51$) which linked to the Hastings Prince Edward Public Health (HPEPH) recreational water website page containing more information on backyard pool safety and drowning prevention. The HPEPH website analytics showed the recreational water page amongst the top five landing pages for the months of June, July and August, 2015.

Interviews with Chief Building Officials

There are ten Chief Building Officials (CBOs) throughout Hastings and Prince Edward Counties. All ten were contacted to explore backyard pool safety from a bylaw enforcement perspective. Nine of them were available to speak about backyard pool safety in their areas and agreed to participate.

The process for acquiring a fencing permit was similar across all areas. It is the home owner's responsibility to contact their respective municipality to learn about local bylaws and gain the necessary permits. Municipalities with bylaws mostly followed a similar process where they required a sitemap indicating where the pool and fence would be placed on the property. Not all bylaws were similar, for example one municipal bylaw has not been amended since 1974 and only applies to in-ground pools where another municipal bylaw does not include spas, whirlpools or hot-tubs.

One municipality requires a deposit upon application for the permit, which residents would be reimbursed after the final inspection. This municipality created this process because they found that permits would be issued but phone calls would never be received to conduct the final inspection. This one municipal CBO felt that while this added another administrative layer to the process, it helped to increase the number of residents calling to receive their final inspection. This benefited the municipality by helping to decrease any potential liability for the municipality.

When asked whether any literature on pool safety or drowning prevention was shared with residents obtaining permits, all CBO respondents indicated the municipality did not provide educational information during the permit process. A couple of municipalities expressed a willingness to share materials produced by other organizations, such as public health, but felt it was not their role or within their capacity to create such materials themselves.

Most CBOs enforced the bylaw on initial installation and then only by complaint basis thereafter. The average number of pools installed annually varied area to area. In the more populated areas of Belleville and Prince Edward County, there was approximately 20 pool fencing permits issued each year. In the more rural areas it ranged from none to a dozen permits issued per year.

When asked their opinion on whether it would be difficult to create a bylaw or amend an existing bylaw for pool fencing with four sides, answers varied depending on whether the municipality already had a bylaw or not. In municipalities with existing pool fencing bylaws, many felt that if their council decided to make that amendment, then it was their role to enforce it and that it would not create any significant difference to their work. In fact, there was one municipality that felt it was already interpreting and enforcing their fencing bylaw as requiring four-sided-pool-fencing. However, one CBO felt that grandfathering existing pools would be challenging to enforce because the inspector would not be able to tell which pools were new and which ones were already in place or grandfathered. In municipalities where there was not already a bylaw in place, there was concern for their capacity to take on that enforcement role and potential liabilities.

Another challenge regarding backyard pool safety volunteered by several CBOs was the availability of inexpensive seasonal pools. These pools were often greater than two feet in depth and remained filled with water all summer. For municipalities with existing bylaws, these types of pools would still be subject to the pool fencing bylaw. Many residents who purchased these types of pools were unaware of this when they purchased the pools. As a result, they were very upset to learn about the fencing requirement as many felt they could not afford a fence.

Interviews with Pool Retailers

There are six pool retailers within Hastings and Prince Edward Counties. These retailers are concentrated in the southern part of the region with three in Belleville, two in Trenton and one in Picton. All six pool retailers agreed to carry and share the campaign materials with their customers. Four of the six retailers participated in the remaining interview questions.

All four retailers installed pools, however some only sold above-ground pools while others sold a mix of above-ground, on-ground, and in-ground pools. When combining the pool sales for three of the four retailers, there was an estimated average of 60-80 new pools being sold each year. One retailer felt that overall pool sales were decreasing and that more of their focus was on pool maintenance such as installing new pool liners.

With regards to discussing fencing with prospective pool owners, all retailers directed their customers to check with their respective municipality. Retailers reported various attitudes that were expressed by customers regarding fencing. One retailer felt it varied depending on the customer and where they live; some insisted on fencing while others who lived in rural areas and did not have neighbours nearby would not install a fence. Yet another retailer found that they often would see four-sided-pool-fencing in rural areas where it was less expensive to fence just the pool area rather than their whole lot. Another retailer found that many customers who purchased above-ground pools did not see the point in having fencing. While another retailer who installs in-ground pools reported that all the pool owners who lived in a municipality without fencing bylaws still chose to put a fence in despite not being required to.

Other safety products were often mentioned as a means of keeping young children safe such as pool alarms, wrist-band alarm systems and newer pool covers that did not collapse into the pool when pressure was placed on top of them.

Another point of interest mentioned by a retailer included a concern that any increased costs with owning a pool would result in decreased pool sales. Another suggestion included providing examples of safer pool fencing to retailers so they could better understand what was meant by the concept and to also have a visual to show their customers.

A final observation of interest was how new subdivision lot sizes can impact whether residents could even consider putting in pools. This one retailer, who also installs pools, shared that within the newer subdivisions many lots were smaller, so the idea of four-sided-pool-fencing may be particularly challenging. This retailer also observed that in-ground pools themselves were getting more challenging to install in newer subdivisions. In some instances, if someone wants an in-ground pool in these newer subdivisions, home owners have to work with their developers to get them in before other houses are built. Once the other houses are built, there may not be enough room to bring in the equipment to install an in-ground pool.

Community Survey

There were over 570 clicks on the survey website and a total of 385 residents chose to complete the survey. Nine surveys were excluded from the analysis because they did not indicate their municipality, resulting in 376 surveys eligible for analysis. Among respondents, 36% lived in Belleville, 37% lived in Quinte West, and 27% lived in the various rural areas of Hastings and Prince Edward Counties.

Amongst the 376 respondents, 113 (30%) respondents agreed or strongly agreed with the statement “A fence should completely enclose the pool on all four sides with no direct access from the house,” while 261 (69%) respondents disagreed or strongly disagreed with the same statement.

A slightly higher proportion of respondents (40%) supported a bylaw requiring four-sided-pool-fencing around pools that are 2 feet deep or deeper. This may have been because 17% of respondents who disagreed with the statement, “A fence should completely enclose the pool on all four sides with no direct access from the house,” still expressed support for a bylaw. Overall, those who agreed or strongly agreed with four-sided-pool-fencing statement in question one were also more likely to support a bylaw (92%), while those who disagreed or strongly disagreed mostly did not support a bylaw (82%).

There was a significant difference between urban residents (respondents from Quinte West and Belleville) and rural residents (respondents in the remaining parts of Hastings and Prince Edward Counties). In this sample, rural residents were more likely to agree with four-sided-pool-fencing than urban residents; 35% of rural residents (n= 101) versus 28% of urban residents (n= 275) agreed or strongly agreed with the statement, “A fence should completely enclose the pool on all four sides with no direct access from the house.” The numbers for those who disagreed or strongly disagreed showed fewer rural residents disagreeing (65%) where more urban residents did disagree (71%).

Whether or not respondents had children age 0-14 years in the home did not make a difference in respondents’ opinion. Overall, 52% (n=196) of respondents had children age 0-14 years in the home and of these respondents, 64% also had pools (n=127). Amongst the respondents who agreed or strongly agreed to four-sided-pool-fencing (n=117), 46% of those respondents had children at home while 53% of the respondents who disagreed or strongly disagreed with four-sided-pool-fencing (n=267) had children in this age range.

Whether or not respondents owned pools did make a significant difference in how respondents answered the survey. Those who already owned a pool 2 feet deep or deeper were more likely to disagree with four-sided-pool-fencing. Overall, 61% (n=231) of respondents answered yes to having a pool deeper than 2 feet. Amongst the respondents who agreed or strongly agreed with four-sided-pool-fencing (n=117), 41% had pools deeper than 2 feet, while 69% of the respondents who disagreed or strongly disagreed with four-sided-pool-fencing (n=267) answered yes to having a pool deeper than 2 feet.

To gain a better understanding of why respondents chose to agree or disagree, the respondents were given the opportunity to explain their answers. Various themes emerged from the comments section that help to better shape the discussion around this important topic.

Themes from respondent's who agreed or strongly agreed with four-sided-pool-fencing

Amongst the respondents who agreed or strongly agreed with the statement, "A fence should completely enclose the pool on all four sides with no direct access from the house," the following themes emerged from the comments:

- There is existing support for four-sided-pool-fencing
- Fencing requirements for above-ground pools should be different from in-ground pools
- It is the pool owner's responsibility to prevent neighbourhood children from accessing their pool
- It is normal for a municipality to have a pool fencing bylaw
- There are environmental and educational factors that prevent or mitigate drowning in young children

Below are samples of comments from each theme.

There is existing support for four-sided-pool-fencing

Within this group there was strong existing support for four-sided-pool-fencing.

"Would save lives!"

"I totally agree, better to be safe than sorry."

Fencing requirements for above-ground pools should be different from in-ground pools

Some respondents felt it was important to make a distinction between fencing for above-ground and in-ground pools. Most felt that in-ground pools should definitely have fencing whereas the sides of the above-ground pool served as a sufficient barrier, as long as there was also some kind of physical barrier restricting access to the water such as a gate or removable ladder.

"I think above-ground pools should be exempt from these bylaws, however, in-ground pools should be required to have a fence around them. It's a lot harder for someone to fall into an above-ground pool."

"I have an above-ground pool with fencing on deck plus gates. Pool is 52 inches high. Not in-ground which is unsafe and should have a fence. No small children. Think if the pool is higher than 2 feet then fence needed."

It is the pool owner's responsibility to prevent neighbourhood children from accessing their pool

Many respondents who agreed with four-sided-pool-fencing also felt it was the pool owner's responsibility to restrict access to their pool with a fence to keep neighbourhood children safe.

"I have a neighbour that doesn't really have a fence and it worries me."

"I am totally shocked that our neighbours have just built an in-ground pool next door to us with absolutely no fencing in [municipality name removed for respondent privacy]! We have young grandchildren we babysit and I will be extra vigilant when they are visiting! Shame on any municipality that does not require a building permit and a four sided fence!!!"

“My daughter and son-in-law installed a pool in [municipality name removed for respondent privacy] and insisted that a complete fence around the pool be installed. It is absolutely necessary for your own kids and straying neighbour kids.”

“People don’t need pools but if you want one and can afford one you can afford the fencing. Make it mandatory. Owners can only have peace of mind if they have the fence. Who doesn’t want that?”

It is normal for a municipality to have a pool fencing bylaw

There were respondents who moved from an area with existing bylaws and now live in areas where there currently are no fencing bylaws. Fencing bylaws were already “normal” for these respondents and they could not understand why there were not bylaws where they live now.

“We were very surprised when we moved here that fences are not required when putting in a pool.”

“A fence should be a requisite for both safety and insurance purposes. Always had a fence in Toronto so should be the same here. I notice people with these 3ft deep pools just sitting there with easy access for anybody.”

There are environmental and educational factors that prevent or mitigate drowning in young children

The comments from this group focused on environmental barriers such as fencing, locks, ladders, gates etc. as important factors to prevent drowning. This group also included comments expressing the need for education in emergency response, such as first aid and CPR, as an important factor in mitigating drowning. Some chose to focus on the actual depth of the pool that should be fenced in when determining whether fencing was an appropriate environmental tool to prevent drowning.

“I feel all pools should be completely enclosed and alarms should be installed on all doors from the house.”

“The fencing should be for any pool even if not directly accessible from the house. I watched a 5 year old jump up the side of a 4 foot pool and throw his leg over the side so he could grab something floating on the water. Their ladder to access the pool was not down (above-ground). It should also be a locked gate. Safety device/ring or reaching pole should be within a couple feet of poolside.”

“Self closing gate.”

“Locking gates as well as a safety hook at the highest point on fence.”

“Always keep it locked.”

“Pool area should be locked. Height of fencing should be 5’ and not chain link as it is easy for children to climb. Perhaps privacy type fencing would be appropriate.”

“Fence should be opaque. Kids love to climb fence. If they can’t see a pool back there they probably won’t want to climb over fence – probably.”

“All homeowners with pools MUST be certified in CPR and First Aid.”

“Home owners with pools should be made to get CPR and First Aid certification.”

“I would support a bylaw of 2.5 feet or deeper.”

“I think a pool 4 feet and higher should be fenced in.”

Themes from respondent’s who disagreed or strongly disagreed with four-sided-pool-fencing

Amongst the respondents who disagreed or strongly disagreed with the statement, “A fence should completely enclose the pool on all four sides with no direct access from the house,” the following themes emerged from the comments:

- There is existing support for four-sided-pool-fencing
- Fencing requirements for above-ground pools should be different from in-ground pools
- It is the pool owner’s responsibility to prevent neighbourhood children from accessing their pool
- Adult supervision plays an important role in preventing drowning, along with education, understanding child development, and other environmental factors
- Having access to affordable recreation such as swimming is important

Below are samples of comments from each theme.

There is existing support for four-sided-pool-fencing

Despite disagreeing with the statement, “A fence should completely enclose the pool on all four sides with no direct access from the house,” many comments actually supported the idea of four-sided-pool-fencing. Below are examples of comments that actually described four-sided-pool-fencing and support for them.

“Fenced in yards with gated decks.”

“Our whole backyard is completely fenced. I don’t believe no access to the pool from your house is appropriate. Perhaps a gate from the deck to pool but that is plenty.”

“I believe that there should be a fence around pools however I don’t agree that there should be no access from the house...I don’t have a pool now but I used to when my son was a year old [and] we put safety measures in place such as bars on the patio doors that were up high out of reach and we installed a gated door that locked where the deck led to the pool...”

“I think direct access is fine with a gate. Our pool is on ground level and our back deck is elevated. A stairway down to the pool with a gate or removable section at the top would prevent access when not in use...gate is always locked so kids can’t get in.”

“The area to access our pool is completely gated in. The walls of the outer side of the pool act as a barrier. You would have to be a full adult to climb into the pool via the walls.”

“Our pool is surrounded on three sides by a fence with a self-latching gate as the only access. The fourth side of the enclosure is the back wall of the house. There is NO direct

access from the house to the pool area. Putting a fence adjacent to the back wall of the house would be redundant and serve no purpose to enhance safety...”

“While I agree that a pool should have fencing around it – not all four sides as long as one of those sides is the house. Why put a fence between the pool and the back of the house? We have an in-ground pool with 3-sided fencing with the 4th side being the back of the house with no access to the pool. It would be pointless to put up a fence with just a few yards between the house and the pool. So that is why I am disagreeing to 4-sided fencing. Our fences are also 5ft and above. We also have two latched gates before entering the pool area.”

Fencing requirements for above-ground pools should be different from in-ground pools

Many of those who disagreed with fully enclosing a pool on all four sides with a fence felt it was important to distinguish the difference between above-ground pools and in-ground pools. In many of those cases, respondents felt that in-ground pools should be fenced while above-ground pool should have some kind of physical barrier blocking access to a deck or removable ladder when the pool is not in use.

“I only see above-ground pools without fencing, most owners with in-ground pools or a permanent type of above-ground pool have them fenced.”

“There is a difference between fencing an in-ground or above-ground pool.”

“I think in-ground pools should be fenced and have no direct access from the house, above-ground pool should be left at owners discretion. Ladders could be removed...”

“Pool access should be restricted, as in a fenced yard. I don’t think that the pool itself has to be fenced. How would that work for an above-ground pool in a small yard?”

“A pool that is 4 feet or taller is its own protection. If small children around, then removing direct access from deck area is all that is required. If in-ground, then fencing should be used.”

It is the pool owner’s responsibility to prevent neighbourhood children from accessing their pool

Many of those who disagreed with four-sided-pool-fencing still felt fencing was important. Given that there are three municipalities within Hastings county that do not have any fencing bylaws for pools, this is an important distinction to make as there does appear to be support for three-sided-fencing by both those who agreed and disagreed with the four-sided-pool-fencing statement. Below are samples of comments from respondents who disagreed or strongly disagreed with the four-sided-pool-fencing statement but supported three-sided-fencing in general for pools.

“Pools should be locked to neighbours and from house, but not fenced from house. Too expensive for homeowners to change existing decks.”

“Enclose the yard not the pool.”

“A fenced yard surrounding the pool is necessary for preventing unintentional access to pools.”

“Three sided fencing is fine using the house as the fourth side.”

“Pool access should be restricted, as in a fenced yard. I don’t think that the pool itself has to be fenced...”

“Fenced yard, Yes, but I do not agree that it shouldn’t be accessible from our home.”

“I believe that a fenced yard with proper gate is all that is needed.”

“I feel that to have the pool enclosed i.e. fencing for neighbourhood or public access is definitely needed, however to HAVE to fence in my above ground pool a[s] situated within my house’s back deck I think is a little unfair...”

“Fence around perimeter of yard sufficient.”

“I think a 3 sided fence blocking outside is sufficient.”

“I think yards with pools should have a locked fence around them. That includes hot tubs but a secondary fence around the pool or hot tub is overkill.”

“Min 4ft fence around in-ground pools on three sides is more than enough.”

“It think to have a pool in your yard there should be a fence around it, I believe as long as your yard has a fence with a self-latching gate, this should be sufficient. For example when going to the [local municipal¹] arena, there is a house in the front of it that has a pool. There is no fence and any person can just jump in, I strongly believe that every pool over 2ft should have a fence around it.”

Adult supervision plays an important role in preventing drowning, along with education, understanding child development, and other environmental factors

Many respondents placed strong emphasis on the importance of parental supervision, along with recognizing the importance of understanding child development, and the need for education. When considering how to manage the risk of owning any type of pool, all of these considerations are very important. One respondent’s quote summarized this idea very well:

“...educate the child from day one then ensure they do not have access...”

This comment recognizes the need to teach a child but also takes into account that it takes time for a child to develop the physical and psychological skills to keep themselves safe, so in the meantime it is still important to have environmental barriers in place to help keep them safe. The following comments from respondents echo similar ideas regarding the importance of having a combination of environmental barriers, appropriate supervision and education.

¹ Municipality name removed for respondent privacy

“We have fencing around our property which is within the guidelines of our municipality and which cost us a lot of money. We do not allow young children to be alone by or in the pool at any time. Parents need to take responsibility for their children and young guests.”

“I think a 3 sided fence blocking outside is sufficient. Supervision and lock back doors that have access.”

“Should always be more than one person in the pool area, No swimming alone! Yard fenced with pool but still allowing direct access to house.”

“A gate in the yard can just as easily be opened as a door from the house. How about put the money into teaching safety and swim lessons.”

“Pools should be locked to neighbours and from house, but not fenced from house. Too expensive for homeowners to change existing decks. Safety of children means that parents need to keep an eye on where their kids are and to teach them it’s not alright to go outside on their own if you have a pool or not.”

“Fencing yes, but there should be direct access from the house. It is the owner’s responsibility to ensure children of the house know when to enter the pool area and supervise it.”

“...Our property is completely fenced so the only ones who should be near our pool are those that we have invited. Anyone who visits with children is responsible to stay with their children...”

“There is already a fence in place around the pool. Access from the house is the responsibility of the owner! People need to assume the responsibility...”

“Full fencing of the yard should be adequate for safety and security, and as a barrier for access to pools. All children should be supervised and/or wearing life jackets in a pool area. Fencing is not a replacement for proper adult supervision.”

“Don’t need another new bylaw. The current ones provide proper safety now...”

“We cannot protect everyone 100% of the time. There are other options that should be considered. For example door alarms, motion detectors with cameras that can send signal to your phone etc.”

“Responsible adults make pools safe not fences and legislation.”

“If the yard has a fence it should be a minimum of 5ft tall and all doors should have locks including house doors that access the yard fenced with the pool. Locks should be installed at a height that kids can’t reach to unlatch.”

“...I think children should be taught pool safety before a pool is installed.”

“I think that if you have children then its only common sense that you have no access from your home.”

“Attending to your children is always the number one concern. Always having an adolescent in the yard and around the pool is key to safety.”

“I believe that there should be safety measures in place, having recently dealt with the current bylaw in [municipality name removed for respondent privacy], I feel that the restrictiveness of amending the bylaw will make having a pool not worth it. My son could open the fence gate at age six.”

Having access to affordable recreation such as swimming is important

The following comment is a good example of residents wanting options to access affordable recreation, and further highlights the enforcement challenges mentioned by chief building officials regarding the fencing of inexpensive backyard pools.

“In my opinion, if it is a big, regular sized backyard pool, then yes, u should need a fence....but it’s kind of ridiculous, to have to put a fence around those blue pools, with the pumps...lots of people rent, and want something clean, besides public pools for their kids to swim in....we can’t put a fence around!! I would love to get a small blue pool with a pump for my kids, and I would always be out there with them....NO FENCE FOR SMALL POOLS! ONLY FOR BIG REGULAR, FAMILY POOLS!”

Limitations

The sample used to collect this data was from a convenience sample and therefore is not necessarily representative of the overall population in Hastings and Prince Edward Counties. Therefore these results cannot be generalized to the entire population of Hastings and Prince Edward Counties.

The survey tools were also not validated prior to implementation and may not have accurately measured residents’ readiness for safer pool fencing since many of the comments described the characteristics of safer pool fencing in their comments.

Sample demographics that might make a difference in results and were not included in this data collection are level of education, socio-economic status, gender, and age. However, it may be possible to extrapolate gender and age from the social media campaign as the survey was promoted through that medium. According to the results of the social media campaign, women represented over 80% of those who engaged in the campaign.

Despite these limitations, the results of this assessment are still useful in determining readiness amongst residents for safer pool fencing and the next steps for drowning prevention in Hastings and Prince Edward Counties.

Discussion

The purpose of this situational assessment was to determine, “What is the community readiness in Hastings and Prince Edward Counties for a bylaw proposal for safer pool fencing?” Overall, 40% of respondents expressed support for a bylaw stipulating four-sided-pool-fencing requirements. Rural residents were more likely than urban residents to show support for four-sided-pool-fencing. It is

possible that support may actually be higher given that many comments described four-sided-pool-fencing despite expressing disagreement with enclosing pools on all four sides with no direct access from the house. It is also important to note that many respondents currently owned pools. These respondents may be afraid of having to retrofit their pools, thus increasing the number of respondents expressing no support for safer pool fencing. Toronto implemented a four-sided-pool-fencing bylaw in 2000.² To alleviate similar concerns regarding retrofitting existing pools, Toronto chose to grandfather existing pools.² Existing pools were only required to meet the requirements of the new bylaw if there were any plans to replace an existing fence, similar to how the building code works.

The results did make it very clear that many respondents did support three-sided fencing. There were several comments from both groups about pool owners' having the responsibility of preventing neighbourhood children from accessing their pools, with fencing being the primary tool to prevent this access. Thus, any municipality currently without a fencing bylaw would likely have support from its residents to adopt fencing bylaws.

Many respondents also identified the importance that other factors play in the prevention of drowning for children age 1-4 years. Table 1 identifies the factors mentioned by many respondents as well as other factors that help to mitigate or prevent drowning in this age group. Table 1 is broken down into three stages and refers to three kinds of prevention:

- primary – preventing drowning from happening at all,
- secondary – responding quickly and effectively to a near drowning incident and,
- tertiary – mitigating the impact of a near-drowning incident.

This table is a commonly used tool by injury prevention experts known as Haddon's Matrix.⁸ This tool is used to identify areas where appropriate interventions can be made to prevent injuries, such as drowning. The more preventative factors that are in place, the more likely that a drowning can be prevented. While fencing alone is not always enough, safer pool fencing is one of the factors identified in the literature as playing a key role in preventing drowning.^{7,9} Without a four-sided-pool-fence, there is higher a chance of drowning for a child living or visiting a house with direct access to a pool; Safe Kids Canada estimates that seven out of ten drowning incidents can be prevented with four-sided-pool-fencing.⁹

Within Hastings and Prince Edward Counties, the risk of drowning for children age 1-4 years of age exists. According to the Canadian Red Cross, backyard pools and recreational properties are the prime location for drowning in children (34%) followed by parks and conservation areas (13%).¹ With the information provided by the Chief Building Officials and pool retailers on the average number of pools installed each year, it is estimated that in a ten year period approximately 600-800 pools have been installed. According to the results of this survey, 64% of respondents who had children age 0-14 years living in the home also had pools. It is important to note that this sample size was not randomized, so we cannot assume that this proportion is the same throughout Hastings and Prince Edward Counties. However, it provides a sense of the risk and it is reasonable to assume the risk of drowning amongst 1-4 year olds in backyard pools exists within Hastings and Prince Edward Counties. Thus, putting into place as many measures as possible identified in Table 1 to prevent drowning would be wise.

Table 1: Haddon’s Matrix and Drowning Prevention in 1-4 Year Olds

Backyard Swimming Pools and Drowning in 1-4 Year Olds	Host/Human Factors	Agent/Equipment	Physical Environment	Social Environment
Pre-Event (Primary Prevention)	<p>Child: age, mobility, curiosity, ability to assess risk or danger, spontaneous and impulsive</p> <p>Parental and/or pool owner:</p> <ul style="list-style-type: none"> - knowledge of drowning risk around water - diligence in checking extra barriers are in place (i.e. always locking the back door to pool area) - number of children in the family or visiting - other potential distractions from locking doors and maintaining active supervision 	<ul style="list-style-type: none"> - Type of pool: above-ground, in-ground pool, blow-up etc. - Lifejackets/PFDs 	<ul style="list-style-type: none"> - Fencing (3-sided versus 4-sided) - Locks on back doors of house - Self-closing, self-latching, and self-locking gates - Other types of alarms, pool covers etc. 	<ul style="list-style-type: none"> - Whether fencing bylaws are in place, in particular 4-sided fencing - Acceptance that fencing is an expected expense of owning a pool - Presence or lack of adult supervision and/or lifeguard - Availability of swimming lessons - Previous cultural experience around water (i.e. higher rates of drowning for immigrant families who may not have developed swimming skills)
Event (Secondary Prevention)	<p>Child: likely to be developmentally unable to rescue self from water if they fall in even if they are in swimming lessons; smaller lungs than an adult and can fill more quickly</p> <p>Parental and/or pool owner: planned versus unplanned time around water – supervision and response time</p>	<ul style="list-style-type: none"> - Time spent in water before rescued. - Rescuing equipment 	<ul style="list-style-type: none"> - Access to phone to call for emergency response. 	<ul style="list-style-type: none"> - Recognition of the signs of drowning (silent, not loud) - Presence or lack of adult supervision and/or lifeguard
Post-Event (Tertiary Prevention)	<p>Parental/pool owner training in CPR</p>	<ul style="list-style-type: none"> - Time for emergency response to arrive. 	<ul style="list-style-type: none"> - Rural versus urban location and emergency response time 	<ul style="list-style-type: none"> - Treatment/rehabilitation services for child and family - Community supports for family to raise child with brain injury

Recommendations

The focus of this situational assessment was to determine the readiness of residents in Hastings and Prince Edward Counties for safer pool fencing bylaws. The reason for exploring this is because of the known risk of drowning in backyard pools for children age 1-4 years. Since drowning continues to be the second leading cause of death for children age 1-4 years⁶, it is recommended that advocacy and awareness raising efforts on how to prevent drowning continue. The following are items for consideration when planning next steps in preventing drowning in Hastings and Prince Edward Counties.

Recommendations for Future Educational Campaigns to Prevent Drowning in Children Age 1-4 Years:

Given the fact that drowning is the second leading cause of death amongst children age 1-4 years⁶, it is recommended that annual awareness campaigns continue. Education can be a very effective tool when combined with other strategies. With regards to backyard pools and drowning prevention amongst children age 1-4 years, the following educational themes are recommended.

Defining What Active Supervision Looks Like

While many respondents correctly mentioned the need to supervise, it is important to define what is actually meant by “supervision” since “41% of Ontario parents think they can effectively supervise a child in the water without constantly watching them” (p6).¹ Another troubling finding is that “More than 6 in 10 Canadians (62%) believe they can effectively supervise a child in the water while they are under the influence of alcohol” (p3).¹ Awareness campaigns directed at showing what active supervision looks like might be effective in reducing the amount of parents who feel this way.

Recognizing Potential Drowning Hazards and the Need for Appropriate Supervision

In every interview with the Chief Building Officials (CBOs), each one mentioned seasonal pools. These are pools that are less expensive than permanent pools and are often 4 feet deep or less. Unlike permanent above-ground pools, they are typically set up for the entire swimming season and then removed at the end of the season. Often they have soft plastic sides to them, making it easy for young a child to fall in by putting minimal pressure on the sides. The Canadian Red Cross found that “Two thirds of Canadian parents say water depth is a “major factor” when determining whether their child needs supervision while around or in the water, believing shallower water to be safer.¹ 98% of parents with children younger than 4 [years of age] cited water depth as consideration in determining the level of supervision...In [drowning] cases where the depth of water was known, nearly 4 in 10 (37%) child drownings occurred in water depth of one metre or less. More than 90% of children who died in these conditions were not with a supervising adult”(p2).¹ Given these findings and the increased popularity of these seasonal pools, it is recommended that awareness initiatives include addressing the misperception that shallow water is safer. These campaigns should also address safety tips for personal wading pools as these should have proper supervision and be fully drained when not in use to remove the drowning hazard. Plus, this further supports the importance of fencing even for these seasonal pools.

Knowing How to Recognize the Signs of Drowning

The Canadian Red Cross also found that “1 in 5 Canadian parents say they have rescued someone struggling in water. Among those, more than three quarters (76%) intervened to help a drowning child”(p1).¹ Awareness campaigns that help parents and other adults understand what drowning actually looks like might also help parents understand the importance of active supervision. It seems that many do not realize that drowning is a silent event and cannot be prevented without visually supervising as sound cues are non-existent.¹

Addressing a False Sense of Security That Swimming Lessons May Provide

Swimming lessons are definitely recommended, however, research has suggested that even if a child under five years of age is taking swimming lessons, they should still be considered non-swimmers.⁷ It is important for parents to realize this so they may provide their children with the appropriate level of supervision when around water. Awareness campaigns aimed at parents of children age 1-4 years should include messaging that swimming lessons do not necessarily mean that child has developed the ability to swim and that proper supervision is still necessary when in or around water.

Safer Pool Fencing is the Most Effective Passive Strategy to Prevent Drowning in Young Children

Safer pool fencing is an example of a passive injury prevention strategy. Active supervision is an example of an active injury prevention strategy. Generally, active strategies tend to be more successful at preventing injuries when combined with passive strategies because active strategies typically rely on an individual to act and the actions, such as supervision, may not be consistently applied.⁶ Since the statistics continue to show that a majority of drowning incidents in young children occur when children are alone near water or there is a lapse of caregiving attention,^{1,4} it stands that active supervision is not being applied consistently. Therefore, a four-sided-pool-fence with a self-closing, self-latching, and self-locking gate is likely to be a more effective injury prevention strategy than supervision alone. Thus, it is recommended that advocacy efforts continue to encourage the enactment of safer pool fencing bylaws. Enacting safer pool fencing bylaws completes the recommended comprehensive approach found in injury prevention literature and will be key to successfully prevent drowning in children ages 1-4 years.⁶

Recommendation to Adopt Safer Pool Fencing Bylaws:

Statistics continue to show that a majority of drowning incidents in children age 1-4 years occur when children are alone near water or there is a lapse of caregiving attention.^{1,4,7} Backyard pool fencing provides a passive barrier to the pool that is more likely to be reliable than supervision alone when trying to prevent drowning in young children. The Chief Coroner of Ontario feels so strongly about the need for safer pool fencing that it concluded “The Office of the Chief Coroner does not support any bylaw aside from one that mandates four sided fencing” (p15).⁷ As a result, it is recommended that municipalities review and update their current bylaws regarding backyard pool fencing to include wording requiring four-sided-pool-fencing with self-closing, self-latching, and self-locking gates.

It is recommended that these bylaws include stipulating a minimum fencing height of four feet, that gates are self-closing, self-latching and self-locking, and that the fencing design makes it difficult to climb, go under or squeeze through. It is the municipalities’ discretion whether or not to set out specific stipulations based on whether the pool is an above-ground or in-ground. Wording addressing fencing for seasonal pools, hot tubs and spas should be included as well.

Implementing a bylaw process also creates an opportunity for education on pool safety and supervision during the permit process. Partners in drowning prevention can provide educational material to municipalities to share with prospective pool owners.

Recommendation to Include Equitable Access to Swimming Lessons within Municipal Planning Processes

Developing swimming skills and learning about water safety are important lifelong skills to have. In order to develop these skills, children need to have access to places where they can learn to swim,

especially given that “Weak or non-swimmers made up 6 in 10 children who drowned while engaged in aquatic activities like swimming or wading, and nearly 8 in 10 (78%) who died while engaged in non-aquatic activities”(p 4).¹ Municipal policy can influence whether affordable opportunities to develop these skills will be adequately distributed so that they are available for all children to access. During official planning cycles, it is recommended that consideration be given to including policies that “Ensure all residents have access to safe and healthy opportunities for active recreation in built and natural settings”(p15).³ The inclusion of such municipal policies and their respective implementation strategies would mean that those who cannot afford a private backyard pool, or do not have space for a private backyard pool, can still have easy access elsewhere to develop the knowledge and skills to prevent drowning. These additions during municipal planning processes would help to create a more comprehensive approach to drowning prevention within Hastings and Prince Edward Counties; the more comprehensive the approach, the more likely drowning can be prevented.

Recommendation to Collaborate With Appropriate Agencies to Implement Drowning Prevention Strategies

Another recommendation is to cultivate partnerships with appropriate local agencies and groups to collaboratively develop and implement drowning prevention strategies that address drowning risks throughout childhood. These may include but are not limited to the Canadian Red Cross Society, Lifesaving Society, pool retailers, municipalities, children and youth service agencies, conservation authorities, cottage associations, and provincial parks.

Conclusion

The purpose of this report was to provide greater insight into the complexities of drowning prevention in backyard pools. The risk of drowning in backyard pools does exist in Hastings and Prince Edward Counties. Given the various factors that can contribute to a drowning, it stands to reason that the solution to mitigating these risks must also be multifaceted. Strategies to reduce the risk of drowning should include developing a greater awareness of what constitutes appropriate supervision, equitable access to developing swimming and water safety skills, and the adoption of four-sided-pool fencing. It is clear that there is support from residents for three-sided-pool-fencing and it is possible that there is also greater support for safer pool fencing than these results showed. It is hoped that this information proves useful to those working towards solutions in drowning prevention.

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