



Drowning Prevention Pilot Project

Project Data, 2015

Drowning is the leading cause of injury deaths in children ages 1-4 in Ohio; it is the third leading cause of injury deaths in children ages 5-9 and 10-14. Survivors of severe drowning incidents can experience long-term disabilities including memory problems, learning deficiencies, and loss of basic cognitive functioning. Ohio does not currently collect detailed information on public swimming pool-related injuries or deaths. Recognizing the usefulness of these details for preventing drowning incidents, the Ohio Department of Health (ODH) initiated a Drowning Prevention Pilot Project to 1) better understand the circumstances surrounding these incidents, and 2) inform data-driven revision of public swimming pool rules. To gather these data, ODH developed the Public Pool and Spa Injury Incident Report Form based on Model Aquatic Health Code guidelines and other states' data collection practices, and piloted it with 23 local health districts (LHDs) during the 2015 outdoor swim season.

ODH received **85 reports** of pool-related injuries from **9 of 23** LHDs

- | | | |
|-------------------|---------------------|-------------------|
| ▪ Cuyahoga County | ▪ Marion County | ▪ Paulding County |
| ▪ Delaware County | ▪ Medina County | ▪ Shelby City |
| ▪ Lake County | ▪ Montgomery County | ▪ Wood County |

Public Pool and Spa Injury Incident Report Forms

- Approximately 91% of reports included the incident's date, time and location
- However, characteristics of sustained injuries (i.e., injury type, injured area, how injury occurred) were either missing or invalidly coded on 13% of forms
- More than 35% of reports included patrons' personal identifiers despite instruction and the lack of space for this information

Project Data

Demographics

- All of those reported injured were considered patrons of the pools
- Most of those injured were male (67.1%)
- Those injured by race:
 - American Indian/Alaska Native (1.2%)
 - Asian (1.2%)
 - Black/African American (16.5%)
 - White (72.9%)
- Age range of those injured was 2-45 years; average: 9.2 years
 - 0-4 years (11.8%)
 - 5-10 years (63.5%)
 - 11-14 years (12.9%)
 - 15-19 years (3.5%)
 - 20+ years (5.9%)

Timing of Incidents

- Majority of incidents were reported during the month of July (52.9%)
 - May (1.2%)
 - June (34.1%)
 - August (8.2%)
- Almost all incidents occurred during the afternoon or evening hours of pool operation (92.9%)
 - Morning, 7:00am – 11:59am (5.9%)
 - Afternoon, 12:00pm – 4:59pm (80.0%)
 - Evening, 5:00pm – 9:00pm (12.9%)

Location of Incidents

- Reported incidents occurred most often in outdoor pools (72.9%)
- The most common incident locations included the main pool (27.1%), diving board (24.7%), and slide (17.6%); though less common, other incident locations included zero-entry pools (4.7%), wading pools (4.7%), and spray grounds (1.2%)
- Water depth for incidents ranged from 0-13 feet; average: 5.8 feet
- Nearly all (96.5%) incidents occurred while the pool was open
- Almost half (48.2%) of reports were missing information about the pool enclosure being secure; 1.2% indicated that the enclosure was not secure at the time of the incident
- A vast majority (92.9%) of incidents occurred when there was at least 1 lifeguard present; average 3.7 lifeguards present

Pool-Related Injuries

- The most common form of injury was a cut/puncture or scrape (58.7%)
- The majority of injuries were experienced on patrons' lower extremities (i.e. leg, hip, knee, foot, or ankle) (50.0%), though head injuries were also common (39.5%)
- The vast majority of all injuries did not require an emergency response (87.1%)
- While a majority (62.4%) of patrons did not require treatment, 27.1% were treated and released, and 2.4% were reportedly hospitalized for injuries
- Over half (55.3%) of reports indicated a water rescue; 31.8% made use of some form of safety equipment, including rescue tubes and backboards
- Few (1.2%) reports indicated a need for resuscitation following a submersion injury, though none indicated a need for use of an AED device



Drowning Prevention Pilot Project

Survey Results

To prepare for the 2016 season, ODH sought to evaluate the Public Pool and Spa Injury Incident Report Form's effectiveness, feasibility and usefulness as a data collection tool and identify successes and challenges associated with project implementation. We disseminated a survey to all 23 participating local health districts with a response rate of 78%. The feedback provided is vital to the reconfiguration of the project, and will be used to further improve our processes for the 2016 swim season.

Participating Health Districts:

- | | | |
|---------------|------------|----------------|
| ▪ Clark | ▪ Lake | ▪ Putnam |
| ▪ Darke | ▪ Licking | ▪ Shelby City |
| ▪ Delaware | ▪ Madison | ▪ Summit |
| ▪ Elyria City | ▪ Marion | ▪ Toledo-Lucas |
| ▪ Gallia | ▪ Medina | ▪ Wood |
| ▪ Highland | ▪ Paulding | ▪ Youngstown |

Surveillance systems to monitor pool and spa-related injuries and incidents:

- Over 90% of responding health districts indicated that they do not have their own surveillance system

Public Pool and Spa Injury Incident Report Forms

Simplicity and flow of the Form:

- 100% of responders indicated that the flow of the form makes sense
- 90% of responders indicated that the form was simple to follow

Approximately 14% of responders indicated that there were areas of the form that should be altered. Their comments are as follows:

- *"At top of form recommend changing injured party to person - otherwise people will fill the form out for a group or try to put multiple people on one form - we see it happen with our animal bite reports. The number of person affected would be confusing for general public/ operators since the form starts out for an injury incident report for one person. Recommend asking number of contacts with similar symptoms? or number of people exposed to ill person? Or explain what you are looking for number of persons affected."*
- *"'Description of Injured Person' heading should read 'Description of Injured/Ill Person'"*
- *"Suggest Description of Injury & Description of Illness boxes being combined with 1 header or adding a N/A box so that one knows they do not have to fill out that area. Also the 'Description of Illness' font is smaller than other headers. Under the 'Form Completed by' recommend adding 'Title/description' of Person completing this form."*
- *"Under the 'Description of Incident' I think that 'How did the injury occur?' and 'Result of Incident' would work better towards the upper portion of the Description of Incident box."*

Public Pool and Spa Injury Incident Report Forms, *Continued*

Form submission to ODH:

- Almost half of responding health districts indicated that they were able to submit completed forms (47.6%); 90% of those indicated that they examined the forms before sending to ODH
- Of those that were able to submit completed forms, the preferred modes of submission were primarily email (55.6%) and fax (44.4%), though mail was also used (22.2%)
- Pools submitted completed forms to their respective local health districts via mail (40.0%), fax (40.0%), email (20.0%), and even hand delivery (20.0%)

Almost 30% of responding health districts indicated that they had challenges with their pool personnel.

- *"Some operators were hesitant to complete the forms due to liability concerns; some were hesitant because it took too much time."*
- *"They don't want to complete two forms."*
- *"We did not receive any back - I feel between the lifeguards who are not generally the manager, the chances of getting them back on a voluntary basis is slim."*
- *"Pools w/o lifeguards not aware of incidents; did not want to complete unless required by state to do so."*

Electronic database and training materials:

- The development of an electronic database was recommended by 86% of responders
- A comparable proportion of respondents indicated a need for training materials for improved pool- and spa-related incident reporting

Suggestions for project expansion to capture incident data at unguarded pools include the following:

- *"Put it mandatory in the new set of pool rules."*
- *"The only way would be to make it mandatory."*
- *"Revise the rules to require signage be posted that indicate injuries are to be reported to the operator and that operators maintain an injury log."*
- *"Send each unguarded pool a sign to post stating how they can report pool-related incidents."*
- *"Signs that could be posted with a web-link to a form that could be electronically submitted."*
- *"Having information ready to be mailed with a cover letter during licensing."*
- *"Send forms out to each facility within 30 days of license application due dates, or by June 1st of each year."*
- *"This could be incorporated in annual training sessions hosted by LHDs for pool operators, and also reinforced through education during standard inspections."*
- *"Contact motel and condo operators requesting their involvement. They could request of their patrons to report injuries and illnesses to them and have them fill in the questionnaire."*
- *"Have an online database, where anyone can get on the Ohio Department of Health's website and report any pool related incidents."*
- *"Online form that is easily accessible."*
- *"Make the reporting form available to emergency personnel so that they may be able to report injuries that would otherwise be missed due to the lack of lifeguards. The form or electronic form could be located on your website, and then they could access it as needed."*
- *"Include training also focused to local EMTs, police, sheriff deputies for local health districts to give with a copy of the form to fill in after responding to the incident. It could be one page explaining the form. Would need to have to explain it is only for the public pools and not residential pools."*

General Feedback of the Project

Overall usefulness of the Forms for tracking pool-related incidents:

- Over half of respondents indicated that the forms were either somewhat or very useful (52.6%)
- Conversely, very few respondents indicated that the forms were not useful (15.8%)

Positive aspects of the project:

- *"A one-page document is helpful; however, pool facilities tend to also use their own forms (insurance or policy requirement?). This led to some duplication."*
- *"Anytime we collect data for the purposes of preventing future concerns it is a good thing."*
- *"It's a start, and that's more than we had before."*
- *"50% of the pools asked to submit the forms did so. The forms appeared to be completed fully and easily. Reporting was easy for our department."*
- *"Overall the entire project went well considering it was the first year."*
- *"It allowed me to go out and re-educate the operators about the reporting. With new operators/managers it was nice to go over the form with them and explain the intent of the project."*
- *"I really like the overall set up of the form, user friendly."*
- *"I thought it worked very well. We were more informed of incidents this way, than people trying to record it weekly."*

Suggestions for project improvement:

- *"Still need to get more participation. There needs to be an understanding as to whether the form is to be used for all injuries, or more serious injuries/incidents."*
- *"Improve the reporting of all pool related injuries especially with the pools with no lifeguards."*
- *"With anything new we will just have to keep working at it. People often are resistant to change, but over time they will see the benefit to this."*
- *"We would like to know how the information has been used or how it will be used. We would like to pass this information on to the operators."*
- *"Figuring out better ways to get more pool operators to participate in completing the forms. We had one pool in our county send in majority of our reports."*
- *"We did not receive any completed forms from our operators. I think we just need to keep trying it with the operators so that they become accustomed to filling out and turning in the form if they have a reportable event."*
- *"Getting the pool operators to actually submit the forms is a challenge. Coming up with a way to receive incident reports at unguarded pools."*
- *"Since this was a voluntary program, reporting was very low. We only had one form returned to us, and that was for a very minor cut on someone's leg. We had no forms returned to us that were for actual drowning/near drowning/ water rescue related incidents. If we are truly looking at drowning prevention as the focus, is it really necessary to capture information on minor cuts or scrapes that occur?"*

Next Steps

Participation in the project during the 2016 swim season:

- Almost every health district is interested in participating in the project next year (90%)

Local health districts requested drowning prevention assistance from ODH in the following areas

(Note: Respondents were able to choose more than one answer):

- Training (80%)
- Development/Dissemination of Promotional Materials (80%)
- Data Collection/Management/Dissemination (50%)
- Technical Assistance (50%)
- Other – *“Just good availability of program staff if this unfortunate need arises”*

Questions, comments and further suggestions:

- *“Ohio needed this program.”*
- *“Interns who could travel from pool to pool explaining the paperwork and purpose of the study would increase compliance.”*
- *“Simplify the types of injuries you want reported. When looking at drowning prevention, getting information regarding a slip/fall/cut that happens at a public pool really isn't helpful information.”*
- *“From an operator's prospective what would be the benefit of filing the report(s)?”*
- *“In my experience such a severe incident would involve the LHD and ODH no matter what. Good Documentation was already occurring.”*

If you have questions about the pilot project or evaluation survey, please contact:

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