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YMCA OF THE USA AQUATIC INCIDENT SURVEILLANCE PILOT STUDY

May 11, 2011



BACKGROUND

- There is no national incident surveillance system in place.
- Currently have to rely on other sources for drowning information and data.
- Y-USA Aquatic Safety Task Force identified lack of data collection within the YMCA system.
- Task force recommended to work with others to collect such data.



YMCA FACTS....

- There are approximately 2,300 YMCA owned and operated swimming pools.
- Collectively, the YMCA is the largest owner of swimming pools in the United States.



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PILOT STUDY

- The study was conducted by the YMCA of the USA in conjunction with researchers at the Research Institute at Nationwide Children's Hospital, Center for Injury Research and Policy, The Ohio State University
- Thanks to Dawn Comstock, PhD and Christy Collins, MA!!!



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PILOT STUDY

- Goal:
 - To study the feasibility of establishing and maintaining a national aquatic incident surveillance system within the YMCA
- Long Term Goal:
 - To reduce the incidence and severity of aquatic incidents by using surveillance data describing the epidemiology of aquatic incidents to drive the development of targeted prevention efforts



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METHODOLOGY

- YMCA Aquatic Safety and Risk Advisory Group created a standardized incident report form for the study
- A reporter at each facility was asked to logon to an internet-based collection tool weekly.
- Study period – 4 months
- Completed exposure report form: # of individuals using facility, # of lifeguards, etc..



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METHODOLOGY

Reportable Incident:

Any incident in which advanced emergency medical assistance is called or offered.



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METHODOLOGY

Data Reported:

- Victim
 - Age
 - Gender
 - Etc..
- Incident
 - Type
 - Severity
 - Etc..
- Event
 - Type of pool
 - Type of activity
 - Number of lifeguards



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RECRUITMENT

- 19 YMCA aquatic facilities identified and recruited to participate
- 13 completed the online enrollment form
- 9 signed agreement form and were officially enrolled in the study



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REPORTER COMPLIANCE

- Designated reporters were expected to report for all 14 weeks of the study.
- Overall, the 9 enrolled facilities reported an average of 11.7 study weeks (range: 1-14 weeks).
 - Five reporters (55.6%) reported all 14 weeks
 - 2 reporters reported 12 weeks (22.2%)
 - 1 reporter reported 10 weeks (11.1%)
 - 1 reporter reported 1 week (11.1%)



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EXPOSURE INFORMATION

Exposure Data by Type of Exposure, YMCA Aquatic Incident Surveillance Pilot Study, 2009-2010

Type of Exposure	# Exposures
# of individuals exposed to water	77,716
# of lifeguards on duty	3,361
# of other staff members supervising pool	933
By activity ^a	
Recreational swim	18,960
Fitness program	18,030
Competitive program	16,431
Swim lessons	8,951
Large group activity	2,258
Other ^b	6,243
Special event	468
Recreational diving	0
By type of pool ^a	
Traditional pool (6-10 lanes)	56,681
Other ^c	9,291
Spa/hot tub	449
Zero depth pool	50
Catch pool	0
Diving well	0
Lazy river	0
Multi-attraction pool	0
Wave pool	0

^aNumbers do not sum to total # of individuals exposed to water (n=77,716) because not all facilities collect data by activity or type of pool.

^bMost common other activities included: lap swim (# exposures = 4,329), after school swim (# exposures = 326), and rentals (# exposures = 312)

^cOther types of pools included: traditional; 25 yards; 4 lanes (# exposures = 5,365) and therapy pool (# exposures = 3,354) (type of pool not specified for 572 exposures)

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INCIDENCE INFORMATION

- 3 incidents were reported.
- Only 2 met the study definition of a reportable event (one, which was a drill, was excluded from analysis).
- The incident rate was 2.6 serious aquatic incidents per 100,000 exposures.



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END OF STUDY SURVEY RESULTS

- An online “End of Study” survey provided reporters the opportunity to give feedback on their experiences with the Study.
- Completed by 7 of the 9 reporters.
- Average reporting time burdens:
 - 13 minutes for the weekly exposure report
 - 5 minutes for each incident report form
- Online surveillance system was generally reported to be very easy to use (71.4%)
- The majority were either very satisfied (57.1%) or somewhat satisfied (14.3%)



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POSITIVES

- A large number of exposures (n=77,716) were captured despite a relatively small sample size (n=9) of participating facilities.
 - This indicates that capturing exposure data, a requirement for calculating incidence rates and comparing rates among various subgroups of interest, in a national sample is feasible.
- The incidence of reportable events was very low (n=2) so the time burden for reporters was small.
 - Thus, facility managers should be willing to participate by reporting data to a long term/permanent surveillance system.



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CHALLENGES

- Difficulty recruiting study participants will represent the greatest challenge and the greatest time burden.
- Will require a very large sample of participating facilities.



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CONCLUSION

The Pilot Study demonstrated the value and feasibility of establishing and maintaining a permanent/long term national aquatic incident surveillance system.



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