

## YMCA of the USA Aquatic Incident Surveillance pilot study

Mike Espino<sup>1</sup>, R. Dawn Comstock PhD<sup>2</sup> and Christy L. Collins MA<sup>2</sup>

YMCA of the USA, Chicago, USA<sup>1</sup>, The Research Institute at Nationwide Children's Hospital<sup>2</sup>

### Background

Despite decades of public health efforts, drowning and other serious aquatic incidents continue to claim the lives of too many children in the United States. There is currently no national surveillance system in place to capture accurate data on such aquatic incidents in public facilities with lifeguards on duty, making it difficult to develop targeted prevention efforts to reduce their incidence and severity.

### Objectives

The objective of the YMCA Aquatic Incident Surveillance Pilot Study was to investigate the feasibility of establishing and maintaining a system-wide YMCA national aquatic incident surveillance system. The long term goal of the pilot study is 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.

### Target

The study was conducted with nine YMCAs located throughout the United States.

### Methods

A reporter at each of the nine facilities was asked to log on to an internet-based data collection tool weekly throughout the study period to report exposure and incidence data using an incident report form and, for each aquatic incident reported, to report data on the victim, the incident, and the event. For the purposes of the study, a reportable event was defined as any incident in which advanced emergency medical assistance was provided on site or was called for. An online 'End of Study' survey provided reporters the opportunity to give feedback on their experiences with the study.

### Results

Overall, three incidents were reported during the study. Of these incidents, only two met the study definition of a reportable event. Because the incident rate (2.6 incidents per 100,000 exposures) was so low and not all reporters completed an incident report form during the pilot study, reporters were asked to complete a demo incident report form prior to completion of the end of study survey. The online surveillance system was generally reported to be very easy to use. The majority of reporters were either very satisfied or somewhat satisfied with the internet-based surveillance system. The only reported difficulty with the system was one reporter who thought the login information was difficult to remember.

### Discussion

Overall, throughout the study, reporters were compliant and required minimal amounts of researcher's time for auditing, indicating that the survey tool and internet-based data collection methodology are relatively easy/intuitive to use. Because of the low incident rate, a large national sample will be needed for future studies. The anticipated difficulty recruiting study participants will likely represent the greatest challenge and the greatest time burden associated with establishing and maintaining a national aquatic incident surveillance system. However, given the ease of use of the reporting tool and the low time burden of reporting, a case could be made for requirement of mandatory participation in a permanent/long term surveillance system utilizing a standardized incident report form.

### Conclusion

The development and implementation of the pilot study demonstrated the value and feasibility of establishing and maintaining a permanent/long term national aquatic incident surveillance system. The development of such a system would provide the epidemiologic data needed to drive the development of targeted prevention efforts to reduce the number and severity of serious aquatic incidents in public facilities with lifeguards on duty.

### Acknowledgments

The Research Institute at Nationwide Children's Hospital of The Ohio State University and the YMCA of the USA Aquatics Safety and Risk Advisory Group and Task Group for the development and implementation of the study.

### Corresponding Author

Mike Espino  
Aquatics Safety & Risk Specialist  
YMCA Of The USA  
540 Estero Ave. Unit A, Morro Bay California USA 93442  
Email: mike.espino@ymca.net  
Website: www.ymca.net  
Telephone: +1 3127812209