

## 15-01

### STATEMENT OF POLICY

#### Recreational Water Safety

##### Policy

The National Association of County and City Health Officials (NACCHO) urges national, state, and local health departments and related agencies to engage policymakers, government agencies, non-governmental organizations, businesses, and communities to produce and support policies, legislation, regulations, programs, research, and resources to promote healthy and safe swimming.

NACCHO supports activities to increase recreational water safety, including the following:

- Incorporating the Model Aquatic Health Code into local health department policies and practices to decrease instances of waterborne injury and illness, working toward a national set of guidelines.
- Improving regulatory oversight of recreational waters, including pools, spas, interactive fountains, waterparks, lakes, rivers, and oceans and private pools and spas where possible.
- Implementing standardized and uniform recreational water testing guidelines across health departments.
- Increasing levels and sources of funding for local health departments to secure resources for conducting adequate surveillance of recreational water environments and investigating incidents such as outbreaks, pool chemical-associated events, and drowning.
- Promoting communication between local health departments and pool owners and operators (including private and residential pools and spas), especially at facilities with high employee turnover, to ensure local regulations are followed and pool employees are properly educated.
- Encouraging owners and operators of recreational water facilities to complete certification courses, such as Certified Pool/Spa Operator<sup>®</sup> or Aquatic Facilities Operator<sup>™</sup> training, ensuring they are able to safely manage their facilities.
- Supporting the use of educational materials to encourage hygienic and healthy best practices at pools and other recreational water facilities to limit recreational water illness.
- Promoting community education regarding the importance of swimming skills, supervision, knowledge of swimming-focused emergency medical response, and use of life jackets.
- Increasing use of predictive modeling to monitor public beaches in order to decrease community exposure to infectious and chemical pathogens and decrease the number of days beaches are closed unnecessarily.



- Encouraging cooperation between public health officials, owners of recreational water facilities, and the community to promote healthy and safe swimming practices.

### **Justification**

Swimming in recreational waters, including natural sites such as lakes, rivers, and oceans and man-made sites such as pools, spas, and waterparks, is a popular pastime in the United States. With over 300 million visits to recreational water sites each year, these venues can pose serious health threats if not managed properly.<sup>1</sup>

The recent economic recession has had detrimental impacts on health departments across the country. From 2008 to 2013, local health departments lost approximately 50,000 employees.<sup>2</sup> A study conducted by NACCHO in 2012 illustrates the effect of budget cuts on environmental health services in local health departments. In addition to job loss, 33.7% of local health departments reduced or eliminated at least one environmental health service. Specifically, 13.6% of local health departments polled cited reducing or eliminating recreational water services. Water services saw the third largest reductions at health departments, behind food safety and vector control. Departments and staff that had acknowledged budget cuts reported a number of negative consequences, including reduced education and training for local health department employees.<sup>3</sup>

The survey, “Looking for Trouble,” documents the shortcomings in aquatic venue surveillance, specifically examining types of monitoring and the most common reasons for violations. The survey of local health departments found a relationship between high employee turnover rates at facilities and a lack of employee knowledge of pool water quality and equipment maintenance. This lack of knowledge can lead to mistakes and violations. To combat these violations, the report stresses the importance of health departments working with facility owners and operators to ensure that best practices are followed.<sup>4</sup> The report also indicates limitations in inspections of pool equipment and water quality. Most health departments surveyed indicated that they always or most of the time checked basic, common certification requirements. Unfortunately, less common requirements are often neglected. For example, saturation index and type of chlorine used may be overlooked if overall chlorine levels are on target. However, using the wrong type of chlorine can still result in nullification of certification and increase the transmission of infectious pathogens.<sup>4</sup>

Most recreational water sites are regulated at the state or local level, with 68% of local health departments having pool inspection programs.<sup>4</sup> This results in policy and practice differences across the country and is resource-intensive as individual jurisdictions devote staff and time to policy development, implementation, and updates. To address this problem, the Centers for Disease Control and Prevention (CDC) created the Model Aquatic Health Code (MAHC) for swimming pool and spa surveillance. The MAHC is a comprehensive guide based on research and best practices used to improve the ability of health inspectors to reduce the risk for drowning, outbreaks, and chemical poisoning at public pools and other man-made recreational water sites in their jurisdictions.<sup>1</sup>

Recreational water illness (RWI) is a serious public health threat, significantly increasing in incidence. In 2009–2010, *Cryptosporidium* caused 24 (30%) of 81 reported RWI outbreaks and

has become the leading cause of RWI outbreaks in the United States. In addition to *Cryptosporidium*, *Giardia*, *Shigella*, norovirus, and *E. coli* are prominent causes of RWI outbreaks.<sup>5</sup> Although most reported RWI outbreaks are of acute gastrointestinal illness, outbreaks of skin, ear, respiratory, eye, and neurologic infections have also been reported.<sup>5</sup> A 2010 study conducted by CDC found that one in eight pools were closed immediately in 2008 after inspection due to serious code violations. Examples of these code violations include disinfectant level violations and lack of safety equipment.<sup>6</sup>

One of the most serious health risks associated with recreational waters is drowning. Between 2005 and 2009, there were 3,880 fatal unintentional drowning incidents annually, making it the fifth leading cause of unintentional injury death in the United States.<sup>7</sup> According to CDC, those at highest risk of drowning are children ages one to four and minorities. From 1999 to 2010, drowning rates among American Indians/Alaska Natives and blacks were two and 1.4 times higher than drowning rates for whites, respectively.<sup>7,8</sup> Factors that influence drowning risk include lack of swimming ability, lack of physical barriers around water, and lack of close supervision. Additionally, failure to wear life jackets, alcohol use, and seizure disorders play a large role in accidental drowning events.<sup>7</sup> Many of these incidents are preventable with awareness and education, particularly of swimming skills. It should be the goal of local health departments to ensure community members are mindful of the risks and know how to keep themselves and others safe.

Predictive modeling has become an increasingly useful public health tool for determining levels of dangerous bacteria, such as *E. coli*, in natural waters. The majority of beaches in the United States are currently monitored by culturing fecal indicator bacteria (FIB) in water samples, which takes approximately 24 hours to yield results.<sup>9,10</sup> This delay is problematic due to the rate at which FIB levels change in the environment, leading to possible public exposure to contaminated beaches.<sup>9</sup> New predictive monitoring approaches use historic water quality and other environmental data, allowing health departments to determine the public health consequences of current conditions.<sup>10</sup> This may decrease the likelihood of exposure to infectious pathogens and the number of days beaches are closed unnecessarily.

Using public health resources to support recreational water safety can effectively decrease preventable illness and injury associated with these popular sites. Additionally, local incorporation of the Model Aquatic Health Code will provide owners and operators of recreational water facilities with the most recent standards and guides for operation, thereby reducing the risk of illness and injury. Through cooperation with the community and facility operators, health departments can achieve positive, sustainable goals at recreational water sites.

## **References**

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### **Record of Action**

*Proposed by Environmental Health Committee*

*Approved by NACCHO Board of Directors*

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