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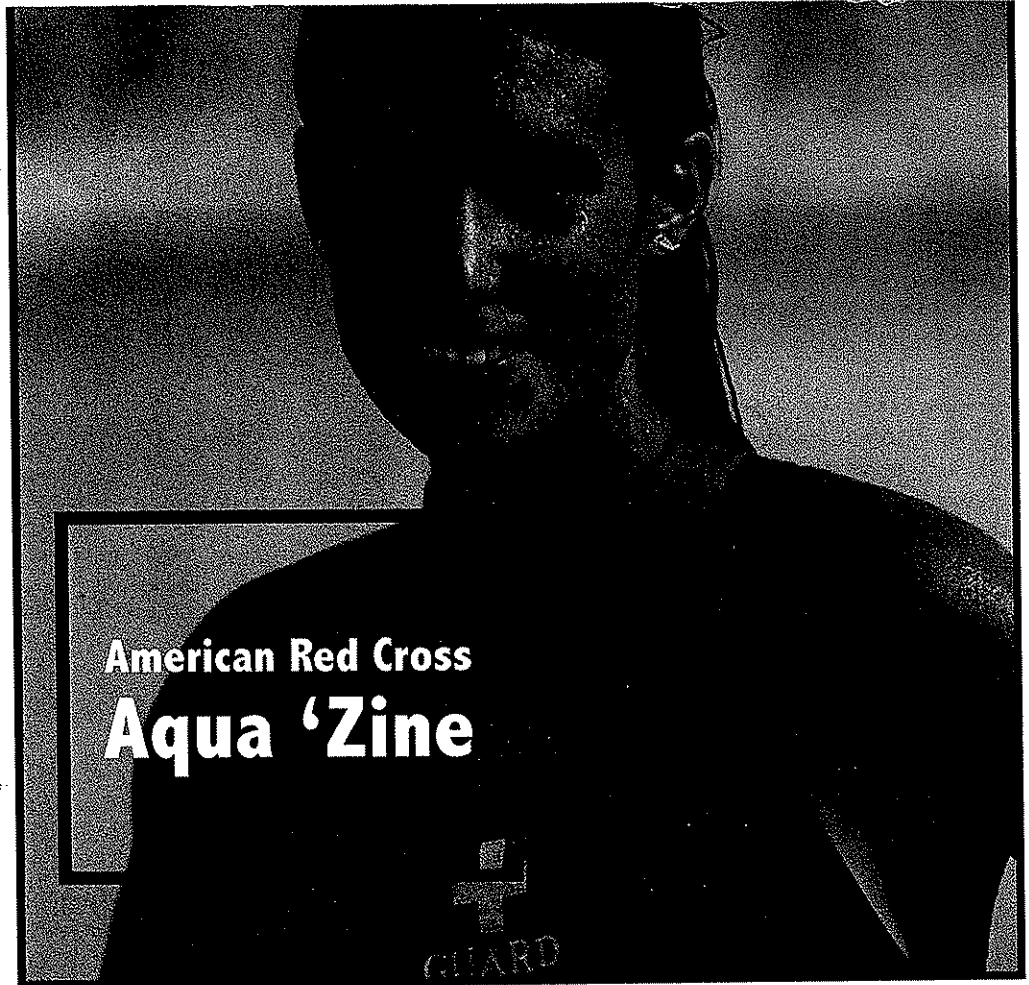
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**New York Drowning Research Provides Valuable Lessons for Aquatic Facilities and Lifeguards**

**F**or nearly 20 years, the New York Department of Health has been investigating drownings at pools and open-water beaches throughout the state and analyzing the data collected. The findings from this epidemiological study have broken many common assumptions about why drownings occur, and have helped paint a clearer picture about what can be done to prevent them.

"This ongoing research was started to examine the multitude of factors that contribute to drowning so regulations can be strengthened, and injuries and deaths can be prevented," said Douglas Sackett, assistant director for the New York Department of Health, Bureau of Community Environmental Health and Food Protection.

Although most people believe that the majority of drownings occur in deep water of five feet or deeper, Sackett said that this has proven to be a common myth. "We found that nearly half of all drownings in New York between 1987 and 2004 occurred in water that was less than five feet deep," said Sackett. "This tells us that facilities must insure that lifeguards are scanning shallow water as much as they are deep water."

Another myth busted by the New York research is that drowning happens in crowded water with lots of people where lifeguard scanning becomes more difficult. The New York data revealed that 49 percent of drownings occurred with less than 30 bathers present at the time of the incident (22 percent occurred with five or fewer bathers present).

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"Regardless of the time of day or how many people are in the water, lifeguards must always be vigilant," said Sackett.

The New York study also revealed that it is not young children with the highest rate of drowning, but rather males in their teens and early twenties. In fact, 84 percent of all New York drowning victims between 1987 and 2004 were male. In particular, African American and Hispanic/Latino males had the highest rates of drowning.

"It is difficult to know why exactly young men—and in particular young African American and Hispanic men—have the highest rate of drowning. Young men typically take more risks and may simply be in the water more—the truth is we simply don't know all of the reasons," admitted Sackett. "What we do know is that we need some kind of intervention to decrease the rates of young males drowning," he said.

Another common assumption is that most drowning victims are non-swimmers. The New York study found that 42 percent of drowning victims were swimmers and that only 26 percent were considered non-swimmers. The remaining 32 percent could not be classified.

Besides examining characteristics of drowning victims, the New York study also examined swimming environments including water quality and lifeguard effectiveness.

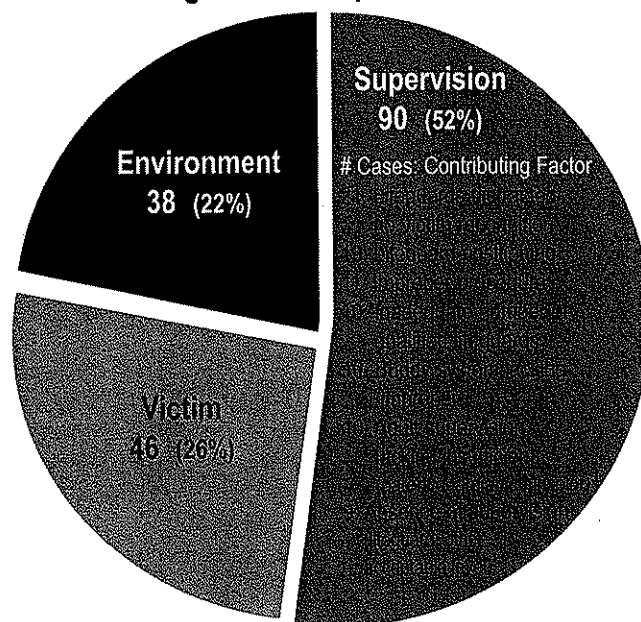
Water quality and facility conditions were factors in 22 percent of drownings between 1987 and 2001. In particular, glare and water clarity played significant roles. In many of these cases, lifeguards didn't see the initial submersion of the victim and then could not see under the water surface or to the water bottom.

"This tells us that lifeguards must look for ways to counteract glare such as repositioning themselves or wearing polarized sunglasses," said Sackett. "It also reinforces that pools with poor water clarity should not be opened for swimming until the problem is resolved."

An even greater problem than environmental concerns, are issues around supervision. Approximately 52 percent of drownings in New York between 1987 and 2001 had contributing factors related to supervision. Of those 52 percent, 78 percent were related to some kind of failing by lifeguards on duty such as an inadequate number of lifeguards on duty, poor lifeguard positioning, improper procedures being used, and lifeguards being distracted and not recognizing a victim in time.

"Research indicates that drowning victims struggle for only 20 to 60 seconds before submerging, so the reality is that a lifeguard only has a very limited time to scan the entire area under surveillance, recognize a drowning victim and intervene before the victim submerges in order to have a favorable outcome," said Sackett.

## DROWNING Contributing Factors: Supervision 1987-2001



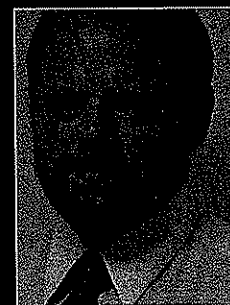
"These failings in supervision relate to how well lifeguards are trained and managed," said Sackett. "We can improve lifeguard performance through stricter regulations, improved training, ongoing in-service refreshers, mentoring and better management."

Sackett believes that New York is not a unique state and that the factors that contribute to drowning incidents in his state are similar for aquatic facilities nationwide.

"I think what this data should teach aquatic facilities is that there are multiple factors that contribute to a drowning situation," Sackett stressed. "Facility managers and lifeguards should review this data and evaluate their facilities and practices to make sure that factors identified as contributing to drownings are adequately addressed." ■

### Meet the Expert

Douglas C. Sackett is the Assistant Director of the Bureau of Community Environmental Health and Food Protection for the New York State Department of Health. A 30-year veteran of the department, Sackett heads the investigations of drownings at regulated swimming areas. He is on the Board of Directors for the National Swimming Pool Foundation, served as a member of the National Swimming Pool Foundation Technical Advisory Committee for the Certified Public Pool Inspector Training Program and was a member of the American Red Cross Lifeguard Management Advisory Group.



## Behavior-Based Patron Surveillance Still the Most Effective

The most important duty of a lifeguard is patron surveillance—keeping a close watch over people in the aquatic facility. Effective patron surveillance requires that lifeguards recognize behaviors or situations that may lead to life-threatening emergencies, such as drownings or injuries to the head, neck or back. If lifeguards determine a person is in trouble, they must respond quickly.

Scanning is a critical element in being able to recognize a victim in trouble. Scanning is a dynamic process that requires lifeguards to actively observe patrons' behaviors and look for signals that someone in the water needs help. However, not all lifeguard training programs follow the same surveillance techniques.

Lifeguards trained by the American Red Cross are taught to look for certain behaviors that indicate a swimmer is in distress or a person is drowning. Red Cross-trained lifeguards are taught to look for differences in breathing, arm and leg action, body position, and body propulsion or locomotion (movement). Knowing the differences in behaviors helps lifeguards determine if a person is a swimmer, distressed swimmer, or active or passive drowning victim.

Some training agencies require use of the 10/20 protection rule. The rule states that a lifeguard has 10 seconds to recognize an aquatic emergency and another 20 seconds to perform a rescue and begin care. The 10/20 protection rule is neither used nor supported by the Red Cross.

Providers that utilize the 10/20 protection rule instruct their lifeguards to pay close attention to the physical characteristics of swimmers, such as age or ethnic background, based on statistics of drowning victims. But by classifying swimmers by appearance, lifeguards could end up overlooking someone who is struggling merely because they strike the guard as "low risk."

Moreover, the 10/20 protection rule is not only unscientific, but is also often irrelevant because if a lifeguard is devoting more time to observe specific "high risk" swimmers and areas, he or she may not be able to complete a full scan in 10 seconds. As proven by the results of the New York drowning research, there are too many factors that contribute to a drowning emergency to simply label swimmers as high and low risk based on stereotypes.

For Frank Pia, Ph.D., a 21-year veteran lifeguard and chief lifeguard at Orchard Beach in Bronx, New York, the main issue is the "trigger," or the observation that causes a lifeguard to respond to an emergency. Pia believes that

many inexperienced lifeguards think that they will be able to recognize a drowning because there will be a lot of movement, a distressed facial expression or a cry for help. In reality, drowning victims can be stagnant, non-vocal or surrounded by a large group of people who aren't aware that a swimmer is struggling. Since a lifeguard may not always have a full, unobstructed view of every swimmer, it is critical that he or she develops an understanding of what a person is trying to accomplish with their movements in the water, regardless of their physical appearance or "risk factor." Red Cross-trained lifeguards learn simple point-to-point surveillance techniques so that they can better recognize a swimmer in trouble.

The Red Cross Lifeguard Training course does not set any time frame in which a lifeguard scans his or her area of responsibility. And although the Red Cross has been criticized for simplifying lifeguarding techniques, Pia believes this is actually the key to success.

Drownings occur at facilities not because lifeguards weren't trained, but because managers didn't require that they follow their training.

"Rather than cluttering a lifeguard's mind with scanning patterns, a 10/20 rule and "high risk" stereotypes—essentially focusing on *how* to see, lifeguards should be taught to think about *what* they are seeing," Pia said.

Because the Red Cross teaches the distinctive behavior of an active or passive drowning victim, Red Cross-trained lifeguards can be more aware of the signals of an emergency and develop quick recognition of "visual call-outs."

According to Pia, one of the most important steps an aquatic facility can take to ensure a knowledgeable, qualified staff is to constantly reinforce their lifeguard team's ability to conduct effective patron surveillance, recognize life-threatening behaviors, and respond quickly and appropriately. The Red Cross advises lifeguard supervisors to provide regular and frequent in-service training, and provides resources and guidance for this training through its Lifeguard Management course.

"Drownings occur at facilities not because lifeguards weren't trained, but because managers didn't require that they follow their training," Pia said, emphasizing that managers should never allow lifeguarding staff to create a non-Red Cross-approved protocol, such as permitting lifeguards to sit in lounge chairs rather than elevated lifeguard stands. Facilities can also improve patron surveillance by frequently rotating lifeguards to alleviate boredom and drowsiness.

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Each year, the American Red Cross reaches nearly - 4 million people with its aquatics programs and trains 90 percent of the lifeguards across the country. Using innovative, research-based lifeguard training techniques, the Red Cross stands out as the most trusted name in the aquatics industry. American Red Cross programs produce lifeguards skilled in the most effective patron surveillance methods, resulting in a safer environment for swimmers nationwide. ■

## Red Cross Offers Turnkey Marketing Solutions for Aquatic Facilities

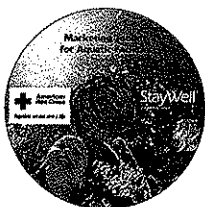
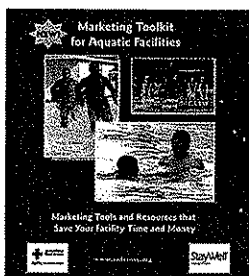
**A**lthough a comprehensive marketing strategy can be the key to success for many aquatic programs, many facility managers just don't have the time or the resources to devote to a promotional campaign. To help facilities overcome this challenge, the American Red Cross has compiled a variety of turnkey marketing solutions to help explain the benefits of Red Cross swimming and water safety training to potential customers of all ages.

The American Red Cross Marketing Toolkit for Aquatic Facilities is provided at no cost to all authorized providers. Inside the kit, facility managers will find a host of materials that aquatic centers can use to reach more customers on a day-to-day basis, including a CD-ROM filled with course record forms and customizable flyers, advertisements, t-shirt designs and more. In addition, Red Cross chapters provide other free marketing materials to their aquatic facilities, such as brochures, posters and catalog—all of which make promoting Lifeguard Training and Learn-to-Swim classes easier than ever.

Marketing materials and additional resources are also available on a new American Red Cross Web site, Instructor's Corner ([www.redcross.org/instructorscorner](http://www.redcross.org/instructorscorner)).

Backed by more than 90 years of lifesaving expertise, and armed with a wide array of promotional materials at their fingertips, Red Cross authorized providers surely have a leg up on the competition. By utilizing these tools, facilities will have everything they need to increase enrollment and make a big splash in the community.

To request your free copy of this valuable toolkit, contact your local Red Cross chapter. ■



### Meet the Expert

Frank A. Pia, Ph.D., is a psychologist with 21 years experience as a lifeguard and chief lifeguard at Orchard Beach in Bronx, NY, where 2,000 near drownings and rescues occur each summer. He is the originator of the Distress versus Drowning Person Classification, conducted the original research on the Instinctive Drowning Response and is the copyright author of the Characteristics of an Actively Struggling Drowning Person. He has lectured throughout the U.S. and Canada on the causes and solutions to swimming-, non-swimming- and boating-related deaths and is a member of the American Red Cross Advisory Council on First Aid and Safety.

## Updated Red Cross Lifeguarding Program Coming Fall 2006

**T**he American Red Cross will release a full line of updated lifeguarding courses in fall 2006. The courses and products being revised include:



- Lifeguard Training;
- Lifeguard Management;
- GuardStart: Lifeguarding Tomorrow;
- Aquatic Examiner Service; and
- CPR/AED for the Professional Rescuer.

The courses will be updated to meet the new first aid and CPR guidelines. The Red Cross has been an active member of the international panel of expert organizations reviewing the current guidelines and the latest scientific research in this area. In addition to the scientific updates, the new courses will also include updated lifeguarding skills and information.

More details about the updated courses will be available in summer 2006. ■