

# REDUCING SWIMMING RELATED DROWNINGS

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This article provides park and recreation administrators with information about the three major causes of swimming related drownings so that they can prevent drownings at facilities where lifeguards are on duty. The information in this article also guides administrators in setting up inservice training programs and in monitoring the performance of lifeguards and lifeguard supervisors.

Over the last 20 years, drowning has remained a major cause of accidental death in the United States. Approximately 6,000 to 8,000 people died each year from drowning, making it the second leading cause of accidental death in this country according to the National Safety Council (NSC.)

The NSC divides drowning accidents into three classifications: (1) swimming-related—people who drown while swimming or playing in the water; (2) non-swimming related fatalities—people who drown after falling into the water from docks or dry land, or drown in accidents at home; and (3) boating-related fatalities—people who drown while engaging in recreational boating.

Examining the causes of non-swimming and boating-related fatalities is beyond the scope of this article. However, the 24-minute videotape entitled "The Reasons People Drown" is an excellent resource for community drowning prevention programs.

Park and recreation directors are primarily concerned with preventing swimming-related fatalities that occur in areas staffed by lifeguards. Most swimming-related fatalities are unwitnessed drownings in which neither the lifeguard nor nearby swimmers noticed the drowning victim struggle and slip below the surface of the water.

Because no cries or waves for help were observed, an assumption is often made that the victim passively slipped underwater without a struggle. However, while drowning victims can neither cry out or wave for help, they do struggle on the surface of the water before submerging, and exhibit an



Instinctive Drowning Response that lifeguards must be trained to recognize.

## The RID FACTOR

Besides failing to Recognize the Instinctive Drowning Response, a two-year research study I conducted into published accounts of drownings in the United States from 1910 to 1980 indicates that swimming related drownings can also be caused by the intrusion of non-lifeguard duties upon the lifeguard's primary task (preventive lifeguarding,) and Distraction from surveillance duties. These three elements, **R**ecognition, **I**ntrusion, and **D**istraction form the "RID Factor."

## RECOGNITION—DISTRESS VS DROWNING

A brief overview of the two types of water crises will aid understanding the first element of the "RID Factor," the failure to Recognize the surface struggle of the drowning victim. In earlier publications, "On Drowning" (1970) and "Observations on the Drowning of Non-Swimmers" (1973), I classified water crises into two categories: distress situations and drowning situations. A distress situation involves

a swimmer who cannot return to safety without assistance. Because of his or her swimming skills, this victim is generally able to summon aid by waving or calling out for help.

Drowning situations can be subdivided into two groups, passive and active victims. Because of a sudden loss of consciousness, the passive victim slips under water without waving, calling out for help or struggling on the surface of the water. Generally, this type of emergency is caused by a heart attack, stroke, hyperventilation, a blow to the head, cold water immersion, or excessive drinking of alcoholic beverages.

On the other hand, in an active drowning a conscious, struggling drowning non-swimmer exhibits behavior that an attentive, properly trained and supervised lifeguard can detect. The following description of this behavior that non-swimmers exhibit while drowning is based on two sources: first, from my 21 years of experience as a lifeguard and lifeguard supervisor for the New York City Department of Parks and Recreation at Orchard Beach on Long Island Sound (where as many as 2,000 non-swimmers were rescued each summer,) and second, from the

16mm lifeguard training film "On Drowning" that recorded the movements of actual, not staged, near drownings and rescues. The behavior of a drowning person resembles the following description.

#### INSTINCTIVE DROWNING RESPONSE

- The person is rarely able to call out for help. This apparently odd fact becomes believable when one remembers that breathing, not speech, is one of the primary functions of the respiratory system. Therefore, in time of extreme peril in water, breathing must take precedence over speech. I believe that this phenomenon accounts for the fact that throughout "On Drowning" viewers will observe onlookers watching a person drown, unaware that he or she is drowning, because there has been no call for assistance.

- The person has instinctive arm movements that appear to be an attempt to push the victim upward in the water by thrashing the water with both arms extended laterally. This type of arm movement cannot propel the person in any direction; it merely raises and lowers the person out of and into the water as he or she tries to breathe.

- The person manages to turn to shore. The body is upright with no supporting kick.

- The victim's head sinks lower and lower in the water as the drowning progresses. The arm movements become less visible and more feeble, until only the top of the head and grasping hands can be seen.

- The process can last for as long as 60 seconds or for as few as 20 seconds.

#### PREVENTIVE LIFEGUARDING

The next step in trying to reduce swimming-related fatalities is for aquatic facility managers to realize that a vast majority of a lifeguard's time is spent in preventing people from either engaging in dangerous behavior or placing themselves in dangerous situations. When the preventive work of a lifeguard is effective, potential life-threatening conditions are corrected before rescues or accidents. However, to the unknowledgeable observer a lifeguard engaged in surveillance work might appear under-utilized and available for added duties.

The surveillance system used by lifeguards for preventive and rescue work may be of three types: elevated

stations, ground-level stations, and boat stations. The elevated stand or tower should be at least five to six feet in height and give the lifeguard an unobstructed view of the swimming area. The view of the bathers that the lifeguard has from the elevated tower is markedly superior to that obtained from either a ground level station or a boat station. Therefore, the tower guard must be considered the foundation and most important part of the surveillance system.

Whenever the facility is open to bathers, a lifeguard should be positioned on the elevated tower, even if only one swimmer is using the facility. My research has shown that it is not

unusual for drowning to occur while several lifeguards are on duty, the elevated tower unused, and only a few bathers in attendance. Increased vigilance by lifeguard supervisors and administrators will effectively eliminate the tendency for some lifeguards surveillance techniques to relax during off-peak times.

In analyzing the scanning techniques used by lifeguards on ground-level stations, I found the guards had limited view of the swimming area, with many bathers shielded from view. Because of his or her closeness to the patrons, the guard was more prone to distractions. However, guards assigned to a walking patrol or ground-level station

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can provide effective and efficient enforcement of safety rules.

If cautions or reprimands to patrons are needed, the ground-level guard instead of the tower guard should be the one to offer the explanation. Because of the brief 20 to 60 second surface struggle of the drowning non-swimmer, it should be clear why the tower guard should not, unless he or she is the only one on duty, engage in detailed explanations of safety rules. If explanations must be given by the tower guard, they should be as brief as possible and made while the guard continues scanning the bathing area.

Besides stopping those activities that may lead to injury or death, lifeguards must be trained by facility managers to recognize the difference between distress situations (in which the victim can call out and wave for help) and drowning situations (in which the person cannot.) If lifeguards are to detect the silent and brief struggle of the drowning non-swimmer, they cannot be assigned maintenance or recreational duties while they are part of the surveillance system.

#### INTRUSION

The second element of the "RID Factor" is the Intrusion of maintenance or recreational duties upon the surveillance system of the swimming facility. One of the best ways to analyze this contributor to drowning fatalities is to use the approach found in the Miller & Rice (1967) book "Systems of Organizations." By applying organizational systems theory concepts, we see that in an effort to fulfill their primary task, maintenance or recreation units will either overtly or covertly renegotiate the lifeguard's task (sole responsibility) while he or she is on duty, thereby endangering the lives of the swimmers.

Miller and Rice view organizations as open systems that import, convert, and then export products or services. These processes are the work that organizations must do to survive. An educational enterprise, for example, imports students and through the conversion process provides them with opportunities to learn. It then exports students who have acquired some qualifications or who have failed to be altered by the conversion process.

Park and recreation departments have a corresponding import/conversion/export process. With a limited amount of resources, they take in indi-

viduals and provide them with opportunities to relax and enjoy leisure time activities. After the activities are completed, the individuals are sent home.

Park departments have as their primary task the maintenance and operation of various facilities. The services that these agencies provide are judged by how well the facilities are maintained and operated.

Recreation departments have as their primary task the provision of leisure activities. To survive as an organization, they must provide various forms of relaxation for the users of their services.

Clearly defining primary tasks for the sub-systems in park and recreation organizations enables us not only to compare and contrast different primary tasks, but also to establish boundaries between sub-systems. This concept of primary task and the boundary of sub-systems is quite important. Administrators need to understand that overt or covert crossing of boundaries and the blurring or renegotiation of a sub-system's primary task are major causes of conflict in park and recreation agencies. I believe that Intrusion upon the lifeguard unit by maintenance or recreational tasks has not only prevented the upgrading of lifeguard standards, but has also been a direct cause of unwitnessed drownings in guarded areas.

The primary task of the lifeguard unit is to prevent people from engaging in hazardous behavior or placing themselves in life-threatening situations. Secondarily, the unit performs rescues or administers first aid. Since

many near-drownings and emergencies have occurred at facilities with only a few bathers in attendance, the lifeguard should never be assigned recreational or maintenance duties while he or she is a member of the surveillance system.

The maintenance unit has as its primary task the care and cleaning of parks facilities. Since this unit, especially during the summer, is overworked and understaffed, the director of maintenance or an administrative subordinate may look to the lifeguard unit for help in cleaning aquatic facilities. However, any written or verbal policy that calls for lifeguards to perform maintenance duties *while they are or should be part of the surveillance system* not only sharply increases the chance of accidents and drownings happening, but also increases the agency's legal liability.

The recreation unit has as its primary task providing pleasurable leisure activities. This unit, like the maintenance unit, is generally understaffed and overworked and often looks to the lifeguard unit for help. To require lifeguards who are or should be part of the surveillance system to rent beach umbrellas or chairs, to take admission tickets, or to give swimming lessons sharply increases the probability of an accident or drowning occurring, as well as the agency's legal liability.

Just as it is correctly pointed out by the Red Cross in their 1983 lifeguard textbook, "One cannot safely perform the duties of a lifeguard and a coach simultaneously...The facility should provide separate lifeguard supervision

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for additional safety during these activities." One of the best ways to prevent the intrusion of maintenance or recreational duties is to follow the advice of the Red Cross and ensure there is "uninterrupted and proper supervision of the facility...at all times."

The renegotiation of the lifeguard's primary task by either the maintenance or recreation units may be covertly interpreted by a lifeguard as authorization either to ignore the agency's priority-setting of his or her duties or to establish a new set of priorities. If this action by the lifeguard goes unchallenged by the lifeguard supervisor, serious and perhaps fatal consequences to the users of the facility are likely to occur.

### **DISTRACTION**

Distraction, the third element of the "RID Factor," is a concept that most administrators are quite familiar with, and is one that can also be analyzed through systems theory concepts. If a distraction from surveillance duties occurs beyond the time limits of the surface struggle of the Instinctive Drowning Response, the lifeguard is either unaware of preventive lifeguard concepts or chooses to ignore both the agency's priority of his or her duties and established and nationally recognized lifeguarding principles.

As in all occupations, there are lifeguards who cannot or will not satisfac-

torily fulfill the requirements of their position. Often, these individuals seek a lifeguard job because of the environmental fringe benefits, such as outdoor work in a pleasant recreational setting, or the glamour attached to the opportunities to meet attractive individuals of the opposite sex. My investigation at Orchard Beach has shown that your children sometimes struggle for only 20 seconds on the surface of the water before submerging. Therefore, any activity that takes the lifeguard away from active surveillance of bathers, even for this brief time, must be viewed as inattention to duty.

In order for this strict standard of care to be met, there must be overlapping tower surveillance of the bathing area and the lifeguards must receive regularly scheduled breaks from their surveillance duties. One break system that the Red Cross recommends is for the lifeguard to receive one 15-minute break every hour.

The strongest reason for advocating this standard of care is that the lifeguard must detect the surface struggle of the drowning non-swimmer within 20 to 60 seconds or a routine rescue may become a submersion or fatality. If a lifeguard shows continued inattention to duty, he or she should be warned about the consequences of this behavior and be closely supervised. If the pattern continues, the person should be encouraged to seek a job in which

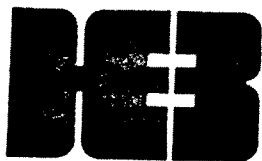
the consequences of inattention will not be catastrophic.

One of the many hallmarks of American society is the high value placed on human life and the belief that as new information on reducing and treating accidents becomes available, our nation should benefit from it. The American National Red Cross has mandated that cardiopulmonary resuscitation (CPR), standard or advanced first aid, and advanced lifesaving be prerequisites for enrollment in their new lifeguard training program. Thus, those individuals who complete the program will have the qualifications and training to function as aquatic emergency service technicians.

Recreation and park administrators can implement both the wishes of the American people and the aspirations of the American National Red Cross by changing any old perceptions that they have of a lifeguard as a bronzed, adolescent beach boy and demand that the lifeguard acts as job title implies, as "a guard of life." For, in the words of Johann W. von Goethe, if we, "Treat people (lifeguards) as if they were what they ought to be (aquatic emergency service technicians)...you will help them become what they are capable of being" (guards of life.)

For information on "The Reasons People Drown," contact L.S.A. Productions, Inc., 3 Boulder Brae Lane, Larchmont, NY 10538, (914) 834-7536.

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