

# 4 Injury Prevention

## **Lifeguards are essential for keeping aquatic facilities safe.**

Unlike most other professional rescuers, lifeguards are present to help prevent emergencies from occurring. As a lifeguard, one of your goals is to prevent injuries, so you should know the best strategies for preventing them. You must also be prepared to meet the safety challenges presented by visiting groups, as well as the various activities and features at your facility.

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# 4-1 HOW INJURIES HAPPEN

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Aquatic injury prevention is part of your facility's risk management program. **Risk management** involves identifying dangerous conditions or behaviors that can cause injuries and then taking steps to minimize or eliminate those conditions or behaviors. Even though lifeguarding requires performing emergency rescues, far more time is spent on **preventive lifeguarding**—trying to make sure emergencies do not happen in the first place.

Although not all emergencies can be prevented, knowing what causes life-threatening injuries can help you to prevent many of them. Injuries either are life threatening or non-life-threatening. Examples of life-threatening injuries include drowning and injuries to the head, neck or spine. Life-threatening conditions that can result from an injury include unconsciousness, breathing and cardiac emergencies, severe bleeding and drowning.

Drowning begins when a person's mouth and nose are submerged and water enters the airway, regardless of the water depth. Drowning can occur in shallow or deep water. In shallow water, a toddler may fall over and be unable to stand or raise the head up. Drowning also may result when a nonswimmer enters or falls into water over their head, when a swimmer becomes exhausted and cannot stay afloat or when a patron is incapacitated in the water due to a medical emergency, such as a seizure or cardiac emergency.

Most head, neck or spinal injuries at aquatic facilities result from a high-risk, high-impact activity, such as head-first entries into shallow water. If a victim's head strikes the bottom or the side of the pool, the spinal cord can be damaged, possibly causing paralysis or death.

Non-life-threatening injuries also occur in aquatic facilities. Examples of non-life-threatening injuries include fractures or dislocations, abrasions (scrapes), superficial burns (sunburns), muscle cramps (caused by overexertion), heat exhaustion, dehydration, and sprains and strains.

Non-life-threatening injuries can occur by slipping, tripping, falling when running or getting cut on sharp objects. They also can occur when patrons do not follow the rules. If you understand how most injuries occur, you can help prevent them by increasing your awareness of risks and hazards, helping patrons to avoid risky behavior and developing a safety-conscious attitude at your facility.

# 4-2 INJURY PREVENTION STRATEGIES

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As you learned earlier in this course, your injury prevention responsibilities include ensuring that the facility is safe and providing effective patron surveillance. Another important injury prevention responsibility is communicating with patrons, which involves educating and informing patrons as well as enforcing your facility's rules.

# Communicating with Patrons

Communicating with patrons is an important injury prevention strategy. It requires you to inform and educate patrons about inappropriate behaviors and the potential for injury. Communication also includes consistently enforcing rules and regulations in a positive, customer-friendly manner.

## Informing and Educating Patrons

Patrons need to know about risks that could cause injury. Signs communicate warnings, provide instructions on how to use equipment, and list rules and regulations to prevent behaviors that can lead to injury (Figure 4-1). Informing patrons about the potential for injury is also part of your role. Therefore, you need to understand the rules and regulations of your facility and the rationale behind them.

Patrons may be unfamiliar with a facility's features or get so excited that they do not read signs or pay attention to the rules. If patrons are not following the rules, it is your job to inform them of the possible consequences. Explaining rules in a positive way encourages patrons to behave safely. The following steps can prevent a patron from engaging in risky behavior:

- Get the patron's attention. For example, you might do this by blowing a whistle and saying, "Excuse me" (Figure 4-2). Explain the hazard or danger. For example, say, "If you dive into shallow water, you might hit your head on the bottom and get injured." Or say, "You may slip and hurt yourself if you run." Simply telling someone not to do something often does not work. People usually understand and cooperate when they know why something is dangerous.
- Explain a safe option. For example, say, "If you want to dive, please go to the deep end of the pool where it is safe." Or say, "Excuse me, diving into shallow water is dangerous and can cause a head injury. Please use the deep end." Or say, "Walk, please." This type of explanation gets the patron's attention, clarifies the danger, emphasizes the consequences of the risky behavior and offers safe options, if available and appropriate.

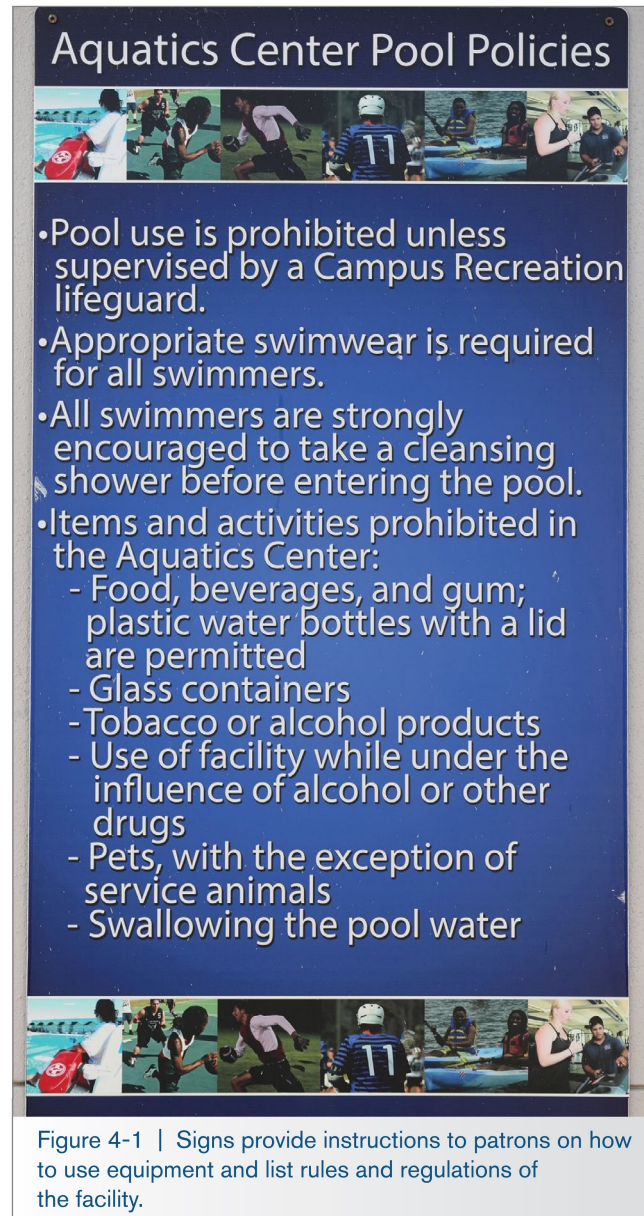


Figure 4-1 | Signs provide instructions to patrons on how to use equipment and list rules and regulations of the facility.

## Enforcing Rules

By enforcing the rules, you help to prevent injuries and encourage safe patron behavior. When conducting patron surveillance, keep rule enforcement brief by using only a few words or short phrases, such as, "Slow down," or by giving a hand signal. When enforcing rules, be consistent, fair and respectful. In some cases, the patron may not know the facility's rules or may not understand them. Always use age-appropriate enforcement methods that are approved by the facility's policies.

If certain patrons repeatedly break the rules even after you have attempted to correct their behavior, you could direct them to leave the water for a set time. Signal for someone who is not engaged in patron surveillance, such as another lifeguard or a supervisor, to explain the rules and their rationale. If the patron is a child and a parent or guardian is available, the rules should be clearly explained to the adult as well. Since most people want to be treated with respect, simply explaining and enforcing the rules usually is sufficient.

If a parent or guardian is uncooperative, do not argue, but instead ask a supervisor or facility manager to assist you.

A patron may become uncooperative and defiant, compromising their safety and the safety of others. If this happens, you should summon a supervisor or facility manager, who may ask the patron to leave the facility. Use this approach only when other methods have failed.

If a patron refuses to leave after being told to leave for repeatedly breaking the rules, the supervisor or manager may choose to call the police or security personnel. Every facility needs a procedure for removing someone from the facility. This procedure should have specific steps and guidelines to follow. Any such action should be recorded in the facility's daily log and on the appropriate form or report.



Figure 4-2 | You may need to use your whistle to get a patron's attention.

## INTERACTING PROFESSIONALLY WITH THE PUBLIC

When you are on duty, your actions should promote an atmosphere of professionalism, safety, trust and goodwill. The following general guidelines will help you display a professional image and maintain a positive relationship with patrons:

- When conducting patron surveillance, any verbal interaction should be brief, and your eyes should remain on the water. Politely refer the patron to a staff member who is not conducting surveillance, if necessary.
- When not conducting patron surveillance:
  - Treat people as you would like to be treated. Make every patron feel welcome, important and respected.
  - Be professional at all times. Be courteous, mature and responsible. Never insult or argue with a patron.
  - Speak clearly and calmly at a reasonable pace and volume.
  - Use appropriate language, but do not patronize or speak down to anyone, including children.
  - When interacting with patrons, make frequent and direct eye contact. Remove your sunglasses, if necessary. When speaking to small children, kneel down to be at eye level with them.
  - Take all suggestions and complaints seriously, and follow up as necessary. Avoid blaming anyone. If you cannot resolve a complaint, take it to your facility's management. Always follow the facility's procedures.
  - Repeat the concern expressed by the patron back to them to ensure that you understand the concern correctly.
  - Do not make promises that cannot be kept.
  - Enforce rules fairly and consistently. Be positive and nonjudgmental. Reinforce correct behavior.
  - Take a sincere interest in all patrons.

### Nonverbal Communication

Spoken words make up a surprisingly small part of overall communication. A listener automatically tends to make judgments about a speaker's attitude based on the volume, pace, tone and pitch of the speaker's voice. A listener also reacts positively or negatively to visual cues or body language. You can gauge a person's attitude as cooperative or confrontational by evaluating these cues; know that the listener will be doing the same.

Nonverbal communication also is expressed while you are on duty, whether you are conducting patron surveillance or performing secondary responsibilities. Patrons may make judgments about your professionalism by observing your appearance, demeanor, posture and behavior. Lifeguards are "on stage" and set the tone while on duty.

## DEALING WITH UNCOOPERATIVE PATRONS AND VIOLENCE

No matter how fairly you enforce the rules, you may encounter an uncooperative patron. Before assuming that a patron is being uncooperative, you should make sure that they hear and understand you. If a patron breaks the rules and is uncooperative, you should take action right away, because breaking the rules can be a danger to the uncooperative patron and to others. Most facilities have procedures for handling uncooperative patrons; however, if your facility does not have a procedure, you should call the lifeguard supervisor or facility manager for help as soon as possible.

A patron may threaten to or commit a violent act. You must be realistic about what can be done in a violent situation. If violence is likely to erupt, call the supervisor or facility manager immediately. If violence does erupt, do not try to stop it. Never confront a violent patron physically or verbally and do not approach a patron who has a weapon. In such a situation, the best approach is to retreat and follow the facility's EAP for violence. Safety for patrons and facility staff should be your main goal.

### 4-3 EFFECTIVE GUARDING — INJURY PREVENTION CHALLENGES

Lifeguards should be conducting patron surveillance anytime the facility is being used by patrons or staff. A major goal of patron surveillance is looking for behaviors that indicate someone may need assistance. As part of your patron surveillance, you also may have specific responsibilities based on the facility's activities or features, such as enforcing age or height requirements, helping patrons with equipment or ensuring that riders are in the proper position. These responsibilities will vary and may include guarding:

- A variety of activities occurring simultaneously.
- "Kiddie" areas, play structures, special attractions, water slides, winding rivers and wave pools.
- Organized recreational swim groups and youth camps.

# Guarding Activities

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Facilities often have a variety of activities taking place simultaneously, all of which require your surveillance. Examples include:

- Open or recreational swim
- Water exercises, such as water walking and lap swimming
- Instructional classes, such as swim lessons, water therapy, water exercise and SCUBA lessons
- Swimming, water polo, synchronized swimming and other team practice
- Competitive events, such as swim meets and triathlons
- Special events, such as movie nights, pool parties and after-hours rentals

To help you identify patrons who may need assistance, be aware of the age and ability levels of those participating in the activity. For example, you may notice a young child in beginner-level swim lessons moving toward water over their head or an elderly man stopping frequently as he swims laps.

Each activity has its own unique characteristics and risks. Some activities, such as SCUBA classes, may require that you receive special training on what to look for specifically or be aware of while you are on surveillance duty. Considerations and questions that need to be answered for effective guarding include:

- What things could go wrong that are unique about this activity?
- What is the swimming ability or comfort level in the water of patrons involved in this activity?
- Are there any unique challenges or obstacles to recognizing an emergency, approaching a victim or performing a rescue?
- Do participants have any medical conditions that increase the chances for sudden illness or injury due to the nature of the activity?

## Instructional Classes

Instructional classes are a type of general activity that have the benefit of supervision by trained personnel. Although the instructor is responsible for the safety of the class, that does not relieve you of your responsibilities. You must still scan every person in the water and enforce rules, perform rescues and provide first aid as appropriate. However, with proper preparation, instructors may become valuable members of your safety team. Facility management should share and practice emergency action plans (EAPs) with instructors, clarify their roles during an emergency and share those roles with you. Some instructors will have lifeguard training and specialized rescue skills; others will not.

Having an instructor present may help you to ensure patron safety because they may be:

- Familiar with special equipment. Therapy classes may use wheelchairs, lifts and special flotation devices. Instructors for those classes should be able to recognize and deal with potential problems with such devices.
- Familiar with the behavior of specific types of patrons. Instructors may be able to recognize subtle signs of potential problems that may not be obvious to you. For example, a water exercise instructor may detect the early signs of overexertion of a patron in that class.
- Able to help in an emergency related to the specialized class. For example, a SCUBA instructor should know how to deal with and respond to a victim wearing a SCUBA tank and buoyancy control device.

## Guarding Areas for Young Children

Many facilities have shallow pools for young children. It is common for these areas to have play equipment, including slides, fountains, inflatable play equipment and climbing structures. Effective patron surveillance at these areas is essential, even though the water may be shallow (Figure 4-3). Enforce rules, such as height and age requirements, fairly and consistently. Note that:

- Older children might be too large for some structures, or their play might be too rough for young children.
- Toddlers who are still learning to walk may fall easily. If they fall down in water, they usually cannot lift themselves to an upright position, even if the water is ankle or knee deep.
- Children often get lost. Remind adults to supervise their children at all times.
- You must watch out for young children using the pool as a toilet. The facility should have procedures for preventing and addressing the situation, including handling fecal incidents, which follow local health department guidelines.
- Children usually do not think about overexposure to the sun or hypothermia. If a child is becoming sunburned or overly cold, immediately inform the child's parent or guardian.



Figure 4-3 | Even though the water may be shallow, effective patron surveillance is essential.



## Guarding Zones with Play Structures

Facilities may have play structures that are either permanent or removable (Figure 4-4). Permanent structures include sprays and fountains, interactive water-play structures and dumping buckets. Removable structures include large floating toys, inflatable play structures and water basketball and volleyball nets. Some play structures require their own lifeguards, whereas others are watched by lifeguards surveying a larger area. While guarding at play structures:

- Do not let a play structure become overcrowded. Be prepared to restrict the number of patrons using it at one time.
- Do not allow patrons to swim underneath structures.
- Watch to ensure that patrons return to the surface after dropping into the water from a floating feature. Swimmers can be surprised by the fall or become disoriented, especially if they do not realize they will be dropping into deep water.
- Pay close attention to children playing in and around sprays, fountains and interactive water play structures. These attractions usually are

in shallow water. Excited children may run and fall. A very young child who falls might not be able to get back up or may strike their head.

- Pay close attention to patrons in moving water. Moving water can surprise people. They might lose their balance and be unable to stand up again.
- Watch for overcrowding and horseplay on floating structures. These structures are tethered to the bottom of the pool; some allow patrons to walk from one floating structure to another while holding onto an overhead rope (Figure 4-5).
- Keep play safe and orderly.
- Watch for patrons who climb onto floating toys and jump back into the water. They may not notice what is around them and jump onto other swimmers or into water that is over their heads.
- Watch for patrons who throw balls and other toys and hit unsuspecting swimmers, resulting in injury.



Figure 4-4 | Many facilities have play equipment for young children.



Figure 4-5 | Watch for overcrowding and horseplay on floating structures.

## Guarding Organized Recreational Swim Groups

Groups of all sizes visit aquatic facilities for recreation. This includes groups from day care centers, day camps and youth organizations as well as school groups, sports groups and groups visiting facilities for birthday parties. These groups may be based out of your facility and swim regularly or may visit one or more times as a field trip. Groups often are supervised by leaders, chaperones or camp counselors. These supervisors may assist with discipline but do not take the place of lifeguards. Group leaders may be in the water with the group, on the deck or shore or a combination of both. Group leaders should know how to alert lifeguards in an emergency.

In some cases, most group members will have similar swimming abilities, such as a day care center group composed of preschool-age nonswimmers. The swimming ability of other groups may vary widely, such as in a youth camp group with a wider age range of children.

Sometimes, a group will reserve all or part of a facility for its own instructor to teach a class, lead a practice or conduct skill checks. These activities may include kayaking, SCUBA diving or swim team tryouts (Figure 4-6).



Figure 4-6 | A group sometimes reserves all or part of a facility for its own use.

In general, when guarding groups, you should:

- Ensure that swimming areas are divided according to swimmers' abilities and are clearly marked.
- Ensure that patrons stay in the sections appropriate for their swimming abilities. Be aware that weak swimmers or nonswimmers, excited to be together enjoying a recreational activity, may attempt to venture into areas that are beyond their swimming ability.
- Provide U.S. Coast Guard-approved life jackets for weak swimmers or nonswimmers.
- Know how to identify group leaders or chaperones.
- Ensure that chaperones are actively supervising the members of their group and that the appropriate swimmer-to-chaperone ratio is met. If it appears that they are not doing so, alert your facility's manager.
- Signal for additional lifeguard coverage, such as a roving lifeguard, if you feel you cannot effectively guard your zone. You may need to do this at the beginning of the swim time while the group gets adjusted to the facility's rules or if large groups are concentrated in one area.

For groups using buddy checks (see Guarding at Youth Camps, page 103), you may need to signal the buddy check, confirm that everyone is accounted for and count the individuals or buddy pairs, depending on the system being followed.

Regardless of a group's makeup or activities, as a lifeguard, you still are responsible for helping to ensure the safety of its members. To help groups remain safe and injury free, your facility's manager may develop activity-specific EAPs and strategies in advance.

# Strategies for Safe Group Visits

Facilities often implement additional strategies for injury prevention and swimmer management during group visits. Group leaders should meet in advance with managers at the facility to discuss appropriate plans and procedures. A copy of the facility rules as well as written expectations of group leaders should be provided in advance of the group visit, when possible. Strategies for ensuring safe group visits typically involve one or more of the following:

- **Booking procedure.** Before the visit, group leaders should provide the aquatic facility with information about how many group members and supervisors will be visiting. This is especially important with large camp groups, which require additional time to process through safety orientation, swimmer classification and identification procedures. Confirming the supervisor-to-swimmer ratios helps facility managers plan appropriate staffing levels. Group leaders also should inform the facility about any special characteristics of the group, such as the percentage of swimmers and nonswimmers. Any staff who will be accompanying the group should be informed about how to help supervise group members around and in the water and how to help the lifeguards in an aquatic emergency.
- **Safety orientation.** Safety orientations are conducted when groups first arrive at the facility. The purpose is to educate all members of the visiting group on your facility's policies and rules and to point out key safety issues. You may be tasked with conducting these orientations.
- **Classification of swimming abilities.** Swim tests are administered to determine if a visitor has the minimum level of swimming ability required to participate safely in activities, such as swimming in water over their head or riding on certain slides. If your facility administers these tests, management may have developed a system for lifeguards to easily identify patrons' swim levels. For example, levels can be identified by color-coded wristbands or swim caps (Figure 4-7). A red armband might identify someone who is a beginner and needs to stay in the shallow end; a green armband might identify someone who can go in deep water.

- **Designation of swimming areas.** Swimming areas should be clearly marked and defined according to swimmers' abilities and intended use. Buoyed ropes should divide shallow and deep water. Multi-use facilities often divide the water into sections for general recreation swim or lap swim or divide areas for floatable features or play structures. In waterfront areas, the swimming area should be restricted from the nonswimming areas, and there should be some type of continuous barrier, such as buoyed lifelines, piers or decks, around the perimeter of areas set aside for weak swimmers or nonswimmers to prevent them from straying into deep water. All swimming areas should be explained to the group and its leaders during the safety orientation.
- **Identification of group leaders or adult chaperones.** Your facility should use an identification system so that lifeguards and other facility staff can easily locate group leaders or adult chaperones. For example, group leaders could wear a laminated lanyard or a brightly colored baseball cap or T-shirt to identify them as being responsible for that group.
- **Supplemental group strategies.** Other strategies, such as the buddy system and buddy checks, sometimes are used to provide an additional layer of protection. These are particularly helpful with camp groups, which can be large. For more details on the buddy system, see page 103.



Figure 4-7 | Color-coded wristbands are used to classify patrons by swimming ability.

## How to Conduct a Safety Orientation

If you are tasked with providing a safety orientation to a visiting group, you will need to cover general water safety as well as information specific to your facility (Figure 4-8). When conducting a safety orientation:

- Ensure that group leaders or adult chaperones are present and can be clearly identified by all members of the facility staff.
- Make it fun and build rapport with the group. Ask questions rather than reading a list of rules. This allows you to become more familiar with what group members already know as well as gauge their level of understanding. Explain the reasons for any rules that group members do not understand.
- Identify areas where they can and cannot swim, if applicable.
- Point out where the lifeguards are stationed and inform the group how to get additional help if needed. Confirm the swimmer-to-supervisor ratio expected for group leaders and divide the group so that group leaders have a designated set of people to oversee.
- Issue any identification and/or swim classification items to group members and leaders, such as colored wristbands.

Safety topics typically covered during an orientation include general aquatic safety rules, swimming area sections, water depths, features or play structures, equipment, how to use approved flotation devices, rule signage locations and operational information, such as buddy checks or breaks.

## How to Administer a Swim Test

Swim tests can be used to determine if a person has the minimum level of swimming ability required to participate safely in activities, such as swimming in deep water, riding a slide that empties into deep water or jumping off a diving board into deep water. There is no single set of swim test criteria that best meets the needs of all facilities or organizations, nor is the following information intended to set a standard. If administering swim tests, each facility or organization should establish its own requirements based on the facility's design and features, the activities offered and common practices.



Figure 4-8 | Welcome visiting groups to your facility by conducting a safety orientation.

During your facility-specific training, you should be provided with standard procedures and criteria for conducting swim tests. Never administer a swim test while performing patron surveillance duty. When administering a swim test:

- Have the swimmer take the test in a safe area, such as near a wall, safety line or lane line.
- Have the swimmer take the test in shallow water first. If successful, have the swimmer move to the deep water and take the test.
- Be prepared to assist a person who may struggle in the water while attempting the swim test. Swimmers may overestimate their abilities (Figure 4-9).
- Ensure that chaperone(s) are present during the test, if applicable.
- Ensure that the person has safely exited the water after the test is complete.

When the test is completed, tell the swimmer where they are permitted to swim.

To be eligible to swim in deep water, swimmers should have at least a minimum level of competency in the water. The Red Cross water competency sequence can be used as this swim test. Water competency is defined as being able to perform the following skills in a sequence:

1. Enter the water and completely submerge.
2. Recover to the surface and remain there for at least 1 minute (floating or treading).
3. Rotate 360 degrees and orient to the exit.
4. Level off and propel oneself on the front or the back through the water for at least 25 yards.
5. Exit from the water.

After the initial test, additional swim tests should be conducted at intervals throughout a season to determine if swimming abilities have improved.



Figure 4-9 | Have a lifeguard stationed near a patron during a swim test in case they need assistance.

## Guarding at Youth Camps

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Some youth camps operate their own waterfront and pool facilities. If you are working at one of these camps, your area of responsibility and patron load may be smaller than those at a public facility because campers typically will be your only patrons. Some camps will supplement trained lifeguards with other staff who, after proper orientation, will serve as spotters or lookouts; however, these staff members should never take the place of lifeguards.

At the beginning of a camp session, all participants and staff who will be involved in aquatic activities should be given a swim test. After the initial test, additional swim tests should be conducted at intervals throughout the camp session to determine if participants' swimming abilities have improved. Participants who arrive after the initial test has been given also should be tested.

Youth camps with their own aquatic facilities often implement additional prevention strategies, including the buddy system, buddy boards and buddy checks.

### Buddy Systems

The buddy system is used by camps to enhance safety for swimming groups. Under the buddy system, one participant is paired with another participant of similar swimming skills. The pair is then assigned to a specific swimming area. If buddies do not have similar swimming skills, the pair should remain in the swimming area suitable to the weakest swimmer's abilities.

Buddies must be instructed to stay together and be responsible for one another. They need to tell a lifeguard immediately if their buddy is in trouble or missing, at which time you should take immediate action. The buddy system provides useful safeguards to help account for swimmers by having each buddy look out for the other; however, it does not replace lifeguard surveillance.

### Buddy Boards

A buddy board helps to keep track of everyone in the swimming area (Figure 4-10). Typically, a buddy board is a large, permanent structure mounted within the confines of the swimming area near the entrance and may also be divided into different activities or swimming areas.

Generally, a buddy board works as follows:

- Based on the initial swim test, each person gets a colored tag with their full name and group designation, such as a cabin or campsite number. Tags should be color-coded or labeled by swimming ability, such as "swimmer" or "nonswimmer."
- A lifeguard or other staff member is stationed at the buddy board to make sure tags are placed correctly and that everyone who enters or leaves the swimming area moves their tag appropriately.
- Before buddies enter the water, they hang their tags on hooks on the section of the board that indicates the swimming area in which they will be swimming. The buddies' tags should be next to each other to indicate that they are a pair. Tags should be placed on separate hooks to facilitate a reliable count.
- If buddies decide to move from one section to another, such as from the deep to the shallow area, they must first notify the person at the board and move their tags.
- When buddies leave the water, they move their tags to the "Out" section.

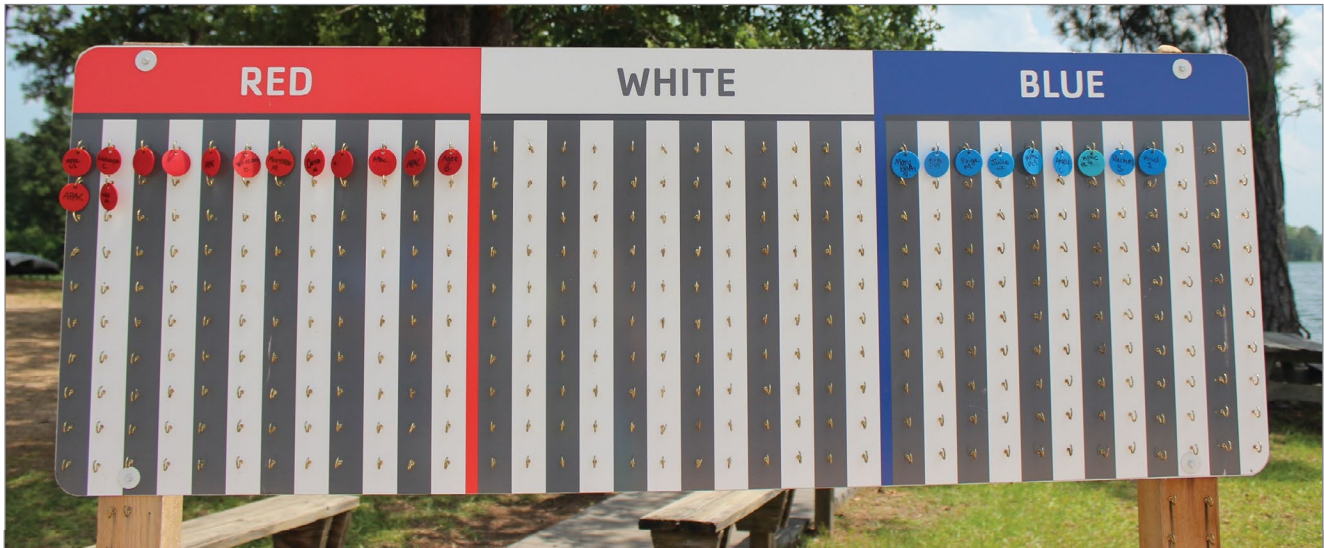


Figure 4-10 | Buddy boards are used to track patrons who enter a swimming area.

## Buddy Checks

The primary purpose of buddy checks is to account for all swimmers and to teach buddies to continuously monitor their partners. Buddy checks often are set for specifically timed intervals.

To initiate a buddy check, a lifeguard, lookout or supervisor gives a prearranged signal, such as a whistle blast. The buddies grasp each other's hands, raise their arms over their heads and hold still while the staff accounts for everyone (Figure 4-11). Buddies do not have to leave the water; those in shallow water may stand in place, while those in deep water may move with their buddy to the side and those already on deck should remain there.



Figure 4-11 | Buddy checks are used to account for each swimmer in a swim area.

Two methods commonly are used to confirm that the staff has accounted for everyone. Both use a buddy board or other tracking system:

- Method 1: Lifeguards count the swimmers in each area and relay those numbers to a monitor. The monitor checks the numbers against the total on the buddy board or other tracking device.
- Method 2: Each pair of buddies is given a number. The monitor calls off the numbers in order, and buddies respond when their number is called.

If everything matches, the buddy check is over. If a buddy check reveals that a person is missing, you should immediately suspect that the buddy is submerged and activate your facility's EAP.

Although the buddy system provides useful safeguards, buddy checks are not conducted frequently enough to substitute for normal surveillance. You should never depend on the buddy system as the only method of supervision. You must constantly scan your zone of responsibility, looking for the behaviors of swimmers in trouble.

# 4-4 SPECIAL CONSIDERATIONS FOR GUARDING AQUATIC ATTRACTIONS

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Special attractions create a lot of excitement and can include rides, such as bowl slides, multi-person raft rides, uphill water coasters and high-speed water slides. Some attractions found at deep-water pools also include diving platforms, cable swings and hand-over-hand structures like ropes, nets and rings. In a waterpark setting, there are multiple attractions designed for a variety of age groups and abilities.

Regardless of their swimming ability, patrons may become fearful, disoriented or off-balance while taking part in one of these attractions, thus requiring assistance. Follow these general principles when guarding attractions:

- Watch patrons as they enter and exit an attraction. Dispatch patrons safely on a ride at set intervals. Dispatching is the method of informing patrons when it is safe for them to proceed on a ride.
- Carefully watch both the water below and the activities overhead.

- Keep patrons in view as long as possible. However, keeping patrons in view can be a problem on some attractions: Structures, such as caves, enclosed tubes, bridges and buildings, might prevent you from seeing patrons at all times. When a patron goes out of sight, watch to make sure they emerge safely on the other side.
- Ensure that patrons who submerge return to the surface. The excitement may cause weak swimmers or nonswimmers to overestimate their abilities or underestimate the water's depth.
- Be aware of special risks. Structures designed to allow patrons to sit or climb on them, or to swim over or under them, pose hazards. Supervise patrons carefully. Someone who falls off of a mat, raft or tube might get injured or pose a hazard to another patron.

## Attraction-Specific Operational Procedures

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Your employer should provide attraction-specific training that will enable you to operate attractions you are assigned to within the manufacturer's guidelines and state or local codes.

Typically, each attraction will have specific operational procedures that include information related to the following:

- How the ride operates
- The characteristics of the attraction, such as speed or attraction rating
- The number of riders that can be safely accommodated
- The type of ride vehicle
- Height and weight restrictions that are in effect
- Special considerations for riders with disabilities
- Proper riding position
- The location of rescue equipment
- Operating procedures for dispatch at the top of the attraction and for exiting at the bottom of the attraction
- Dispatch procedures, including dispatch time intervals, dispatch signaling devices, verbal pre-ride instructions for riders (including proper riding position, conduct and exiting procedures) and protocols for stopping dispatch
- Exiting procedures
- Communication systems
- Spiels (recorded or repeated safety messages)
- Water level of the landing zone
- Water flow
- Restricted areas
- Emergency procedures for situations including stuck riders, crowd control, attraction and facility evacuations, drowning, medical emergencies, power or other utility failures, fires, environmental conditions (e.g., lightning and wind), mechanical malfunctions and security incidents (e.g., fights, robbery and vandalism)



## Guarding Wave Pools

Wave pools are popular attractions that produce waves of various heights, intervals and patterns (Figure 4-12). Wave pools vary in size, shape and depth. At one end is the head wall, where a mechanical system creates the waves. Lifeguards are stationed at various places around or in the pool (Figure 4-13). Wave pools operate on a cycle, such as 10 minutes with the waves on and 10 minutes with them off.

Wave pools are popular attractions at waterpark facilities. When guarding a wave pool:

- Ensure that patrons enter only in the shallow end.
  - When the waves are on, stand up to get a better view of patrons.
  - Watch for swimmers who get knocked over by the waves or carried into deeper water by the undercurrent. Inexperienced swimmers may go to where the waves break because of the excitement.
- Do not let patrons dive into the waves or dive through inner tubes.
  - Keep the areas around ladders and railings clear so that patrons can exit from the pool quickly.
  - Keep other swimmers out of the pool during special activities, like surfing. Surfboards or boogie boards in the wave pool can present a hazard to others.
  - Before performing an emergency rescue, turn the waves off using the emergency stop (E-stop) button at the lifeguard chair (Figure 4-14).
  - Rotate positions only when the waves are off.



Figure 4-12 | Wave pools are popular attractions at waterpark facilities.



Figure 4-13 | Lifeguards are stationed at various places at a wave pool while performing surveillance.



Figure 4-14 | An emergency stop (E-stop) button can be pressed to turn off the waves in a wave pool when a rescue is required.

# LIFE JACKETS

The U.S. Coast Guard has categorized personal flotation devices (PFDs) into five categories. They are rated for their buoyancy and purpose. Types I, II, III and V are referred to as life jackets, whereas Type IV is a throwable device (Table 4-1).

Swimming ability, activity and water conditions help determine which type of life jacket to use. For any type, it should be U.S. Coast Guard-approved and in good condition. The U.S. Coast Guard label is stamped directly on any approved device (Figure 4-15).

Facilities may have policies addressing the use of life jackets in a pool, waterfront or attraction. Type II and III life jackets are most commonly used in these settings. In general, anyone who cannot swim well should wear a life jacket if they are going to be in or around the water at an aquatic facility; however, in some cases, such as on certain slides, life jackets are not permitted. In other cases, such as fast-moving winding rivers, life jackets are recommended or may be required. Life jackets may be available at a facility for rent or free of charge (Figure 4-16).



Figure 4-15




Figure 4-16

As a lifeguard, you may be tasked with:

- Ensuring that life jackets are U.S. Coast Guard-approved. Inflatable toys and swim aids, such as water wings, swim rings and other flotation devices, are not designed to be used as substitutes for U.S. Coast Guard-approved life jackets or adult supervision.
- Ensuring that life jackets are in good condition. Buckles and straps should be in good working condition. There should be no rips, tears, holes or shrinkage of the buoyant materials.
- Helping patrons to select a properly sized life jacket. Life jackets are sized by weight. Check the U.S. Coast Guard label and be sure that it is matched to the weight range of the patron.
- Ensuring that life jackets are properly worn by patrons. A properly fitted life jacket should feel snug, keep the person's chin above the water and allow the person to breathe easily. The life jacket should not ride up on the patron's body in the water. Completely secure any straps, buckles or ties associated with the life jacket.
- Ensuring that patrons properly use life jackets. Correct any improper wearing or use of life jackets. Do not allow patrons to wear multiple life jackets or stack multiple life jackets on top of each other to be used as floats.
- You should remove any extra empty life jackets from the water. An empty life jacket in the water should be a signal that something is wrong. Consistent enforcement of rules related to life jacket use can lead to appropriate behavior by all patrons.

**Table 4-1: Life Jacket Types**

Type	Style	Typical Use	Features
I	Life jacket 	Boating on offshore waters or rough water where rescue may be delayed.	May help to turn an unconscious person from a face-down position to a vertical, face-up position, or to a face-up, slightly tipped-back position.
II	Buoyant vest 	Recreational boating on inland waters where a rescue is likely to occur quickly. Good for calm or inland water. Suitable for supervised use in pools and waterparks.	May help to turn an unconscious person from a face-down position to a vertical, face-up position, or to a face-up, slightly tipped-back position. Is less buoyant than a Type I life jacket.
III	Flotation vest 	Fishing or sailing on inland waters where a rescue is likely to occur quickly. Good for calm or inland water. Suitable for supervised use in pools and waterparks.	May help to keep a responsive person in a vertical, face-up position, or in a face-up, slightly tipped-back position; wearer may have to tilt the head back to avoid going face-down.
IV	Throwable device, such as a buoyant cushion or ring buoy 	Boating on inland waters with heavy boat traffic where help always is present.	May be thrown to a victim in an emergency; does not take the place of wearing a life jacket or vest.
V	Special use 	Intended for specific activities, such as whitewater rafting and special offshore work environments.	Acceptable only when used according to directions on its label.

## Guarding Winding Rivers

In a winding river, water flows in a long circular or twisting path through a facility. Depending on the winding river, patrons may be floating on tubes, walking or swimming. Some wear life jackets, and some do not. Water speeds may vary. Lifeguards may be positioned at the entrance and exit. They also may be positioned at several elevated or ground-level stations or at a combination of both with overlapping zones around the river (Figure 4-17).

When guarding a winding river:

- Ensure that patrons enter and exit at designated locations.
- Watch for inexperienced swimmers falling off their inner tubes or inflatable rafts. It will be difficult for you to see all patrons or the bottom of the winding river if there are a lot of tubes and rafts in the water. Similarly, it can be difficult for someone who falls off a raft or tube to come up for air if the surface is blocked. In addition, someone who is hit by an inflatable raft might be knocked down, hit the bottom and get into trouble.
- Watch for patrons around features in winding rivers, such as fountains and waterfalls, which can catch patrons off-guard or cause patrons to gather.
- Watch carefully for, and correct, risky behavior.



Figure 4-17 | Lifeguards may be stationed in multiple stations around a winding river when performing patron surveillance.

## Guarding at Water Slides

When you are working at an aquatic attraction, your assigned zone may be the dispatch area at the top of a water slide or the landing zone at the bottom of a slide. Guards working a dispatch area at the top of a slide have many unique tasks to perform, such as assessing riders, getting riders into sliding position, giving verbal instructions on safe riding procedures and launching riders at appropriate intervals. Guards assigned to work in the landing zone also have unique responsibilities, such as helping riders to exit a ride and ensuring the landing zone is safe before the next rider is dispatched. Carrying out these responsibilities properly is critical for lowering riders' risk for injuries.

On some water slides, patrons ride on an inner tube, raft, mat or sled. On others, riding equipment is not allowed. On some slides, only one person is allowed on an inner tube or a raft. On others, two or more people can go together on a special tube or raft. On an inner tube or raft, patrons ride in a sitting position. If no equipment is used, the proper riding position typically is

face-up and feet-first. Popular attractions often have lengthy wait times, and riders may have climbed many steps to access the ride (Figure 4-18). An efficient dispatching procedure helps to keep the queue (line) moving, reducing wait times and helping to ease any tension caused by the lengthy wait. However, safety is paramount.

When assessing riders:

- Check that patrons meet all requirements for riding the attraction as established by the manufacturer and your facility, such as ensuring riders:
  - Meet a minimum height or a maximum weight by using height measurement stations, weight scales or both (Figure 4-19).
  - Have the ability to sit upright and maintain the proper riding position throughout the ride.
  - Have the ability to control the upper torso, head and neck.
  - Have the ability to hold on with, at minimum, one functioning hand.
  - Demonstrate conduct indicating awareness of, and willingness to follow, rider requirements.
- Make sure that riders are wearing appropriate attire in accordance with the facility's and the attraction's rules, including these examples:
  - Riders are required to have on swimwear.
  - Clothing with metal embellishments or fasteners (such as zippers, buckles, snaps, rivets or buttons) is not permitted.
  - Water shoes may or may not be permitted.
  - Riders may need to remove eyewear (such as glasses or sunglasses) before going on the ride.
- Observe the rider's demeanor. Riders who seem fearful or show any signs of hesitation or reluctance to ride should be prevented from riding.



Figure 4-18 | Popular attractions often have lengthy wait times, and riders may have climbed many steps to access the ride.



Figure 4-19 | Some aquatic attractions have minimum height and weight requirements.

When dispatching riders at the top of a slide:

- Help riders into the ride vehicle or opening of the water slide, ensuring that they are properly positioned, providing verbal safety reminders and launching riders on their way (Figure 4-20).
- Dispatch riders at the proper intervals.
- Dispatch the next rider using information provided by the lifeguard station in the landing zone, an electronic dispatch system or both.
- Confirm that the water is at the appropriate level. If water is above or below the water level marker, rider dispatch should be stopped and not resumed until the water level is corrected.
- When the landing zone is clear of people and equipment, and other safety conditions are met, the lifeguard stationed in the landing zone will give the appropriate signal to allow dispatch of the next rider (Figure 4-21).



Figure 4-20 | Help riders into the ride vehicle or opening of the water slide.

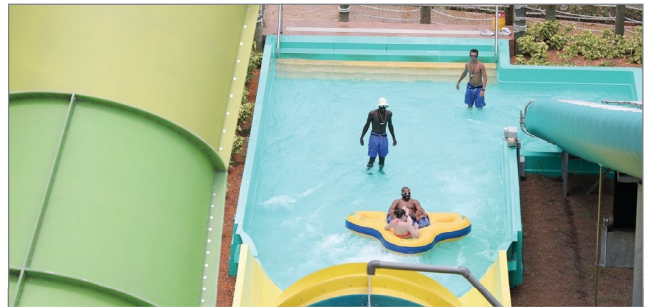


Figure 4-21 | Watch for riders to exit the slide into the catch pool.

***An electronic dispatching system allows lifeguards to communicate at the top and bottom of a slide by pushing a button on a control panel or a remote. The electronic dispatching system may use lights, retractable barriers, motion sensors or a combination of these to let the dispatching lifeguard know that it is safe to send the next rider down the slide. Other equipment (such as a telephone, intercom system or megaphone) may also be available to allow the lifeguards stationed at the top and the bottom of the slide to communicate with each other and the facility switchboard.***

***Riders travel at different rates of speed due to variations in body weight, body friction and position. Generally, the heavier the person, the faster the person will travel. The landing zone must be clear of the rider and the ride vehicle before the next ride is dispatched.***

When stationed in the landing zone:

- As needed, help riders exit the ride vehicle, slide runoff or catch pool (Figure 4-22).
- If a backup of ride vehicles occurs when assisting riders, immediately signal to the dispatching lifeguard to hold rider dispatch until the backup is cleared.
- Make sure the landing zone is completely clear of riders before signaling to the lifeguard at the top to dispatch the next rider.
- Ensure that riders are not permitted to wait in the landing zone for other riders.
- If required, remove ride vehicles from the catch pool and place them in a holding area or on a conveyor belt.
- Signal the dispatching lifeguard that it is safe to send the next rider after:
  - Clearing the landing zone of people and equipment.
  - Verifying that the water level is appropriate.



Figure 4-22 | As needed, help riders exit the ride vehicle, slide runoff or catch pool.

## 4-5 WRAP-UP

As a lifeguard, one of your goals includes helping to ensure that serious injuries never happen. The more you know about how injuries occur, the better you will be able to prevent them. Good communication with patrons is vital in preventing

injuries. You should inform patrons about the potential for injury and educate them about the consequences of risky behavior. It also is important to develop strategies for dealing with injury-prevention challenges at your facility.

### BENCHMARKS FOR LIFEGUARDS

Lifeguards should:

- Use all injury prevention strategies at the facility to help patrons stay safe.
- Enforce rules and communicate clearly and professionally with patrons.

### BENCHMARKS FOR LIFEGUARDING OPERATIONS

Lifeguard managers should:

- Define policies and procedures for aquatic programs and groups.
- Maintain records, reports and safety checklists.



# Chapter 4 Review

**1. List the three major strategies a lifeguard can use to help prevent injuries at an aquatic facility.**

1)

2)

3)

**2. List three things that can help determine if a life jacket is appropriate for use.**

1)

2)

3)

**3. Many facilities have unique challenges that demand different kinds of surveillance. For each situation listed below, list two guidelines you should keep in mind when providing surveillance for patrons.**

**Guarding areas for young children:**

1)

2)

**Play structures:**

1)

2)





## Chapter 4 Review

**4. Identify three strategies for ensuring safe group visits.**

1)

2)

3)

**5. Why is it important to educate your patrons about safety in, on and around the water?**

**6. You are in the lifeguard office taking a break from surveillance duty and a camp counselor requests a swim test for a new camper. You use the Red Cross water competency sequence to conduct a swim test. Describe these steps in order:**

1)

2)

3)

4)

5)



# Chapter 4 Review

## ADDITIONAL REVIEW QUESTIONS FOR WATERFRONT LIFEGUARDS:



### 1. At waterfront facilities using swim tests for group visits, areas for nonswimmers should:

- A** | Begin in shallow water and grade seamlessly into deep water appropriate for swimmers.
- B** | Be separated from the swimmer area with a continuous barrier, such as a pier or buoyed lifeline.
- C** | Extend slightly into deep water for practice.
- D** | Include designated deep water areas for diving.



# Chapter 4 Review

## ADDITIONAL REVIEW QUESTIONS FOR WATERPARK & AQUATIC ATTRACTION LIFEGUARDS:



**1. Many facilities have unique challenges that require different guarding strategies. For each situation listed below, list two guidelines you should keep in mind when guarding patrons at the following attractions.**

**Aquatic attractions:**

1)

2)

**Wave pools:**

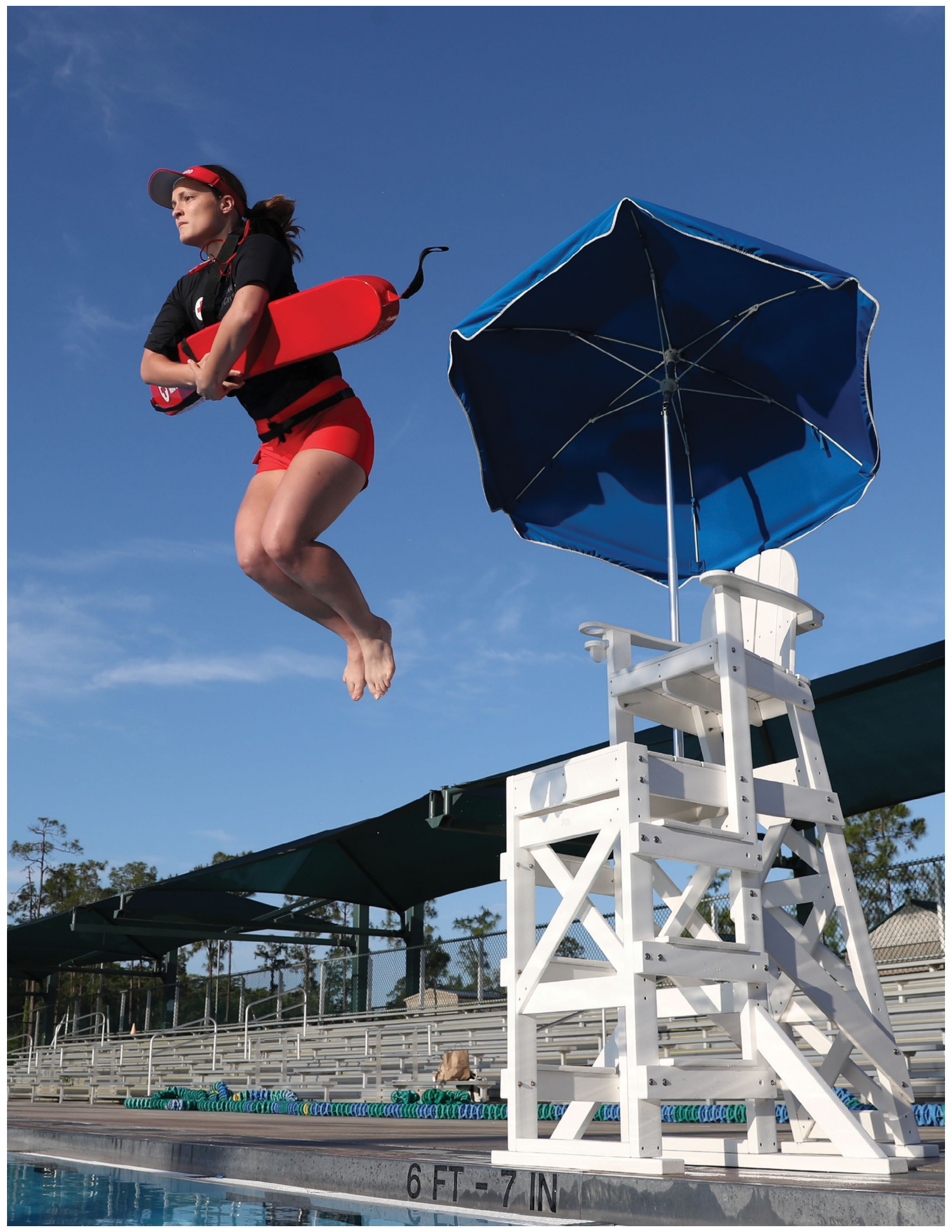
1)

2)

**2. What additional challenges might you face when enforcing rules in a waterpark?**

**3. What are some responsibilities of a lifeguard assigned the landing zone of a slide?**

**4. What are some examples of rules or policies that might be found in a waterpark setting?**



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