Monthly Manager Moments – Article #23

Lifeguard Training – Today's Standards

Introduction – This article is the first in a series on Lifeguard Training. We'll look at the current standards for lifeguards; specific techniques that guards use to make effective rescues, the equipment we have, and the emergencies that we train and prepare for. Since my experience and expertise is with swimming pools, we'll focus on pool and waterpark lifeguards. Beach guarding is much different, covering far greater distances, and using far more equipment than pool guarding. Beach guards sometimes refer to us as "poolies." So, we'll talk about guarding as a Poolie!

Pool vs. Waterpark Lifeguards – Isn't guarding at a waterpark much more difficult than guarding at a pool? Sometimes, yes. Remember that waterparks have cool features, but they're also swimming pools with cool features. Waterparks have multiple bodies of water, but they're all treated, filtered, clear, and controlled – just like any pool. Some features at a waterpark are truly more difficult to guard, due to the moving water, and large numbers of swimmers in the water. Wave pools, for example are more difficult to guard than a standard pool, or a catch pool at the bottom of a slide. It should be noted that some traditional pools are at times also very difficult to guard. For example, during warm-ups of a big swim meet. There might be 80-100 swimmers in the water all at once; going back and forth creating enormous turbulence and splash. This makes it virtually impossible for the guards to see beneath the mass of bodies on the surface. The guards at the wave pool have the same issue. So many people on flotation devices, plus waves breaking = difficult to see beneath the surface. Another commonality between pool and WP guards is the distances for making a rescue. We are all required to maintain a 30 second response time within our designated zone. These similarities are why we're grouping them together.

Like any industry, lifeguard standards are established by what's expected of us, and by litigation. In our industry, there are a number of critical standards that lifeguards must know and adhere to in order to avoid catastrophe and litigation. Let's look at some of them.

10-20 Rule - One national standard is a 10 second scan of a guard's zone, and 30 second victim contact. We often call this the 10-20 rule. We have 10 seconds to see the victim and another 20 seconds to make contact. That means we must make contact with anyone in our assigned zone within 30 seconds of them having a need for it. Pool and waterpark managers must then carefully test their zone assignments to make sure that they can meet this standard, especially at the far edges of the zone. For pools with "total coverage" where one guard watches the entire pool, this can be especially challenging, unless the facility is tiny. This standard is now part of WAC 246.260. It is also part of the National Model Aquatic Health Code. WAC requires a timed response test at least twice every year, to assure that the 30 second response time is being met.

Total and Zone Coverage - At the EWU Aquatic Center, we use total coverage most of the day. This is determined by the size of the facility and the guard to swimmer ratio that is established. Here, we use 1-19 swimmers = 1 guard on duty (total coverage); 20-50 swimmers = 2 guards on duty; 51-100 swimmers = 3 guards on duty. Anytime 2 or more guards are on duty at once, they're in zone coverage. These ratios for total vs. zone coverage can be reduced by any guard who feels the swimmers are higher risk, thus necessitating greater coverage.

Once the ratios are tested and established, adherence is critical, and can never be "fudged." Violating the guard to swimmer ratio is asking for trouble, because if while the standard is violated, a victim is not contacted within 30 seconds, and subsequently suffers a loss, the pool could be deemed negligent.

180° Visual Sweep Rule - Because our EWU pool is so deep (18'), we have particularly tall lifeguard towers. This provides a favorable sight-line for the guard to see the bottom of the very deep diving tank. The towers are strategically positioned to keep every swimmer in clear line of sight, and within a 180° view. If you swim at EWU, you'll notice that the towers are positioned just beyond the protruding corner on the west side of the pool. This prevents a blind spot created by the corner. Although it may cost more to adhere to this rule, no zone should ever violate the 180° visual sweep. The extra guards are money well spent. It's unreasonable to expect any guard to scan a zone that is greater than 180° wide.

This is where waterpark guards are at a clear disadvantage over pool guards. One of the main culprits for 180° zone violation/challenges is the lazy river. Because of the winding nature, and nearly constant curve, blind spots abound. The guards' challenge is multiplied by the commonly high freeboard along lazy rivers, sometimes as high as 24" or more, making it nearly impossible to see a person right next to the wall in front of the guard, unless the person is directly across from the guard. Guards must constantly adjust their position as riders float along the river to eliminate/reduce the blind spots. One partial solution is to stand very close to the edge. The closer they stand to the edge, the smaller the blind spot. That's why the towers at EWU are so close to the edge of the pool.

It would make sense to build lazy rivers with as low of a freeboard as possible, to reduce blind spots. Most new pools are being built with rim-flow/deck-level gutter systems. They are much safer for everyone: easy for guards to see swimmers against the wall, easy for people to get in/out, and easy for guards to extricate victims after rescue. Plus, they're faster, and skim better than a traditional gutter; due to the waves washing over them with virtually no recoil wave coming back. I encourage designers to consider the guards when specifying the height of the lazy river's freeboard. A deck level lazy river might be impractical, since flotation devices would have no bumper to keep them in the channel, but a very short rise of 6" would serve both purposes.

2 Minute First Breath – Lastly, let's look at this relatively new standard. For many years, protocol was developed based on the theory: 4 minutes to onset of brain damage. That is, we developed rescue protocol that assured a victim who needed resuscitation, would receive the first rescue breath in less than 4 minutes, regardless of the circumstance. That's because, it had been well established by the medical community that after 4 minutes without oxygen, the brain may/will begin to suffer necrosis. Because of new research regarding survival times after rescue, that standard was cut in half about 5 years ago. Again because of the most recent research on survival times, the American Red Cross' 2017 Lifeguarding program is now requiring the first breath to be administered in 1.5 minutes to pass the final skills scenarios. This extremely fast standard has put even more focus on speed. When a victim is at the extreme edge of a guard's zone, and needs rescue breathing, this presents a challenge indeed!

For many years, we had pretty much eliminated rescue breathing in the water, because it is difficult to perform, and the victim will nearly always vomit. Dealing with vomit in the pool is even more difficult. When the standard was cut to 2 minutes, we were faced with "rapid extrication" of suspected spinal victims, and

rescue breathing in the water. With the standard now at 1 minute 30 seconds, there is little hope of completely avoiding rescue breathing in the water. However, we can still mitigate the negatives.

At EWU, we use a rapid extremity lift to remove non-breathing victims from the pool. This removal can be done in less than 10 seconds. When the victim is brought to the nearest edge for removal, the first breath in 1.5 minutes is still doable. Victims that need to be removed on a backboard present further complications. Getting a backboard and placing it is slower, and taking a victim to shallow water for extrication is slower still. Here, at EWU we take large victims to the shallow end for removal on a backboard, because their size and weight make any deep water lift impractical. To achieve the 1.5 minute first breath, we ventilate the victim as soon as the guards can stand over the victim. Using a specialized resuscitation mask, the first 2 breaths are delivered in about 1:15. If the victim vomits, we can safely turn him to the side, sweep the mouth, provide suction if needed, and continue ventilations. Once ventilations have been established, we administer 2 breaths every 30 seconds while extricating the victim on a backboard. Once on deck, another initial assessment is made of pulse and breathing. If a pulse is still present, rescue breathing is resumed at 1 every 5 seconds. The guards apply oxygen as soon as possible at 15 LPM, using a bag valve mask.

Other standards – Pools also must comply with clarity, pool chemistry, turnover, and lighting standards. All of these affect the lifeguards' job. Murky water has resulted in a number of catastrophic incidents, feed system failures have resulted in injuries to swimmers, low light levels (below 30 Ft-candles) can contribute to inability to distinguish victims below the surface, etc. For example, many local codes require the clarity to be such that "the main drain is clearly visible at all times." That means if the surface is blocked by anything, or the water is murky, the pool should be closed, or the obstruction eliminated immediately.

Conclusion – Hopefully, this article provided some new insights into what's expected of lifeguards at pools and waterparks. In the following articles, we'll refer back to these standards at times to tie them into the current discussion.

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