



## Position Statement 15-1

### *Use of the Terms Near, Dry, Delayed and Secondary Drowning*

#### **Background**

Before 2002, there were 33 different published definitions of drowning and near drowning. Some of these definitions and terms were confusing and made tracking of drowning patients very difficult. For example, if someone was rescued from the water and taken to the hospital as a “near drowning” and they died a few days later as a result of complications, cause of death may be listed as “respiratory failure” and not as drowning. From a medical and public health standpoint, the initial event that caused death was drowning, but the fatality was never listed as being caused by drowning.

To standardize our understanding and reporting of drowning, a new definition was proposed in 2002 at the World Congress on Drowning that year in Amsterdam. This definition was subsequently approved and accepted by the World Health Organization (WHO), American Heart Association (AHA), International Liaison Committee on Resuscitation (ILCOR) and many other lifesaving, lifeguarding, and medical organizations.

**Drowning is now defined as “the PROCESS of experiencing respiratory impairment from submersion/immersion in a liquid. If someone has difficulty breathing as a result of being underwater, then they have drowned.”**

Drowning doesn’t always end in death. Thousands of people, adults and children, drown every year and survive without any additional complications. There are also a significant number of people who suffer non-fatal drowning and as a result have severe, moderate or mild brain damage. You can think of this situation as similar to that of heart attacks or strokes. Some people who experience a heart attack will die, some will survive without complications, and some will survive with some amount of complications. The same is true with drowning.

Despite efforts to standardize definitions and clarify that drowning is a process, the use of incorrect and confusing drowning terminology continues. As recently as 2015, stories regarding the dangers of “near”, “dry”, “delayed”, and “secondary” drowning were widely circulated on social media and picked up by print and broadcast media as well.

#### **Position**

1. Any person - adult or child - who has been in or under the water and has symptoms of difficulty breathing, excessive cough, foam or froth in the mouth, or aren’t acting right that occur immediately or within a few hours of being in the water had a non-fatal drowning and should seek care from a doctor. Symptoms usually appear immediately, but may be delayed by a few hours or get progressively worse. Onset or worsening of symptoms usually occurs within the first 8 hours of submersion.
2. There is no such thing as “dry” or “wet”, “delayed”, or “secondary” drowning. Anyone with respiratory impairment, not acting right, excessive cough, foam, or lethargy after being underwater, even briefly, should be taken to a hospital for further evaluation. Drowning is a spectrum ranging from mild to moderate to severe.

3. There is no such thing as “near” drowning. A person who does not die from a drowning incident has suffered a non-fatal drowning and survives with either no complications or brain or other organ damage ranging from mild, to moderate to severe.
4. One of the reasons it is so important that we (parents, doctors, researchers, lifeguard trainers, EMS, aquatic safety organizations and the media) speak the same language is that we can get a better understanding of the scope of the drowning problem and learn to better prevent and treat it.
5. To better understand the scope of the non-fatal drowning problem we must use correct terminology when speaking to clients, the media, each other, and through social media.

## Discussion

There are numerous sources online, some from doctors and other medical professionals, which refer to outdated materials and incorrect information. In addition to incorrect use of the term “secondary” drowning, some of these sources also use other incorrect terminology such as “dry”, “wet”, or “delayed” drowning, none of which have a clear, accepted definition. Someone who has been underwater, even briefly, and has difficulty breathing, excessive coughing, is not acting right or has any other abnormal symptoms has drowned and should be taken to a hospital for further evaluation.

Drowning already accounts for about 10 deaths per day in the United States. Exact data on non-fatal drowning is more difficult to obtain, but it is estimated that for every fatal drowning incident, there are 3 to 7 non-fatal drowning incidents. These non-fatal incidents are usually incorrectly identified as a “near drowning.” That is an additional 30 to 70 persons per day in the United States who drown and survive, some with brain damage, some without. Instead of talking about “secondary” or “dry” or “near” drowning, we should be discussing the fact that ALL drowning is drowning and the entire process needs to be better understood and studied.

Our understanding of the scope of the drowning problem is complicated by additional difficulties with data collection. When collecting data, the United States Centers for Disease Control and Prevention (CDC) and WHO do not include drowning (fatal or non-fatal) incidents that occur on boats, during floods or natural disasters or by suicide or homicide. The numbers presented are simply the best estimates they can make. In 2010, there were 12,900 visits to emergency departments (EDs) in the U.S. for drowning, which presumably excludes boating and natural disasters. Only 2,600 were admitted to the same hospital. The remaining 10,300 were either sent home or transferred to another hospital. During that same time frame, there were 3,782 drowning deaths (excluding boating, natural disasters and suicides or homicides), many of which occurred before reaching a hospital and therefore are not included in the 12,900 ED visits. This means that, conservatively, there are 6,000 to 10,000 non-fatal drowning incidents in the U.S. every year. There are likely many more, but we do not have adequate data to support such claims.

## References

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## About SAI and the Authors

The Starfish Aquatics Institute (SAI) is one of the five nationally recognized water safety certification agencies in the United States, with a growing international presence. Not only is SAI the fastest growing agency, founder Jill White is consistently named one of the “Power 25” in the world of aquatics professionals. Her innovative leadership and vision have also been recognized by the World Waterpark Association, which in 2010 bestowed on her it prestigious Al Turner Memorial Commitment to Excellence Award and inducted her into the World Waterpark Association Hall of Fame in 2014.

SAI collaborates in drowning prevention and standards development initiatives and its representatives frequently speak at national and international industry conferences Clients embrace SAI’s comprehensive programs and recognize that its consulting staff and Medical Directors are the most highly trained and experienced in the industry.

**Dr. Hawkins** is an emergency physician and EMS medical director in North Carolina and has served as a Medical Director for SAI since 2011. He attended Yale University and graduated from the University of North Carolina-Chapel Hill School of Medicine. He completed his residency in Emergency Medicine at the University of Pittsburgh. A renowned speaker on wilderness medicine, Dr. Hawkins founded and was the first Executive Director for the Appalachian Center for Wilderness Medicine. He is a Master Fellow of the Academy of Wilderness Medicine and a Fellow of the Academy of Emergency Medicine and the American College of Emergency Physicians. He’s the founder of the Carolina Wilderness EMS Externship and the medical director of the NC State Parks and Landmark Learning as well as a board member of Lifeguards Without Borders.

**Dr. Sempsrott** has served as a Medical Director for SAI since 2011. A graduate of the University of South Florida College of Medicine, he completed his residency in Emergency Medicine at the University of Nevada, School of Medicine. In 2006, he founded Lifeguards Without Borders, a non-profit NGO dedicated to reducing the global burden of drowning morbidity and mortality. Currently serving as Executive Director of the group, he has consulted on programs in Peru, Ecuador, Dominican Republic, Jamaica, Bangladesh, Cameroon, the UK and Colombia. A frequent lecturer across the globe, Dr. Sempsrott also publishes widely on the topic of drowning. He has won numerous awards and honors from educational institutions and conferences. Dr. Sempsrott is a member of the American College of Emergency Physicians and a member of the American Academy of Emergency Medicine.

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