



World Water Safety

## INTERNATIONAL LIFE SAVING FEDERATION

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### LIFESAVING POSITION STATEMENT - LPS 17

## DEFINITION OF DROWNING

### BACKGROUND

Prior to 2002, there were 33 different published definitions of drowning and near drowning. The lack of uniform terminology complicates discussion on research, prevention, rescue, and treatment of drowning <sup>[10]</sup>.

A Task Force on the Epidemiology of Drowning was established in 1998 to consider the many terms used to describe drowning with a view to establish a simple but comprehensive definition to enable sound epidemiological data to be collected. In 1999 one task force member, Dr David Szpilman, was invited to write a discussion paper on the definition of drowning. This paper formed the basis of a consensus procedure aimed at the development of a new definition. Considerable debate occurred during 2000 by many world experts. Based on this discussion, the Task Force released a revised discussion paper in early 2002.

The Chair of the Task Force, Christine Blanche, convened meetings in Amsterdam in June 2002 to finalise the development of guidelines for definitions and reporting of data related to drowning. This meeting comprised the members of the Task Force, together with representatives from major organisations whose focus is resuscitation and epidemiology as well as other recognised experts from around the world. This meeting was part of a larger comprehensive conference, the World Congress on Drowning, an initiative of the Maatschappij tot Redding van Drenkelingen (Dutch Society to Rescue People From Drowning). <sup>[1]</sup>

The guidelines and definitions that emerged from this meeting were adopted at the conference and were presented and approved in October 2002 at a meeting of the International Liaison Committee on Resuscitation (ILCOR), in Florence, Italy.

In its 2010 guidelines, ILCOR recommends that the Utstein definitions and methods of data reporting for drowning and related events be used to improve consistency in reporting and research. <sup>[2]</sup>

The definition has since been adopted by ILCOR, The World Health Organization and all National Resuscitation Councils. <sup>[3,4,5,6]</sup> This definition continues to stand and was reaffirmed

at the most recent meeting of the Second Utstein Task Force on Drowning meeting in 2014-<sup>[11]</sup>

## STATEMENT

Drowning is defined as “the process of experiencing respiratory impairment from submersion/immersion in liquid; outcomes are classified as death, morbidity, and no morbidity.”

The International Lifesaving Federation strongly recommends that all organizations involved in epidemiological research, vital statistical data collection, rescue organizations, the medical community, media, and the lay public should use the definition and nomenclature (terms) as agreed upon by the international community as a basis for useful communication and include it in their glossary.

## DISCUSSION

The principal purpose of the recommendations was to establish consistency in the reporting of drowning-related studies, both in terms of nomenclature and guidelines for reporting data. These recommendations are intended to improve the clarity of scientific communication and the comparability of scientific investigations. Improved clarity and comparability of future scientific reports will advance the clinical and epidemiological knowledge base. In turn, such studies can help identify effective prevention strategies as well as the best treatment for victims of drowning and can ultimately save lives. These recommendations should also extend to professional rescuers, the lay public, and news media when referring to drowning incidents.<sup>[7]</sup>

## DEFINITION<sup>[7]</sup>

Drowning is “the process of experiencing respiratory impairment from submersion/immersion in liquid”.

Implicit in this definition is that a liquid/air interface is present at the entrance of the victim’s airway, preventing the victim from breathing just air. The victim may live or die after this process, but whatever the outcome, he or she has been involved in a drowning incident. The drowning process can only have two outcomes; death (fatal) or survival (non-fatal). Non-fatal drowning can be further divided into survival with no medical complications (no morbidity), or survival with medical complications, usually as a result of anoxic brain injury (morbidity).

Upon rescue, persons can have their drowning process interrupted any time before death. These drowning persons can have a mild, moderate, or severe drowning incident. For example, someone can be rescued within a few seconds of drowning, have only some coughing to clear the airway and survive without any complication. At the other extreme, following severe anoxia, a victim may have a cardiac arrest.

### **The following terms should be abandoned**

#### **1. Dry or Wet drowning**

The drowning process involves respiratory impairment and may or may not involve water entering into the lungs (aspiration). The numerous conflicting definitions of these terms do not contribute to the prevention, rescue, or treatment of the primary injury, which is a lack of oxygen to the brain.<sup>[10]</sup> Hypoxia in victims develops because oxygen is not reaching the brain, regardless of whether aspiration has or has not occurred during drowning. The treatment remains the same: ventilation and oxygenation.

## 2. Active, Passive, and Silent drowning

These terms have tried to categorize various behaviors seen in the drowning victim. While the victim who is experiencing difficulty may initially be able to yell or signal for help, increasing air hunger rapidly precludes the ability to speak and ability to keep the head above water. Within seconds to a minute, worsening hypoxia will make the victim lose consciousness. There are numerous conflicting definitions of these terms. Importantly, they do not help determine the prevention, rescue, or treatment of the drowning victim. Regardless of the stage of difficulty, the drowning victim should be rescued, retrieved, and provided oxygen/ventilation as needed.

## 3. Secondary drowning (sometimes known as ‘Delayed’ drowning)

This term has been misused by laypersons and the media to describe incidents of non-fatal drowning. All persons who experience respiratory distress as a result of submersion/immersion in a liquid have drowned, even if it is not immediately fatal.

## 4. Drowned and near-drowned

Historically, drowned has been used to mean death, and near-drowned has been used to mean survival. These terms should be abandoned in favor of fatal or non-fatal drowning.

## LEVEL OF EVIDENCE

This document is based on expert consensus as noted above.

## POTENTIAL CONFLICT OF INTEREST STATEMENT

None of the participants in the consensus process leading to this position statement has a conflict of interest with the stakeholder industry, technology, persons or organisations that are identified and/or impacted by the position statement.

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## APPROVAL

Position Statement approved by the ILS Board of Directors on 16/09/2014 and 03/09/2016.