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Understanding the Challenges Facing the First Responder in Water-Based Incidents: Workshop

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Understanding the Challenges Facing the First Responder in Water-Based
Incidents: Workshop

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A First Responder (i.e., the person or persons first to arrive at the scene of an incident) are not usually medically trained and most have limited or no emergency response training. Yet it is regularly up to these individuals to recover a casualty and to maintain life until more qualified and better-equipped medical personnel arrive. The ‘ability to respond’ also is equally important to casualty outcome. In Ireland a wide range of potential First Responders may respond to incidents. At one end of the continuum are situated casual passers-by with no experience and no equipment while at the other end are the highly trained and well-equipped advanced medical/surgical teams. Somewhere in the middle sit the ‘voluntary’ or NGO ‘search and rescue’ (SAR) team which is the focus of this workshop. Globally SAR teams represent one of the principle SAR groupings.

In water-based incidents, response time, combined with the ability to react, are critical elements to casualty outcome. Delayed or inappropriate intervention can result in long-term morbidity or death. This workshop looked at the challenges facing voluntary SAR teams dealing with water-based events and asked the question, “Are current training methodologies and equipment producing the outcomes we expect?”

The issue of understanding and treating cold water incidents was the nucleus of this workshop. We specifically addressed the topic of how best to treat a cold or hypothermic casualty extracted from the water. We questioned whether our protocols were in line with current medical understanding and international best practice. Is our field equipment ‘really’ the best available? Are we viewing the casualty and their treatment holistically? All of these were key questions that influence casualty outcome. Yet sometimes, due to corporate inflexibility, an unwillingness to accept change or perhaps even due to ‘silo thinking,’ we find our standard operating procedures lagging behind industry standards and best practice.

As a practical exercise we reviewed video footage of a cold and incapacitated female exiting cold water and asked several questions in an attempt to determine her thermal and medical status and then decided on an appropriate course of treatment. These questions were followed by a review and practical exercise on her treatment and extraction using two systems - the ‘burrito wrap’ technique, the classic multilayer ‘burrito wrap’ with appropriate rope work, vs. the relatively new PerSys Medical/Blizzard carry litter/stretchers with an integrated insulating survival blanket. *

Post-Workshop Notes

The following outcomes were observed by the participants in this workshop:

- the importance of an observational and structured treatment approach
- the need to think holistically when dealing with cold or hypothermic casualties
- the need to fully assess all the environmental factors that are in play and those that might come into play
- the need to recognize that the safety of the entire team must to be factored into all decision-making processes
- the need to address the treatment options for ‘afterdrop’
- the classic ‘burrito wrap’ requires a level of expertise and experience to implement successfully
- the construction of the ‘burrito wrap’ is time-consuming; more appropriate rewarming and extraction systems are available
- the classic ‘burrito wrap’ can be fabricated out of many different materials thereby offering multiple field options which may be advantageous
- the classic ‘burrito wrap’ provides a level of thermal protection and a means of casualty extraction, albeit cumbersome and dated
- the use of the Blizzard litter® requires minimum previous experience
- the Blizzard litter® offers a lightweight and effective solution in both thermal management and casualty extraction
- workshop participants stated a preference for the Blizzard litter® when treating and extracting a cold water casualty.

Understanding the staged effects of how cold water impacts the human body and its manifestations is considered key when considering treatment options. Spending time observing the casualty’s pertinent clinical signs and systems in a wilderness or remote setting is crucial, especially in the absence of diagnostic equipment. Having on-hand equipment that can be deployed in minutes by minimally-trained responders is advantageous to both the casualty and to the safety of the SAR team.



Dr. Patrick Buck, Ph.D., REMT is a marine biologist, Remote EMT and marine guide. He has a deep interest in wilderness and austere survival and is currently researching the design of modified PFD’s to prolong life in cold water. Patrick lectures on the effects of cold water immersion and drowning to various NGOs and government departments and organisations. He is the author of *A Field Guide for the Treatment of Drowning and Cold Water Immersion Incidents* which is used as a training manual by both Irish and international organisations. Patrick lives in Cork, Ireland. * He has a financial interest in BLIZZARD Protection Systems.