

“Main Skills for Lifesaving and How to Train these Skills”

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ABSTRACT

In the common goal to prevent drowning and to reduce significantly the number of drowned persons presence and quality of the lifeguard services plays a great role. At the pool, lakes, rivers and ocean beaches around the world hundred thousands of lifesavers try to prevent accidents and to act immediately, effective and quickly if it is necessary. The conditions at those spots are very different. Respective to these conditions also the main skills for the lifesavers have to be trained in a different way.

The author has analysed the frequency and reasons of accidents and lifeguard actions. He explains the requirements to lifesavers at pools, lakes and at the ocean and derives the main skills of the lifesavers, like spotting, recognizing dangerous situations, deciding what to do, reacting in the right way, running, swimming with or without fins, paddling rescue boards or skis, driving rescue boats, scuba diving, searching under water and rescuing with or without rescue equipment. The lifesavers have to be trained physically and theoretically. Medical know how for CPR and First Aid is as important as physical fitness.

Real rescue situations should be simulated for training purposes. Special lifesaving sports events and rescue competitions can help to increase the fitness of the lifesavers. They attract young people to lifesaving and help to train the main skills of lifesaving. The discussion of dangerous situations within the lifesaving teams at the lifeguard stations, the common daily training fits the members of the team closer together and encourages even the lifesaving technique development.

The author compares also the main skills with the event descriptions of the ILS lifesaving sports events and proposes some of the rescue events as core events for future ILS competitions. This will help to concentrate to the main tasks and to increase the quality of lifesaving action.

INTRODUCTION

In the common goal to prevent drowning and to reduce significantly the number of drowned persons presence and quality of the lifeguard services plays a great role. At the pool, lakes, rivers and ocean beaches around the world hundred thousands of lifesavers try to prevent incidents and to act immediately, effective and quickly if it is necessary. The conditions at those sites are very different. Respective to these conditions also the main and additional skills for the lifesavers have to be trained in a different way.

The following report is one of the results of 35 years active lifeguard service and duties as senior instructor. The experience was collected at the German beaches of the Baltic Sea and in many training courses for senior lifeguards. In my function as Technical Director of one of the German regions and as Vice President of DLRG I could analyse the frequency and the reasons of many drowning incidents and the quality of the lifeguard actions.

THE SITUATION

In training courses round over the world lifesavers are learning the basic skills in theoretical lessons and practical exercises. One of the essential prerequisites is the knowledge of swimming. In the training courses the swimming techniques will be bettered and the participants learn to dive and to search under

water as well as to save a person. Carrying and towing techniques are in the focus of the training as well as CPR and first medical response in emergency situations. But are these skills enough for the lifeguard service at pools, lakes, rivers and beaches?

Every year hundreds of new trained lifeguards from the inner part of Germany come to the German coastline for the lifeguard service at the Northern Sea and the Baltic Sea. Many of them seem to be well trained lifesavers. But after few hours at the lifeguard station it became obvious that they need further training. One of the most important skills are not well enough trained within the courses – the awareness or spotting of emergency situations at a crowded beach or pool. The new lifeguards were surprised to learn that in the majority of cases the lifeguards hear acoustically an incident or about an incident instead of to see it. So one of the first lessons of practice is to shut off the music of the radio and to listen to the noise (or for some better to the sound) of the beach and to observe crowded beaches with and without binoculars from different heights to the sea level. Very different information can be so detected with these three ways of spotting.

LIFESAVING SKILLS

But let us come back to the requirements for lifesavers at pools, lakes and at the ocean and let's derive the main skills of the lifesavers. The Table 1 shows the different skills needed. Spotting, recognising dangerous situations, assessing situations, deciding what to do, reacting in the right way, running, swimming short and long distances with or without fins, paddling rescue boards or skis, driving rescue boats, snorkeling, perhaps even scuba diving, but in any case searching under water and rescuing with or without rescue equipment in carrying and towing techniques. The lifesavers have to be trained physically and theoretically. Medical know how for CPR and first aid is as important as physical fitness for a lifeguard.

Underestimated Additional Skills

Another essential skill is to command the assessment of the information about an incident. Important for such decisions which urgently have to be taken are the

Status of the drowning person or persons

- victim is conscious / unconscious
- victim is still on the surface / already under the surface

and the Status of the conditions

- dangerous biological conditions (animals, plants, bacteria,..)
- dangerous chemical conditions (poisons, oil, ...)
- temperature of water and air
- wind force and wind direction
- direction and strength of currents
- surf conditions
- dangerous rocks or structures
- distance to the site of the incidence.

Table 1: Main Skills of Lifesavers at different Bathing or Water Sport Areas

Pool	Smaller Lake	Bigger Lake	Ocean
<ul style="list-style-type: none"> - swimming short distances - diving ca. 3 m deep in clear water - saving a person without rescue equipment - throwing a rescue ball, line, ring or bag - knowledge in CPR and first aid 	<ul style="list-style-type: none"> - swimming short distances - diving ca. 3 m deep - snorkeling - searching under water with low visibility - saving a person without rescue equipment - throwing a rescue ball, line, ring or bag - knowledge in CPR and first aid 	<ul style="list-style-type: none"> - running - swimming long distances without fins in cold water - swimming long distances with fins in cold water - diving more than 3 m deep - snorkeling - (scuba diving) - searching under water with low visibility in cold water - saving a person without rescue equipment - saving a person with rescue equipment - with rescue tube - with rescue board - rowing a boat, driving a rescue boat - knowledge in CPR and first aid 	<ul style="list-style-type: none"> - running - swimming short distances - swimming in the surf - swimming in cold water - swimming long distances with fins - diving and searching under water over longer times - snorkeling - (scuba diving) - saving a person without rescue equipment - saving a person with rescue equipment - with rescue tube - with rescue board - driving a rescue boat - knowledge in CPR and first aid

The status of those conditions has to be known already, when the information about an incident comes in. These varying data have to be updated on-going and the lifeguards have to be familiar with them during the whole day. The correct information about the distance to the site of the incidence is the only new information and is very essential for the next actions of the lifesavers. Therefore it is very helpful to train the lifeguards in the estimation and the assessment of distances. This is important for

- the choice of the means for rescue
- the duration until arrival at the victims position
- the expected status of the victim at arrival
- the provision of further resources (divers, diving equipment, CPR staff and devices, helicopter, ...).

For the correct choice of the suitable and fastest method for the approach and for the rescue the following items should to be taken into account

- to be at the victims position in time
- to find the victim still at the surface
- to be at the position as fast as possible
- to save the victim alive
- to rescue the victim in the suitable manner
- to protect the own life and health.

So the choice of the method and the means for the approach and for the rescue depend from

- the status of the victim
- the number of victims
- the conditions at this special beach

- the situation in that moment (presence of persons and means)
- the distance to the shore
- the offset at the shore.

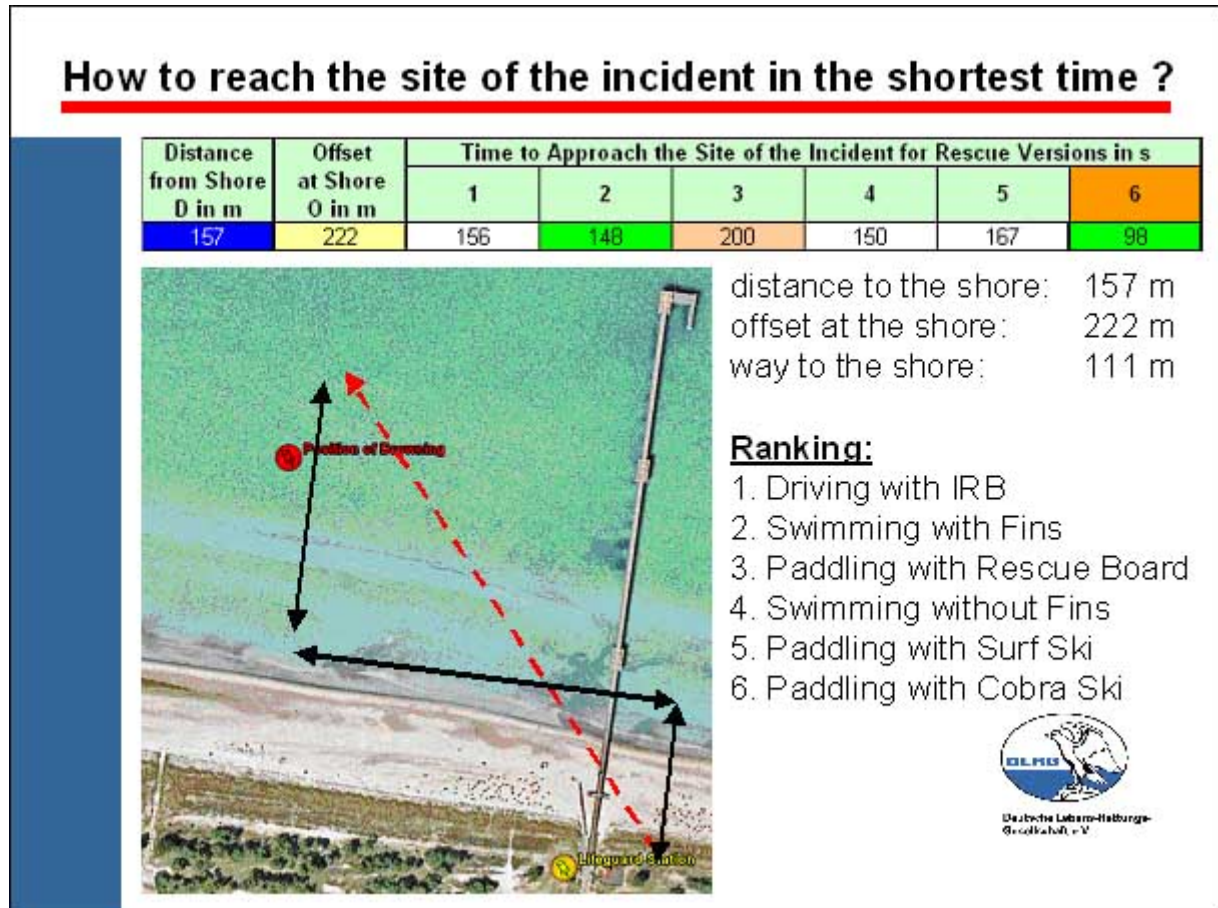


Figure 1: Comparison of different methods to approach the site of an incidence

This can be trained at the lifeguard stations in theoretical lessons with the methods of estimation, with the explanation and development of adequate tables for the special local conditions as well as by the mean of self-calculation for examples and with practical exercises like self-experience or training competitions with different distances to shore and offsets. Figure 1 gives an example.

Another experience I made in my long career is the incompetence of young lifesavers in the routing of a swimmer or of an IRB to the site of the incident. This have to be trained over and over again with for the lifeguards at the station visible submersed manikins and a stop watch with

- different distances to the shore
- different offsets at the shore
- different means to signal (flags, radio, ...) and
- at different weather, light and sea conditions.

Such a training is very helpful for the team competence, for the team solidarity and for the success of the rescue actions. Figure 2 shows some examples of teaching material for this topic.

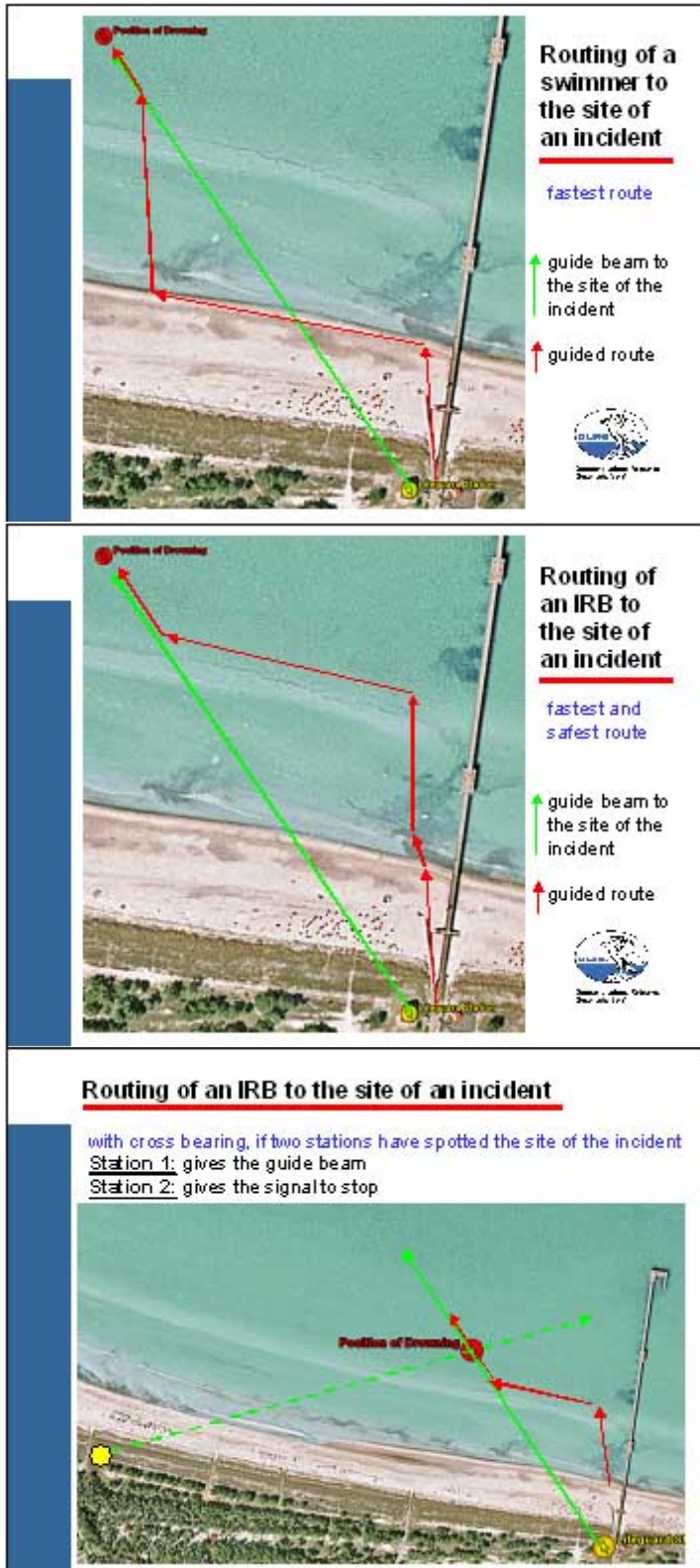


Figure 2: Routing of swimmers and rescue boats

When the swimmer or the rescue boat has been successfully routed to the site of the incident and in case that the victim is already submerged then the searching under water begins. Also this action needs experience and knowledge of the local conditions depending from the actual weather. Searching under water has to be trained. The lifesavers must learn to determine the actual direction of the current at the surface and at the bottom. Hints how to do that as for example by taking one hand of sand and trickling the sand at the bottom are very useful but not trained in lifesaving courses.

The behaviour of a drowned body must be known for a successful search under water. Lifeguard training should include training sessions for such search with different

- depths of the water
- visibilities in the water (clearance, sun)
- directions and strengths of the wind
- directions of currents at the surface
- currents at the bottom of the water
- equipment provided (mask, snorkel, scuba diving equipment, ...).

The difficulties to find the victim is increasing with the duration under water.

DLRG has reacted to this experiences made in the lifeguard service and has created a special training for those who want to go into a lifeguard service. After theoretical and practical training course for the lifesaving silver award a new level for training was developed. Within the training to become an advanced member of rescue services a curriculum for a six weekends training at a lifeguard station was developed. The main subjects are

- observing and awareness of incidents
- assessing extraordinary situations
- approaching and saving techniques
- means to rescue
- routing of swimmers and rescue boats
- searching under water
- training competitions of the team.

LIFESAVING SPORT AS METHOD TO TRAIN LIFESAVING SKILLS

Such training can be part of local initiatives for lifesaving sport. Lifesaving sport shall attract young people to lifesaving and encourage lifesaving technique development. Lifesaving competitions have not only the goal to compete with friends of local, regional, national or international level. Sport supports the fitness of the lifesavers and is one way of physical training. The lifesaving sport shall help to better the lifesaving skills. To reach this goal the lifesaving competitions have to match the lifesaving skills. Lifesaving competitions shall simulate rescue situations. Therefore it is necessary to compare the main skills of lifesavers with the event descriptions of the competition rulebooks. The event descriptions have to reflect the rescue practice, if the sport shall support to fulfil the above mentioned goals.

Table 2: Comparison of the Lifesaving Skills with Events of the ILS Competition Manual

Skills	Pool Competition	Ocean Competition
Physical Fitness and Basic Skills		
- endurance	200 m Obstacle Swim 200 m Super Lifesaver	Surf Race 2k Run Oceanman / Oceanwoman Board Race Surf Ski Race
- speed	50 m Manikin Carry 100 m Manikin Tow with Fins 100 m Manikin Carry with Fins	Beach Sprint
- reaction		Beach Flags
Lifesaving Techniques		
- saving a person without rescue equipment	50 m Manikin Carry 100 m Rescue Medley	
- saving a person with rescue equipment	100 m Manikin Carry with Fins 100 m Manikin Tow with Fins	Rescue Tube Rescue Board Rescue
- mass rescue	200 m Super Lifesaver SERC	IRB Competitions
- handling with lifesaving means	Line Throw	
- rowing a boat	Stillwater Boat	
- rescue with an rescue boat		IRB Competitions
- awareness and assessing incidents	SERC	
- diving	100 m Rescue Medley	
- routing a swimmer or rescue boat		
- searching under water		
- snorkeling		
Theoretical Knowledge		
- knowledge in CPR and first aid	SERC	
- other lifesaving know how		

Analysing the event descriptions of the ILS Competition Manual we find in Table 2 some skills of the lifesaving practice which are up to now not supported by lifesaving sport events. Some other events have only importance to develop physical fitness and basic skills, e.g. the surf ski has a long tradition as sport equipment but has only low importance in the lifesaving practice. The example above has shown that only in case of no offset at the beach relative to the position of the lifeguard post the surf ski is fast enough. Only in these few cases the ski can help to approach to the site of the incident in time, but unconscious persons can not be saved with the ski. The lifesaver has to carry back the victim or has to wait for a rescue boat.

The sports techniques should be the same as in the rescue practice. The method the majority of competitors uses now to carry the manikin in a frontcrawl style is not acceptable. It is only a technique to transport a piece of plastic in the pool from one point to another. A real person with other dimensions and other centre of gravity could not be carried in the lifesaving practice in such technique. The competition rule has to be changed urgently to match the rescue practice again.

It is necessary to develop rules for such competitions that train the skills lifesavers need really in the lifesaving practice. We need for the future less and easier events with material not so expensive and requirements not so complicate. Why do we fix distances? They could vary from competition to competition like in the daily lifeguard practice. We have to think about: Do we want to select the best 100m lifesaver or the best skilled lifesaver ready for all situations?

Let us develop in the near future some core events for the important international competitions and flexible additional events. Let us develop a SERC for the ocean, where all the skills really needed can be trained.

CONCLUSIONS

Real rescue situations should be simulated for training purposes. Special lifesaving sports events and rescue competitions can help to increase the fitness of the lifesavers. They attract young people to lifesaving and help to train the main skills of lifesaving. The discussion of dangerous situations within the lifesaving teams at the lifeguard stations, the common daily training and competition of lifeguarding team level fits the members of the team closer together and encourages even the lifesaving technique development.

Comparing the lifesaving skills with the ILS Competition Manual event descriptions deficiencies become obvious. There are some events without any relation to the skills needed in the lifesaving practice and there are some skills essential in the rescue practice which are not supported in lifesaving competitions. The training of lifesavers and the lifesaving sport should content all really needed skills – also the underestimated additional ones. This will help to concentrate to the main tasks and to increase the quality of lifesaving action.

TAKE HOME MESSAGES

1. The different conditions of water areas cause also different lifesaving skills.
2. Simulated rescue training increase the success of rescue of real rescue activities.
3. The rules of lifesaving sports events should support the training of lifesaving skills.

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