



Internationale Kommission für Alpines Rettungswesen IKAR
Commission Internationale du Sauvetage Alpin CISA
International Commission for Alpine Rescue ICAR

Joint Meeting – all Commissions

Place: Bol, Croatia, Hotel Elaphusa
Date: October 19, 2013
Time: 8 a.m.
Present: Members of the Terrestrial Rescue, Avalanche Rescue, Air Rescue, and Alpine Medicine
Chairman: Fidel Elsensohn
Minutes: Fabienne Jelk

A. Kottmann, REGA: Avalanche Victim Resuscitation Checklist

Each avalanche is a stressful situation. Time is an additional stressor. Decisions about life and death have to be made. This requires information such as time of burial or if an air pocket exists and so forth. The very first information is very important and has consequences on procedure. Up to now algorithms were employed; however, it was difficult to remember those when on a rescue mission. The last algorithm was a little unclear. Although it seemed relatively simple, it often was not applied correctly. We then looked at pilots under stress. They have a checklist which they can follow in stressful situations. Such a checklist was then also developed for physicians. Another reason for developing this was that often it is not a physician who is first with the patient. So it is possible that the information needed is gathered by non-physicians. The checklist is presented. It is a laminated card that is put around a patient's neck and stays with the patient. The white part is filled out by the people who arrive at the victim first; the red part is for physicians or paramedics. A great advantage is that the necessary medical information is readily available on arrival at the hospital. Flow of information is ensured. The Medical Commission has approved the checklist. It will be translated and distributed. Personnel need to be instructed on how to use the checklist.

Presentation: 18-ICAR Avalanche Victim resuscitation Checklist.pdf

Questions/Remarks:

Question Dominique Michellod: In Switzerland, only a physician can confirm a death. How does that apply to the checklist?

You have to follow the laws. Sometimes there is no physician on scene. Confirmation of death is something different.

John Ellerton, England: Managing Moderate and Severe Pain in Mountain Rescue

The Medical Commission worked out a paper regarding pain management and has published this. There are 5 recommendations, which are presented.

#1: Pain is rated by the patient on a scale from 0 to 10. The rescuer asks this question, which helps to develop trust between rescuer and victim.

#2: Special training in pain management is important. Anyone who dispenses pain medication needs to be trained. There are simple procedures rescuers can follow. Pain can also be managed without medication, for example with splints.

#3: There is no perfect pain management. A module can help to figure out the best pain management strategy for the situation.

4: The amount of medication carried should be kept to a minimum. It is more important to carefully select the type.

#5: A strong opiate like morphine is recommended as core medication in case of medium to high pain. A single medication is only efficient in about a third of patients. A combination of medications is recommended.

Rescue organizations need to know how to handle pain; not only the physician but all rescuers as a physician might not always be available. Nonmedical personnel can be trained. Correct treatment of pain should be monitored and improved if necessary.

Presentation: 19-Ellerton-ICAR-Managing-Pain.pdf

Questions/Remarks: None.

Giacomo Strapazzon: Alpine Trauma Registry

Are alpine accident registers necessary? What data is available and how should data be collected?

A register was developed to collect various, serious incidents. Different criteria determine whether a patient needs to be registered. Data collected includes patient registration, accident history, medical treatment before hospitalization, medical treatment as an inpatient, and outcome of the accident. Data was collected from 1/1/2011 through 09/30/2013 in South and North Tyrol; 104 incidents were registered. The results are presented. The registration is still open.

Presentation: 20-2013 Strapazzon Croatia_ICAR medcom.pdf

Questions/Remarks: None.

Blaise Agresti, GSM: Risk Analysis and Management, Quality Process, Accidents

The presentation is about accident analysis and incident analysis within the rescue organization; especially what happens within the rescue team.

On March 9, 2013 crevasse rescue training was planned. The training team was flown to the training area. One of the instructors fell into a crevasse and died.

There are different ways to deal with such an accident: Anger, acceptance, blame, or we can analyze the accident and question what could have been done differently. 90% of accidents are due to human error. There are many rules, algorithms, and so forth but out in the field

we are unable to apply them. Since the foundation of PGHM Chamonix in 1958, 61 rescuers have died. This risk for rescuers needs to be reduced. A 4-stage structure was developed:

1. Analyze internal risks (circumstances of the rescue, training, risk during operation and training, communication, etc.)
2. Accident notification (RETEX, everything, what happened; how accidents, new methods, incidents should be reported).
3. Debriefing with the ALARM system (4 steps, 7 factors; this was taken over by the physicians).
4. Monitoring and training (this is done by an external authority).

Nowadays, we are always looking for someone to blame but instead we should be looking for the mistakes. Mistakes have 2 sides; there is a negative aspect because we want to hide it but there is also a positive aspect because they can be used for prevention. The negative side is still predominant. A change in the culture of dealing with mistakes needs to happen so that mistakes will be acknowledged.

Accident of March 9: the debriefing couldn't be done internally. A risk management specialist was consulted. The chronology of the course of events was established. Each event was analyzed as to whether or not it contributed to the final outcome. Anything out of the ordinary was also recorded. It was identified that the day before the accident many things already happened that were not adherent to regular standards. In a second stage all nonstandard occurrences were compared to 7 factors. Then an action plan with deadlines was compiled. A SOP regarding dropping off a person on a snow-covered glacier was developed.

Human beings have a tendency to keep quiet about mistakes or negative incidents. ICAR's goal should be to also report about mistakes, not just successes; so the internal culture needs to change.

The essential is often threatened by the insignificant.

Questions/Remarks:

Nils Farlund: He is grateful that the French recognized what happened and what needs to be done. This is very instructive and very valuable for all of us.

Dominique Michellod, OCVS: HEC (Human External Cargo) Avalanche Rescue

Talks about an unusual avalanche situation. Notification was received that a person with an avalanche beacon was buried in the Zinal region. Mountain guides deployed, physician and dog handler were getting ready. Avalanche danger was level 4. The snow pack was in bad condition. On the day of the accident, the temperature rose steeply and quickly. The danger of secondary avalanches was very high. Therefore, it was decided to evacuate the 4 people on the avalanche run-out. The buried person's friends had already located him, so it was difficult to explain to them why they had to be evacuated and leave their buried friend behind. The victim survived and was able to leave the hospital after 2 days. The rescuers worked for 15 minutes underneath the helicopter without unhooking themselves from the helicopter.

Presentation: 21-HEC-Avalanche Zinal 15-04-2013.pdf

Questions/Remarks: None.

Patrick Fauchère, OCVS: HEC (Human External Cargo) Entanglement

This is a presentation regarding entanglement of ropes, which needs to be avoided. The helicopter is either free or tied to the ground. Pilots do not like to be tied to the ground. Various incidents are presented. One case showed the entanglement of an axe with the backpack of another rescuer which then resulted in more rescuers on the winch than planned. In another case, the rescuer being flown out was still secured and unable to free himself, so when the helicopter was starting to fly away, the safety catch was ripped away, and the victim was hurled all the way against the helicopter.

Communication between pilot and rescuer is important. There shouldn't be too many people at the staging location; other staging areas should be employed for rescuers and others; if possible color code the lanyards for rescuers and patients, and a cutting tool should be at the ready.

A recommendation was drafted.

Presentation: 22-ICAR_Entanglement_2013.pdf

Dan Halvorsen, Norwegian Red Cross/Norwegian Air Ambulance/VP ICAR: Safety for the Rescuer

Accidents in mountain rescue as well as during training need to be reduced. Accidents during training are shown. There was a case of a helicopter crashing into the water during training. This form of training is no longer employed and was adapted. As well, in hospitals many patients die due to physician mistakes. There are many errors; technical, flying, medical, team work, etc. as well as nature. There are safety programs that are used by airlines and within rescue teams. Aviation requires these safety programs. They have to be simple, available, user friendly, and result oriented. The willingness to register such incidents has to be present. The system needs to be blame-free and non-punishable. All reports of incidents do have names. This enables one to admit his/her mistake without consequences. We all make mistakes. A case is presented in which the pilot did not see the cable because it reflected in the sun. The rescuer, however, recognized it, and the accident was avoided. ACM is introduced: It is a program aimed at avoiding accidents. Everyone, including the whole team starting with the physicians all the way to the office, is integrated. The goal is to utilize all available resources effectively in order to increase air safety, patient safety, and overall efficiency of air rescue.

Presentation: 23-Halvorsen-presentasjon safety.pdf

Questions/Remarks: None.

Dale Atkins, MRA/RECCO AB: Order and Disorder in Mountain Rescue Decision Making

Checklists help to make better decisions in the field. The decision making process is presented. During rescue missions, secondary problems often arise, i.e. instead of 1 buried victim there are now 5. The goal is to bring order to a confused situation. Order makes managing easier. They are simple and predictable. Disorder is something in between. It is completely unpredictable. There is a best solution and several good solutions. Order and

disorder can also be described as safe and unsafe. The situation is simple, complicated, complex, or chaotic. Chaos, however, is not disorder. Chaos is in a gray zone at the edge of disorder. Chaos can be improved with little things; disorder is completely unpredictable. In simple contexts the best solution can be applied. In emergencies, the best solution could lead to delays and so a good solution might be better.

In complex situations good practice can have fatal consequences. During the crash of the AF 447, the autopilot disengaged and the pilots took over. The pilots had wrong data regarding speed. They fell back into their routine. They climbed steeply and a warning sounded. The warning died and the pilots thought something had changed and that everything was okay. The aircraft, however, did not have enough lift at that angle and crashed. Based on recorded communication, pilot 2 did not know what was happening. This was a complex problem.

Example training Mt. Rainier: They always trained with one victim, but suddenly there were 4 and the rescue process had to be adapted. No one thought about the fact that the situation had changed. Consequently, a rescuer died during a rescue mission. The unknown is one of the problems. I don't know what I don't know. If, for example, a body is being recovered and during the operation you realize that the person is still alive, everything changes. At that time you are in the realm of the unknown. Solution: Listen to the people who do know and not the ones who think and act as if they know. Just because something has been working in the past doesn't mean that it will also work in the future. Communication and coordination of the team has to function. Context needs to be recognized. Is it simple, complicated, or complex? After these assessments, one can choose the right strategy.

Questions/Remarks: None.

Hrvoje Dujmic, Croatian Mountain Rescue: First Avalanche for Croatian Mountain Rescue Service – From Theory to Practice

A presentation about the first avalanche the Croatian Mountain Rescue Service was involved in on February 23, 2013, a Saturday, in Kamesnica Mountain. The area lies in Bosnia-Herzegovina close to the Croatian border. One person died. It was a wet-snow avalanche. 30 minutes after the avalanche went down, the alarm came in. The nearest base was in Split, 50 km from the avalanche. The helicopter, however, had to wait at the border for a permit to cross into Bosnia-Herzegovinian airspace. Therefore, it took 90 minutes for the helicopter to get on scene. The weather was very bad. The operation was suspended at 10 p.m. due to a storm. The victim was not wearing reflectors or avalanche beacons and therefore couldn't be found on the first day. On the second day more than 200 people from Croatia and BH were working on the avalanche run-out. The body was eventually recovered by an avalanche dog.

Almost everything the Croatian Rescue Service applied during this incident, they learned through ICAR and the relationships established through it. So the continuance of ICAR is very important. The question is how we can encourage countries that are not part of ICAR to join or how can we relay ICAR knowledge to these countries. ICAR should be promoted in countries that have no knowledge of it at this time. Important as well is the international border-crossing coordination. Legal aspects of that cooperation should be addressed by ICAR as well. Learning more about tactical organization of rescue missions is also important. There are not many presentations addressing this. That would be very important.

The Black-Swan Theory is introduced: Almost all swans are white. No one thought there was such a thing as a black swan but then black swans were found in New Zealand and Australia.

This idiom is only used for incidents that could not really happen. The question is whether we can handle such occurrences. An organization cannot be trained in a certain black-swan situation but the training should be improved to a level where one knows how to proceed in such situations and how to manage them.

Presentation: 24-Avalanche-Croatia-Theorie-Practice.pdf

Questions/Remarks:

Remark Blaise Agresti: The analysis was very good. Regarding the black swan, each year we have training to prepare for such incidents. Next year we'll have such a class in Chamonix. Anyone is welcome to participate. The class is held in English. We also compiled a film regarding crisis management.

End of Meeting: 12 noon

Gebhard Barbisch
Commission for terrestrial rescue
President

For the English Translation: Olivia A. Cashner