International Commission for Mountain Emergency Medicine (ICAR Medcom)

7 – 11th May 2025
Bad Tolz, Germany
Host - Bergwacht Bayern & BExMed

Working Document

Participants: See Appendix 1

Apologies: Kyle McLaughlin, Malin Zachau, Matt P

Register of Sponsors:

- Defender : 1500 EUR
- Kohlbrat & Buntz: 500EUR
- Cosinuss: ? EUR (exact sum tbc)
- Tyromont: 500EUR
- Schiller: 1000 EUR
- SAM: 1000 EUR
- Wero: 1000 EUR
- Stiftung Bergwacht: XXX
- BEXMED
-

Register of conflicts of interest:

Internet:
WLAN Network: Sportcamp_Spitzingsee_Gäste
Password: Spitzingsee_2023

Social Media:

House keeping:

Provisional Agenda Thursday, 8th May 2025, after the simulation, before leaving for dinner

Papers in progress

Occupational Medical Examinations of mountain rescue team members - provisional results of survey (Volker/Iztok/Manu) 20 min - discuss on Thursday when Volker is present.

Provisional Agenda Friday, 9th May 2025, 9:30 - 12:00 CET

President's report (30 min)

Papers in progress

POCUS (Niels) 30 min
Airway (Les/Matthius) 40 min
Major review of Position Paper on rescue at Altitude (John) 20 min
MCI - Triage
Rescuer first aid competence document (Kaz, Mike, Mario) 30 min

Forthcoming elections

Discussion about MedCom President and Vice-Presidents' appointments, and other ICAR appointments (President, AirCom, Assessors)

Forthcoming meetings

ISMM/BMMS World Congress

Virtual component – 9:30 - 12:00 CET

https://us02web.zoom.us/j/4302995842?pwd=zc7fRhYsyaYKbJuZcWNnPjRq7CJmN2.1&omn=82465893314

Meeting ID: 430 299 5842
Passcode: 09052025

Note: only one person logged in.

President's Report

Minutes
The minutes from the 2024 ICAR congress have been uploaded here:
https://icarmedcom.boards.net/thread/175/information-on-thessaloniki-october-2024
The notes from our virtual meeting in Feb 2025 are here:
https://icarmedcom.boards.net/thread/196/icar-medcom-virtual-monday-february

Training updates:
EURAC Nepal - going ahead. Financial release of Time is Life fund agreed by ICAR board
Pik Lenin - no requests received

'Rescue in Difficult Environment' 19-21 March; report of meeting (Luigi)
A second incarnation issuing considered perhaps linked to the ICAR MedCom Spring 2027

Update: ISMM World Congress 18 - 20 May 2026
MedCom Spring meeting: Pros and Cons, and preferences for timing before and after ISMM discussed.
No clear preference

Financial Report
Here is the actual expenditure for 2024, the budget and current expenditure for 2025

Annual ICAR MedCom €3000	2024	2025 €4000	2025
	Actual	Budget	**Actual**
Open Access fee		€2000 (not allocated)	€0
Website	€169	€1250	
JE expenses non-reimbursed	€2140	600	£401.93
Spring meeting Income from sponsors and members/Expenditure? Balance	+ €161 (excess)		€0
Ethical approval POCUS NH	€214	0	
Total (€)	**€2523**	3850	
'Time is Life' education fund expenditure		**7.333,16**	
Remaining 'Time is Life'	**7.333,16**	**0**	**0**

New procedures are being implemented by the ICAR board as the commission budgets are going to looked at in greater depth with a budget agreed for the year and then allocated to the commission. Details have not been finalised.

MedCom Website (Natalie)
Continue with duality of ICAR website at the moment. We agreed that the website would be renewed with English in the administration back to increase the pool of persons available - Naomi and I have been looking at options but find it difficult to get into it online so we aimed to make the final decision on which provider to go with in Bad Tölz then sign off and start resetting the website over summer - that's the plan.

ICAR Congress 2026 Practical Day
Awaiting TerCom decisions; Gebhard will update us.

WMS guidelines collaboration/coordination
Splinting paper - nothing to add as yet

Members Papers:
See Appendix 2.

IHT registry and 9th International Symposium on Accidental Hypothermia? 2026
Work in progress - will be within the ISMM remit rather than the MedCom Spring meeting. A good home for the future?

DiMM Update (John)

Current ICAR members on the Admin. Group – Jason*, (John* as president), Bruce* and Inigo*, Oli* for rescue specialty.
Jason reports: 'For the DiMM, we completed the revision of the CPD guidelines (Appendix 3). This will be included in the 2026 DiMM regulation update. We should plan another DiMM course organizers meeting at ISMM 2026. It would also be great to host another DiMM faculty development session in combination with the course organizers meeting. Who is the contact for organizing ISMM 2026? The next project for the DiMM will most likely be creating a list of student competencies. More on that in the coming months. '

Initiatives

Current ICAR MedCom recommendations

- Multiple Trauma Management in Mountain Environments (2020) - does a review need to be initiated?
- Determination of Death in Mountain Rescue (2020) - A review is not necessary. Approve for a further 5 years (at Jackson Hole)
- Clinical Staging of Accidental Hypothermia: The Revised Swiss System (2021) Article published - see Appendix 2. We will adopt this update formally in Oct 2025.
- Guidelines for Mountain Rescue During the COVID-19 Pandemic (2021)
- Medical Aspects of Avalanche Rescue (2023) The revised checklist has been translated into Czech, French, German, Italian, Polish, Spanish, Catalen, Norwegian and Japanese languages. Great work, thank you. Haris is doing a Greek version
- Suspension Syndrome (2023) - paper has been published to SJTREM
- TOR (2023) - paper has been published in HAMB

Proposed ICAR MedCom recommendations

In progress

- Splinting and dislocations in Mountain Rescue (Seth)

In progress. Restructured to exclude spine but with dislocations. Collaboration with WMS may proceed Draft for autumn? Jason reports:
'Currently, we have screened 17,142 papers (see attached screen shot). We are waiting for one of our junior members to finish screening the remaining 1602 papers and we can move onto the full text review. Right now, we will have 500+ papers to do a full text review on, but we may have more. I'll let Seth and Peter comment about the timeline. I believe we are still hoping for this to be a collaborative paper with the WMS, but I'm not sure there has been any movement on that yet. Seth and Peter may have more details.'

- POCUS (Niels, Didier, Andrea, Manu, Natalie and Peter)

Niels: 'Survey results have been analysed by statistician and validated by senior authors contributing to the project. First draft should be completed soon and sent out to author group for corrections. Plan is to submit to SJTREM. I can briefly present the most important results if there is an interest and time during the spring meeting. Manu Funk has agreed to take the lead on the second paper (narrative review), which will provide ICAR MedCom recommendations for the use of POCUS in mountain rescue. First literature search has been done, next step is dividing up roles once the first paper has been submitted for publication.'
Heading to STREM. Update in Oct

- Airway-Management in Mountain Rescue – Techniques and Strategies. Matthias, Natalie, Les, Peter and more.

Les will present a progress report
Update presented. Further work needs helpers.

- What Occupational Medical Examinations of mountain rescue team members are performed by ICAR member organisations?

  A questionnaire study. Volker, Iztok, Gregor Dolinar, Peter, Mario, John - survey ready? Usage of ICAR Data base pdf way/ digital questionnaires

Email contact has been difficult 55/140. ⅔ nongovernmental most > 100 rescuers most no paid assistance. ⅔ have no mandatory medical assessment, of those that do most do initial and majority repeat. and ecg bmi done. 57% the examiner have insurance. 95% fit to do work. Plan for last request, statistics Update Oct

- Papers on Rescue at Very High Altitude – Kyle reports:
  - Prophylaxis for rescuers at VHA - minor revision in progress/completed ,Will be published in HAMB shortly.
  - History (Gege) Gege and I have hit some walls trying to get historical data from rescue teams. May not proceed.
  - Helicopter (Charley) It will be submitted to HAMB before end of the month
  - Medical management of casualty (Will Smith/Steve Roy) Goal to have rough draft by ICAR congress in Oct
  - Position Paper on the ethics of Rescue at Altitude. Major revision being considered to meet a HAMB reviewer's comments

- Management of Multi Casualty Incidents in Mountain Rescue (2018) François has offered to lead this. See response Appendix 4

- MCI tools - Triage (Mike Innis) AVASORT II and other variants from a MCI triage sieve. Should this be a separate paper? See Appendix 4

- Management of Moderate and Severe Pain in Mountain Rescue (2019)

  Marc Blancher asks:

  1. Do you think pain management needs an update? Yes
  2. If so, you were the leader of this paper, do you still want to be for the updated version? Transfer to Marc, but will be involved
  3. Do you think we should go again for PICO questions? Up to you; I think a clinical question output is most appropriate.
  4. Do you think we should create a new group? Yes, via the MedCom forum
  5. Procedural sedation : should it be included in pain management or be a specific topic? Yes, definitely

- Rescuer first aid competence document (Kaz, Mike and Mario)

  Topic areas to be defined and what 'we' need to do in first 20 min. Delphi process. Project to be activated via the forum

Aspirational!

- Blood Products (Sven, John) Aaron Reilly and Drew Harrell UNM and Oli are interested.
- Health Care Professional training?
- New ones:
  - Drowning? WMS next year
  - Heat Illness
  - Ultramarathon

Current ICAR recommendations (passed at an AOD)

- Medical Aspects of Avalanche Rescue (2022)
- Revised Hypothermia Swiss staging (2021)
- Suspension syndrome recommendation (2021)
- Guidelines for Mountain Rescue during the COVID-19 Pandemic (2021)
- Operational Stress Injury Recommendations for Alpine (2023)
- TOR (2023)

- Recommendations for Stress Resilience in Alpine Rescue (2024)
- Rescue at Very High Altitude - a Position paper - Ethical considerations: (2025) paper under peer review

Proposed ICAR recommendations (for AOD 2025)

- Prophylaxis for rescuers at VHA
- Helicopter Rescue at VHA

Other Projects

- **ICAR Registry of Rescuer deaths**.

One historic form received from NZ.

Future events

	Year	Date	Place
ICAR MedCom 'Spring' meeting	2026	21 - 23 May	Peak District UK - linked to ISMM World Congress. Lead?
	2027		? Host - Luigi – *Sardinia together with the CAI. Linked to 2nd 'Rescue in Difficult Environment'*
ICAR MedCom Training	?	?	Pik Lenin
EURAC training	2025	7 -13 June	Nepal MEM course - Hermann – € 7333 MedCom funding. Programme has been circulated
ISMM World Congress	2026	18 - 20 May	Peak District in conjunction with British Mountain Medicine Society with IHT day incorporated on the 20th May
ICAR Congress	2025	7 -12 October	Jackson Hole, USA
	2026	6 -11 October	Reichenau an der Rax and Vienna ÖBRD, Austria
	2027		
UIAA MedCom	2025	Oct 23 (Hybrid)	Kosovo with UIAA General Assembly (24th) and a course after(25-26th)

Appendix 1 Members present (Bad Tolz):

List of Participants SM 2025 (as of 07 April 2025)				
				Friday day
1	Hölzl	Natalie	docnat@gmx.net	y
2	Bucksch	Ruth	info@bexmed.de	y
3	Vollendorf	Helga	Helga.vollendorf@gmx.de	y
4	Hölzl	Markus	treasury@alpine-rescue.org	n
5	Ohashi	Noriyoshi	n-ohashi@fsinet.or.jp	y
6	Paal	Peter	peter.paal@icloud.com	arriving late Fri
7	White	Jonathan	jcwhite@doctors.org.uk	y
8	White	Juliet	julietannwhite@btinternet.com	y
9	Stopsack	Heiko	stopheiko@gmail.com	y
10	Schön	Corinna	corinnaschoen@gmx.de	y
11	Sheets	Alison	alisonsheets@usa.net	y
12	BRUGGER	HERMANN	hermann.brugger@eurac.edu	y
13	Lechner	Raimund	raimund.lechner@gmail.com	y
14	Lischke	Volker	volker.lischke@gmx.de	departing Friday morning (time?)
15	Wilson	Suzie	suzie.wilson@patterdalemrt.org.uk	y
16	Sumann	Günther	guenther.sumann@aon.at	y
17	Dodds	Naomi	naomi.dodds@hotmail.co.uk	y
18	Holthof	Niels	nielsholthof@gmail.com	y
19	Soteras	Inigo	inigosoteras@yahoo.es	y
20	Tomazin	Iztok	itomazin@siol.net	y
21	Kanazawa	Hidenori	hidekana82@gmail.com	y
22	Dow	Jennifer	jenndow@mac.com	y
23	Price	Richard	dickprice@xtra.co.nz	y
24	Price	Frances	hadlow@beswickprice.net	y
25	Ellerton	John	johnellerton01@btinternet.com	y
26	Greene	Mike	docmgreene@hotmail.com	y
27	Milani	Mario	mario.milani.doc@gmail.com	y
28	GIANCELSO	AGAZZI	gege@orobianet.it	y
~~29~~	~~Teale~~	~~Steve~~	~~steveteale81@gmail.com~~	
30	Wang	DAle	dswang@usa.net	y
31	Oshiro	Kazue	kazooshiro@gmail.com	y
32	Tannhof	Christoph	c.tannhof@gmail.com	y
33	Manuel	Funk	jmanuel.funk@gmail.com	depending on baby birth
34	Gašperin	Miha	miha.gasperin@gmail.com	y
35	Reisten	Oliver	oliver.reisten@air-zermatt.ch	y
36	Plazikowski	Eike	e.plazikowski@gmail.com	y
37	Huber	Tobias	Tobias.huber@bergrettung.at	departing Friday morning (time?)
38	Jacob	Matthias	matthias.jacob@klinikum-straubing.de	y
39	Lotter	Florian	Florian.Lotter@bergwacht-bayern.org	?
40	Werner	Daniel	daniel.x.werner@web.de	arriving lunchtime
41	Reploh	Tobias	tobias.reploh@googlemail.com	arriving lunchtime
42	Mörtl	Moritz	moritz.moertl@bergwacht-wolfratshausen.de	arriving lunchtime
43	Blochum	Stefan	Stefan.Blochum@bergwacht-bayern.org	?
44	Lobensteiner	Thomas	Thomas.Lobensteiner@bergwacht-bayern.org	only Saturday
45	Staps	Enrico	enrico.staps@me.com	arriving lunchtime
46	Schultheiß	Georg	schultheissgeorg@web.de	arriving lunchtime
47	Wunderlich	Markus	wunderlich-markus@gmx.de	arriving lunchtime
48	Kraus	Richard-Felix	y	arriving lunchtime
49	Benkert	Aaron	y	arriving lunchtime
50	Woyke	Simon	y	arriving lunchtime
51	Hüffner	Katharina	y	arriving lunchtime
52	Barbisch	Gebhard	y	arriving Friday
53	Hölzl	Xaver		arriving friday
54	Elsensohn	Fidel	fidel@elsensohn.at	y
55	Gordon	Les	hlgordon35@gmail.com	y
56	Festi	Luigi	lfesti56@gmail.com	departing Friday morning (time?)

Appendix 2 Papers from members:

A regional modification to the Revised Swiss System for clinical staging of hypothermia including confusion. Gray D, Pasquier M, Brugger H, Musi M, Paal P.Scand J Trauma Resusc Emerg Med. 2024 Nov 11;32(1):110. doi: 10.1186/s13049-024-01273-3.
And a correction:
Correction: A regional modification to the Revised Swiss System for clinical staging of hypothermia including confusion. Gray D, Pasquier M, Brugger H, Musi M, Paal P.Scand J Trauma Resusc Emerg Med. 2025 Jan 3;33(1):2. doi: 10.1186/s13049-024-01303-0.

Appendix 3

Proposed Revision for DiMM regulations concerning CPD. Text below to replace existing language in DiMM regulations concerning CPD (formerly known as "maintenance of diploma")

Continuing Professional Development (CPD) for DiMM holders:

The Diploma in Mountain Medicine does **not** provide a license to practice mountain medicine. The DiMM is an academic qualification and DiMM holders must ensure they have the suitable expertise and only practice within their range of competency. Principles of continuing professional development for Diploma in Mountain Medicine holders are:

- CPD is education and training recognized as contributing to the continued professional development of a DiMM holder.

- DiMM holders are ultimately responsible for identifying CPD needs, planning how those needs should be addressed, and undertaking CPD that will support professional development and practice.

- It is the DiMM holders' responsibility to maintain a record of CPD and present this, as required, at appraisal for revalidation according to professional regulations in a given country or region.

- CPD must include mountain-based skills to enable DiMM holders to function safely and efficiently in the environment in which they are operating.

- DiMM holders are obliged to participate regularly in education and training opportunities and CPD which are organized by DiMM programs, by member associations (UIAA, ICAR, ISMM), and by external organizations offering CPD applicable to mountain medicine.

- Each country (subject to any national or federal laws) can set its own recommendations as to how often CPD should take place. The DiMM member organizations (UIAA, ICAR, and ISMM) recommendation is that a DiMM holder carries out a minimum of 60 hours of CPD over 5 years (12 hours / year).

Sample DiMM CPD Framework:

Topic	Minimum Hours in 5 year period	Minimum Average Hours each year	Objectives
Mountain Medicine	40 hours	8	Subjects determined by personal development plan and hours balanced across a range of topics.
Mountain based skills	20 hours	4	To maintain the skills required to operate safely and effectively in the environment in which the DiMM holder practices.

Topic and Type of CPD (Examples adapted from British Mountain Medicine Society)
Mountain Medicine (Examples) - **Clinical Topics** (mountain Emergency medicine, environmental medicine, altitude medicine, expedition medicine, etc.) **Different methods can be used such as conferences, workshops, webinars, podcasts, reading or peer reviewed guidelines, etc.* - **Audit and reflection on clinical practice** (peer review of cases, audit of personal mountain medical practice) - **Academic Topics** (Critical appraisal of current literature, participating in research leading to publication in peer reviewed journal or reviewing for a journal, other publication e.g., book chapter related to mountain medicine, undertaking formal study resulting in an academic qualification e.g., certificate, Diploma Masters or PhD) - **Teaching delivering education** (Teaching related to mountain medicine in which the CPD activity has personal development value)

Mountain Based (Examples)

- Formal training in mountain-based activity (e.g. avalanche, weather, navigation, ropework, improvised rescue, mountain rescue training, technical skills training, etc.)

- UIAA grade 3 or above climbing, alpine or general mountaineering, off piste skiing of ski touring

Appendix 4

AvaSort II paper

Response from Francois;

We have carefully read Mike's documents. There are many very interesting ideas. Mike raises three very important issues in particular: the management of psychological injuries; the issue of the trajectory of patients requiring specialized resuscitation by ECLS (Emergency Medical Services) and for whom triage is not limited to assigning a color code but rather to initiating the evacuation process to the appropriate specialized center; and finally, the issue of complex MCI situations, for which a single triage rule must be reconsidered. Triage rules must also be defined for victims of lightning, drowning, and hypothermia.

To complement Mike's work, here are some ideas that are important to us in France:
Triage issues must not be simply theoretical, but based on clinical data, registers, and, if possible, prospective data. Currently, in the Northern Alps, we have a register of severe trauma and avalanche victims. As we presented at the Icare 2020 conference, we have implemented a prospective study to analyze avalanche deaths by establishing a standardized protocol for examining deceased persons using CT scans, biological examinations, and autopsies, as well as a standardized collection of snow quality data at the victims' burial site. It is still too early to draw any conclusions. Perhaps this study will allow us to determine reliable criteria for declaring deaths on site and, conversely, justify initiating resuscitation and evacuation to the most appropriate hospital. We believe that detailed observation of the avalanche (kinetic energy, avalanche path, the presence of obstacles such as vegetation or rocky ledges, burial depth, snow density relative to the victims' airways) are likely important indicators for estimating the chances of survival.
The issue of triage must address both the problem of undertriage and overtriage. What are the risks associated with undertriage? What are the risks associated with over triage? Indeed, if we want to save patients with severe hypothermia, we must accept the idea of over-triaging and therefore evacuating victims who are likely deceased. As everyone knows, the HOPE score can only be calculated at hospital with a potassium level measurement.
Each MCI is unique. The circumstances of discovery, the victims, the size of the area, chance, isolation, or, conversely, proximity to hospitals, and the time of day or night all combine to determine the strategy that will save the most lives. Depending on the combination of all these factors, the strategy that will save the most lives will differ from one situation to another, and the optimal triage strategy for one situation will be ineffective in another. Furthermore, during an MCI, triage rules can vary over time, depending on the sector, the accident, and the resources available, and they are not always consistent across the entire site. For example, in 2016, we experienced an accident involving 33 victims buried over a very large area. During this time, it was possible to perform advanced resuscitation on a person clearly in cardiac arrest due to asphyxiation, without harming other victims.
Over the past ten years in France, we have documented a number of multi-casualty accidents, implemented crisis management training, and trained dozens of doctors. What we have learned is that all doctors are calling for triage rules, but the rules are not always followed. This raises the question of deviation from the rules. Are the rules too complicated? Are the doctors sufficiently trained? Are the rules inefficient? It is important not to confuse avalanche accidents, which are polar opposites: first, avalanches resulting in a fall from a great height, with a lot of kinetic energy, with victims who are sometimes not buried (this type of accident was presented at the ICAR 2023 conference by Chamonix rescuers), and second, smaller avalanches with completely buried victims.
What we learned from the registry of 308 victims who survived an avalanche is that they very often have traumatic injuries, sometimes severe, but which did not decompensate during the pre-hospital phase. This raises the question of the dogma of priority to be given to living patients.
Regarding field triage criteria (burial times, search for a respiratory cavity, cardiac monitoring before extrication, core temperature measurement), it must be kept in mind that it is often difficult, if not impossible, to collect this information in the case of multi casualtys. Therefore, persisting in performing triage becomes difficult. This is why we believe it is important to prepare doctors to make decisions in the face of complete uncertainty.
Perhaps we should analyze the depth at which the victims who experienced a rescue collapse and survived were buried. There are few cases and it shouldn't take us too long... Either the burial depths are very dispersed or perhaps we will realize that rescue collapses only occur in cases of non deeply burial and perhaps even approach a cutoff value.

In conclusion, our view is that in cases of avalanche-induced MCI, triage rules are very important, but they are not sufficient in themselves. It is important to train physicians in their use, to train them to make decisions under uncertainty, and to share feedback with them.
It might be useful to schedule monthly video meetings with a specific agenda to discuss these topics and how we can divide up the tasks between us?

Dr François ALBASINI