WS/IMHA Position Paper *
Medical Support for Offshore Yacht Races - Medical training

4-5 November 2016, Barcelona, Spain

The safety and health of sailors offshore is of major concern. Medical teams involved in planning and managing offshore yacht racing will benefit from an internationally recognised reference document which addresses all aspects of medical support for such events.

The medical training received by the crew should reflect and be integrated with, both the content of the medical kit on board, the medical manual used by the crew, and the also the telemedical support service used by yachts.

Medical training must consider the type of yacht racing undertaken, the time and distance remote from definitive medical assistance, and the medical kit carried by the yacht. In general, yacht races venturing into more challenging environments require more extensive medical training.

Ideally, medical training should involve theory, practical skills, and simulation of practical scenarios on board the vessel, including at sea.

After evaluating gathered evidence on medical training for crews in offshore yacht racing, *WS/IMHA Workgroup on Medical Support for Offshore Yacht Races* reached consensus on common competences / learning outcomes in medical training for offshore yacht racing.

Each of the learning outcomes / competencies are rated on the extent to which they should have been achieved by a designated provider / crew on board who has successfully completed the training in medical care on off shore racing yachts on the following Likert scale, which is based on "Miller's triangle" (Miller 1990):

- Not Learned   allocated "**1**" on Likert scale
- Knows (about it)   allocated "**2**" on Likert scale
- Knows How (to do it)   allocated "**3**" on Likert scale
- Shows How (in simulation)   allocated "**4**" on Likert scale
- Does (in real practice)   allocated "**5**" on Likert scale

* List of competences as stated in Learning Outcomes / Competences for Undergraduate Medical Education in Europe, MEDINE 1, without those graded as 1 (Not Learned).

For each of the learning outcomes / competences in **Yacht Medic Professionalism** learning outcomes / competences relating to medical professionalism are rated on the extent to which they should have been achieved by a designated provider / crew on board who has successfully completed the training in medical care on off shore racing yachts":

- Not Learned   allocated "**1**" on Likert scale

- Knows (aware of issues)   allocated "**2**" on Likert scale

- Knows How (understands principles) allocated "**3**" on Likert scale

- Shows How (in artificial scenarios)   allocated "**4**" on Likert scale

- Does (consistently in real practice)   allocated "**5**" on Likert scale

After the training in medical help on board, designated provider on board / crew who has successfully completed the training in medical care on off shore racing yachts will have the ability to:

Outcomes	Designated provider	Crew
Carry out a consultation with a patient		
Take a history	4	1
Carry out physical examination	4	1
Make clinical judgements and decisions	3	1
Provide explanation and advice to the patient	3	1
Provide reassurance and support	4	1
Assess the patient's psychological state	4	1
Assess clinical presentations, order investigations, make differential diagnoses, and negotiate a management plan		
Recognise and assess the severity of clinical presentations	4	1
Make differential diagnoses	2	1
Provide immediate care of medical emergencies, including First Aid and resuscitation		
Recognise and assess acute medical emergencies	4	4
Treat acute medical emergencies	4	1
Provide basic First Aid	4	4
Provide basic life support and cardio-pulmonary resuscitation according to current International guidelines	4	4
Provide advanced life support according to current International guidelines	2	1
Provide trauma care according to current International guidelines	4	1
Prescribe drugs		
Prescribe drugs (if no contact with TMAS) according to guidelines	4	1
Treat pain and distress	4	1

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Carry out practical procedures		
Measure blood pressure and other vital signs	4	4
Cannulation of veins	4	1
Administer IV therapy and use infusion devices	4	1
Fluid administration: hypodermoclysis, intraoseous and rectal	3	1
Subcutaneous and intramuscular injection	4	1
Administer oxygen	2	1
Move and handle patients	4	4
Wound closure	4	1
Splinting	4	1
Bladder catheterisation	4	1
Bleeding control (clotting)	4	4
Urinalysis	4	1
Basic respiratory function tests	2	1
Communicate effectively in a medical context		
Communicate with patients	4	1
Communicate with TMAS	4	1
Communicate in breaking bad news	2	2
Communicate with others (social media, internet, media)	2	2
Communicate in seeking informed consent	2	1
Communicate in writing (including medical records)	3	1
Communicate in dealing with aggression	2	1
Communicate by telephone /VHF/ radio	4	1
Ability to apply ethical and legal principles in medical practice		
Maintain confidentiality	4	3
Apply ethical principles to patient contact	3	1
Obtain and record informed consent	3	2
Certify death	2	1
Apply Flag state and International law to clinical care	2	1
Assess psychological and social aspects of a patient's illness		
Assess psychological factors in presentations and impact of illness	3	2
Assess social factors in presentations and impact of illness	3	2
Detect stress in relation to illness	3	2
Detect alcohol and substance abuse, dependency	2	2
Apply the principles, skills and knowledge of evidence-based medicine		
Keep accurate and complete clinical records	3	2
Use information and information technology effectively in a medical context		
Use computers / communication equipment	4	3
Access information sources	4	2
Store and retrieve information	3	1
Promote health		
Provide patient care which minimises the risk of harm to patients	3	3
Apply measures to prevent the spread of infection	4	4
Recognise own health needs and ensure own health does not interfere with professional responsibilities	3	3
Conform with regulation to be in charge of medical care on board	4	1
Engage in health promotion at individual level	2	2

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Yacht Medic Professionalism	Designated provider	Crew
Professional attributes		
Probity, honesty	4	4
Commitment to maintaining skill competency and knowledge	4	2
Interpersonal skills	5	2
Professional working		
Abilities to recognise limits and ask for help	5	3
Capacity to deal with uncertainty	4	2
Ability to lead others	4	1
Ability to solve problems	4	2
Ability to make decisions	4	2
Ability to work safely and independently when necessary	4	2
Ability to communicate with shore-based TMAS and SAR services	4	3
Capacity and ability to organise and plan medical support	5	1
Ethics / confidentiality		
Maintaining confidentiality	4	5
Informed consent	4	1
Concept of 'Acting in the patients best interests'	4	2
Probity, honesty	4	4

After the training in medical help on board, designated provider on board / crew who has successfully completed the training in medical care on off shore racing yachts should be able to demonstrate knowledge of:

Knowledge Outcomes	Designated provider	Crew
Basic Sciences		
Normal function (physiology)	2	1
Normal structure (anatomy)	2	1
Normal body metabolism and hormonal function (biochemistry)	2	1
Drugs and prescribing		
Use of antibiotics and antibiotic resistance	2	1
Principles of prescribing	2	1
Drug side effects	2	1
Drug interactions	2	1
Individual drugs	2	1
Public Health		
Disease prevention	2	2
Ethical and legal principles in medical practice		
Rights of patients	2	1

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After the training in medical help on board, designated provider on board / crew who has successfully completed the training in medical care on off shore racing yachts should have experienced practical work in these areas:

Experiential Learning	Designated provider	Crew
Care of acutely ill or traumatized patients	4	3
Care of general (internal) medical patients	3	2
Care of general surgical patients	3	2
Care in the community/family practice/primary care	2	1

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