



## **WORKSHOP REPORT**

**Brest, July 2<sup>d</sup> – 3<sup>rd</sup>, 2004**

**COLLECTION and VALIDATION of DATA  
In MARITIME MEDICINE**

**Venue meeting place: LA PEROUSE Library and IUEM  
Technopole Brest-Iroise – BREST FRANCE**

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# 1.- IMHA workshop programme

## PROGRAMME TIMETABLE

### Thursday, 1<sup>st</sup> July 2004

Airport arrival according participants' timetable and meeting point at the hotel (Hotel LA PAIX, Brest)

20 h : Dinner of co-fraternization

### Friday, 2<sup>d</sup> July 2004

9h00 : Opening of workshop : welcoming speech Pr BIZAIS, rector , faculty of Medicine)

9h20: Quality criteria of a database. Processing for collection of data - Generalities –operating system softwares . Mrs Panagi CSA - Refworks

10h30 : pause

11h00 : Presentation of databases “Bibliomedmar” from SEMM and MEDc@t from URV (Dr Canals)

12h00 : lunch

14h00 : Presentation of German Database ( Dr Anthony Low – Hamburg)

14h30 : working groups:

Sources and validation of data in maritime medicine

Limits of data in maritime medicine

Supports of data

16h30 discussion

17h00 End

19h30 Dinner aboard AZENOR

### Saturday, 3<sup>rd</sup> July. 2004

9h30 Synthesis of the workshop on the database : Dr Luisa Canals

11h00 European project : Presentation

Competences in Maritime medicine : Mr J.M. Filloque, UBO

Presentation of the European Project : Dr V. Costigliola, EMA President

12h30 cocktail party at the Town Hall

13h30 Lunch

21h Dinner

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**Local organizing committee in France:**

- **Dr Dominique Jégaden**, President of SFMM, IMHA member, medical advisor for Ifremer. coordinator of the workshop.
- **Pr Jean-Dominique Dewitte**, professor of occupational medicine, IMHA member, director of the UBO University Diploma on Maritime Medicine,.

**International organizing committee :**

- **Dr Luisa Canals**, president of IMHA and SEMM
- **Dr Olaf Jensen**, IMHA member, Denmark
- **Dr Anthony Low**, IMHA member, Germany

**Evaluation final report:** Dr Luisa CANALS, Dr Dominique JEGADEN, Dr Ralph NILSSON

**Language for presentations and discussions:** English

## 2.- Objectives and proposed points for discussion

**Objectives and International committee tasks:**

- **Objectives 02-07-04:**
  - Collection and validation of data in maritime medicine
- **Objectives 29-11-03:**
  - European Project

## 3.- List of participants

(Ordered by countries)

NAME	ADDRESS/ TEL / FAX/ E-MAIL	EXPRESSED INTERESTS
1. Vincenzo Costigliola	EMA European Medical Association President Blv. St Michel, 89 1040 Bruxelles (Belgium) Http://www.EMAnet.org Tel. +32 2 7342980 Fax +32 2 7342135 vincenzo@emanet.org	International relations
2. Ralph Nilsson	Occupational and environmental medicineSahlgrenska University Hospital  St. Sigfridsgatan 85  SE 41266 Göteborg, Sweden	Maritime occupational medicine

	New phone no.: +46 31 343 81 99, fax: +46 31 40 97 28  Ralph.nilsson@ymk.gu.se	
3. Olaf Jensen	Research Unit Maritime Medicine 81-83, Oestergade DK-6700 Esbjerg (Denmark) ocj@fmm.sdu.dk	Research in Maritime Medicine
4. Don Eliseo Lucero-Prisno	Health Adviser Philippine Seafarers Assistance Programme donprisno@hotmail.com	Health adviser
5. Anthony Low	Hamburg Port Health Center Seewartenstrasse 10 20459 Hamburg - Germany Tel : 040 428894 354 Fax: 040428894511 Anthony.Low@bwg.hamburg.de	Maritime medical bibliography
6. Andra Ergle	8, Kalvenes Riga (Latvia) andra.ergle@apollo.lv	CME, medical fitness of seafarers
7. Emmie B. Knudtzon Snincak	P.O. Box 83 5399 Bekkjarvik (Norway) emmie.hms@c2i.net	Occupational medicine for seafarers, fisherman & fishfarmers
8. M. Luisa Canals	C/ Sta. Joaquina Vedruna, 5, esc. 3-2-2; 43002 Tarragona (Spain) Tel. +34,655360705 Fax +34, 977 229959 <a href="http://www.imha.net">http://www.imha.net</a> <a href="http://www.semm.org">http://www.semm.org</a> lcanals@comt.es	Maritime Medicine, Prevention, Occupational Medicine, Research, Training
9. Nguyen Truong Son	Head of Maritime Medicine Department of Haiphong Medical College N)213 Nguyen Van Linh Precict Du Hang Kenh Le Chan Dist.; Haiphong City Tel : 8431519317 Fax: 8431519687 yhb@hn.vnn.vn	Maritime medical research
10. Pham Van Thuc	Vietnam National Institute of Maritime Medicine (Vice-Director) 213 Nguyen Van Linh Str. Du Hang Kenh Le Chan Dist. Haiphong City Tel : 8431519317 Fax: 8431519687 <a href="mailto:yhb@hn.vnn.vn">yhb@hn.vnn.vn</a> pvthuc@yahoo.com	Maritime medicine research
11. Sophie Panagi	CSA 4640 Kingsgate Cascade Way Oxford Business Park South Oxford OX4 2ST UK Tel: 44 1865336250 Fax: 441865336258	Training and information specialist

	<a href="http://csa1.co.uk">http://csa1.co.uk</a> <a href="mailto:spanagi@csa.com">spanagi@csa.com</a> eurosupport@csa.com	
12. Jean – Dominique Dewitte	CHU Morvan, Avenue Foch 29609 Brest (France) jean-dominique.dewitte@univ-brest.fr	Occupational teaching
13. Dominique Jegaden	Faculté de Médecine Département des sciences humaines 22, Av. Camille Desmoulins BP 815 29285 Brest Cedex (France) <a href="http://www.mersante.com">http://www.mersante.com</a> dominique.jegaden@wanadoo.fr	Medical fitness of seafarers
14. Jean-Marie Filloque	Directeur du SUFCEP-UBO 6 av.Victor Le Gorgeu - BP 809 - 29285 Brest cedex (France) <a href="http://www.univ-brest.fr">http://www.univ-brest.fr</a> Tél : +33 (0)2 98 01 67 77 Fax : +33 (0)2 98 01 65 89 Jean-Marie.Filloque@univ-brest.fr	Long life learning
15. Philippe Breuille	Médecin-chef service de santé des gens de mer – Nantes. France Philippe.breuille@equipement.gouv.fr	Fitness and maritime occupational medicine
16. Ghislaine Tirilly	Docteur en ergonomie SFMM redghis@wanadoo.fr	Maritime ergonomy
17. Mireille Bellet	Faculté de médecine 22, avenue Camille Desmoulins BP 815 29285 Brest Cedex (France) Mireille.Bellet@chu-brest.fr	International relations
18. Albert Mevellec	SUFCEP-UBO 6 av.Victor Le Gorgeu - BP 809 - 29285 Brest cedex (France) <a href="http://www.univ-brest.fr">http://www.univ-brest.fr</a> Albert.Mevellec@univ-brest.fr	Long life learning

## 4.- Summary and main conclusions

In the IMHA workshop that was held in Barcelona, 28-29<sup>th</sup> November, 2003 about “Continuing education” we detected the need to have data bases related to maritime health. That’s why the IMHA board approved a workshop about “collection and validation of data in maritime medicine” to be held in Brest, July, 2<sup>nd</sup>- 3<sup>rd</sup>, 2004. We have had 18 participants of several countries (Spain, Belgium, Sweden, Denmark, Norway, France, Latvia, Philippines, Germany and Vietnam). The program was organised taking into account two main objectives. The first objective was to decide about the type of database that we wanted to work in and the second was to implement the European project about the education in maritime medicine. Let’s explain how the program was developed. During the first morning, presentations about supports for databases were exposed.

*Demonstration of a bibliographic data base program (RefWorks).*

Mrs Sophie Panagi demonstrated RefWorks which is the only web-based literature database program on the market: This means that it is accessible from any computer connected

to the Internet. It does not need installation of software on the hard disk except from a small plug-in for Word which could easily be downloaded. You only need a user-id and a password to log in. Bibliographic data, including abstract and index terms, from other data bases e.g. Medline (PubMed), EndNote or Reference Manager could be exported and imported into RefWorks. Data could also be entered manually as well as commentaries and key words for indexation and links to e.g. the original article, if it is available for free on the internet. Otherwise you have to order the original report from a library or from the author: RefWorks is primarily a bibliographic data base and not so well suited for cataloging of e.g. members, institutions or lectures. The cost is 70€ /year for the individual. If IMHA signs a contract for its members the individual costs will be lower.

The second exposition, from Dr. M. Luisa Canals, was about a previous experience from the Spanish Society of Maritime Medicine and its bibliographic database, BiblioMedMar, which could be consulted by internet in their webpage and which their own members were the providers of the information. So they had a page for consultation and another one for the inputs with several fields (title, authors, type of publication, if it was reviewed, etc.). Besides, in relation to the educational materials the University of Tarragona (URV) has a project, [MED-C@t](#), to collect standardized resources and classify them (conferences, courses, information about institutions, digital materials, presentations, etc.). This material has a process of validation. They use an internet based system (IMS Content Packaging Information Model).

In the afternoon, Dr Anthony Low from Hamburg (Germany) presented the extensive collection of books, reports and articles in the field of maritime medicine which have been collected in the HPHC library in Hamburg through many years. Copies of his presentation, including the thesaurus used, were at the disposal of the participants of the workshop. The bibliographic data could be available on the internet in the future. Everybody is welcome to use the library after contact with Dr Low or one of the librarians e.g. Mrs Jana Fischer (phone +49-(0)40-428894-377/79, e-mail: [jana.fischer@bwg.hamburg.de](mailto:jana.fischer@bwg.hamburg.de) ).

The sources, validation, limits and supports of data were discussed among the workshop participants. A preliminary list of sources of data in the field of maritime medicine had been prepared by Ralph Nilsson and will be supplemented as an appendix and discussed in the IMHA website. The first thing is to know what do we need (users), what do we want (type of information), in what context (education, research, etc.). There was a lively discussion about if the database should be validated or just catalogated. Olaf Jensen pointed out that the validation of data is the art of limitation, one example of this is to ask if the data would be valid for compensational purposes. He also pointed out that articles indexed in Medline (PubMed) are peer reviewed and free (at least the abstracts). However there are also a vast amount of "grey" literature and also useful data on e.g. fatal injuries which are not available in Medline, from different countries. Such data could be collected prospectively in a first phase and then retrospective data could be added depending on the resources available.

Don Eliseo Lucero Priso pointed out that the data could be validated by the individual user depending on the purpose. Emmie Knudtzon Snincak said that it would be of value if lists of educations and tutorials could be included, perhaps also data from different countries on occupational exposures and accidents/injuries. It was suggested that everyone could send information on e.g. articles and reports they find valuable to the database. Ralph Nilsson suggested that the homepage of IMHA could contain links to different sources of information and educations related to maritime health and possibly complemented by a literature database and other useful information (list of institutions, etc.). Olaf Jensen promised to look on the internet if there were any database programs which could be used for free. He also demonstrated "supercourse", a collection of lectures and tutorials which could be downloaded for free from the internet.

On Saturday, 3<sup>rd</sup> July, the workshop discussions were summarized by Luisa Canals. She also suggested how IMHA could proceed in this matter, as responsible for the IMHA website. She will work to elaborate it and supplement it with appropriate links. There could also be a discussion place and mailing lists for different topics. If a search engine is to be included extra funding have to be find.

*European Project.*

Luisa Canals presented the background to the European project which was discussed in the last workshop in Barcelona in November 2003. An application with six collaborating countries in Europe was sent to the Socrates/Erasmus programme in April 2004. The European Commission will decide if it is going to be funded in October 2004. If approved, the programme will run for 18 months from November 2004. Further information about the project could be found in the IMHA Newsletter or website.

Mr Jean-Marie Filloque, UBO, presented the process towards certification, using the 3 weeks diploma course in Maritime Medicine, as an example. To be certified, either on a national or a European level, several steps and criteria should be fulfilled. A copy of his Powerpoint presentation was made available. In the following discussion it was emphasized that Maritime Health is not only a European matter, since seafaring is international with about 80% of the workforce from South East Asia. Our colleagues from Vietnam asked IMHA to have some initiatives in Asia and invite us to joint and collaborate in their Symposium, they are willing to create a national society and wanted his government and the university to be involved. However, more funding is available in Europe and therefore it could be feasible to start with a European project, which also will contain international aspects and could be expanded with additional modules to cover the needs in other countries. The possibility to ask for an international project like for example ERASMUS MUNDI is open till October. IMHA should decide what steps are needed to help, specially to countries from Asia (check the possibility of a workshop).

Emmie Knudtzon Snincak pointed out that maritime health is not solely a medical problem and that it is important for IMHA to work closely with other international organisations such as IMO and ILO and to push for international conventions in this field. Luisa Canals answered that IMHA already does this and has e.g. participated on a joint WHO/ILO meeting where it was stated that doctors examining seafarers should be experienced on maritime medicine or be specialized in maritime occupational health so we need previous medical training in maritime medicine.

Dr Costigliola, EMA, updated us about the funding from the European Commission and about how the application is processed. He pointed out that it could be worthwhile to send applications both for educational projects and research, if we have good and clear ideas about projects, and if they are new, innovative and have a European dimension or a more international if we ask for other projects. As an example he mentioned that a project about how to reduce the risks in the maritime sector could be of value as a research one.

#### ARTICLE IMHA NEWSLETTER

##### **IMHA workshop short report: Collection and validation of data in maritime medicine**

Brest, July, 2<sup>nd</sup>- 3<sup>rd</sup>, 2004

We have had 18 participants of several countries (Spain, Belgium, Sweden, Denmark, Norway, France, Latvia, Philippines, Germany and Vietnam). The program of this IMHA workshop was organised in close collaboration with UBO (University of Brest) and SFMM (French Society of Maritime Medicine). It has taken into account two main objectives. The first objective was to decide about the type of database in which we want to work in and the second to implement the European project about the education in maritime medicine and their data bases related.

Let's explain how the program was developed. For the first goal we expected to know what do we need (users), what do we want (type of information), in what context (education, research, etc.). So presentations about supports for databases were exposed. There was a demonstration of a bibliographic data base program (RefWorks), web-based literature, easy to consult from internet and with the possibility to create our own catalogue. The cost is 70€ /year for the individual (if IMHA signs a contract for its members the individual could be lower). Afterwards, a report was exposed about the experience from the Spanish Society of Maritime Medicine and its bibliographic database, BiblioMedMar, which could be consulted by internet in their webpage and which their own members were the providers of the information, including pdf articles or their medical journal. So they had a page for consultation and another one for the inputs with several fields (title, authors, type of publication, if it was reviewed and so on). Besides, in relation to the educational materials the University of Tarragona (URV) presented a project, [MED-C@t](mailto:MED-C@t), to collect standardized resources and classify them (conferences, courses, information about institutions, digital materials, presentations, etc.). This material has a process of validation. They use an internet based system (IMS Content Packaging Information Model).

Later, Dr Anthony Low from Hamburg (Germany) presented the extensive collection of books, reports and articles in the field of maritime medicine which have been collected in the HPHC library in Hamburg through many years. Discussions about limitations, validations, more sources of information followed. As a conclusion, participants express the need to work on this type of data bases for maritime health resources and then a web page will be implemented in IMHA website about it with links with other projects to go on it. In relation with the second goal, an update on how the application for the EC project "Socrates" was given by EMA and also how UBO works on the subject of "competences in Maritime Medicine". Our Vietnam colleagues express the need of creating liked projects extended specially to Asian countries where most of seafarers belong and where a real need of education and research is felt. In this line proposals for other projects like Erasmus Mundi or Asia Link can be studied.

## 6. – Budget and Expenses

Annexed in an excel file

## 7. - Documents

### **IMHA workshop "Collection and validation of data", presentation**

**Dr. M. Luisa Canals**  
**President of IMHA**

Brest, 2nd July, 2004

It is a truism that nothing of value is achieved without dedication. IMHA is a scientific non profit association that asks us for dedication in maritime health matters. But such a task needs clear objectives, people willing to work, they should believe in these goals, some tools, budget and a start up point. Fresh air is needed in IMHA that means that we have to grow joining colleagues interested in seafarers' health. IMHA workshops are an opportunity to start new projects and find out that we share our interest, like here with our colleagues in Brest. We thank them for their efforts in preparing and coordinating this workshop.

Summer is already here, a nice time to meet. Let' remind about the starting point of this workshop. During the IMHA workshop in Barcelona (November 28-29th, 2003) it was decided that the first step towards an harmonisation of maritime medicine training was to build an international maritime health database. This database would share a lot of tools (some linked to other IMHA projects) and would help to maritime medical research. Why do not extend it to a data base of maritime health institutions, doctors, rules and regulations, bibliographic references etc?. An international steering committee was created and the responsibility to set up the project fell upon the French representatives, in this instance the University of Western Brittany (UBO). Three representatives of UBO attended at that time the meeting: Jean Marie Filloque, Jean Dominique Dewitte and Dominique Jégaden. The last two are very active IMHA members and Dr. Jégaden is the main coordinator of this workshop in Brest. Other university representatives joined immediately the project: the University of Southern Denmark, the University of Rijeka (Croatia) and the University Rovira and Virgili of Tarragona (Spain) others say that will do it later if approved. Plus other institutions (the French, German and Spanish Societies of Maritime Medicine and EMA = European Medical Association as a coordinator together with IMHA for an EC project inside Socrates) and also one University not present in Barcelona (Gdansk university – Poland) started a written proposition that was presented in April and we expect its acceptance for November, 2004. While, we have already begin to work and we invite you to find more information in our IMHA webpage and in <http://www.mersante.com> to have a follow up when we finish.

Following the coordinator explanations we can say that a database is a system of information management that gathers, stores, treats and makes an effective circulation of information. It is a complex tool which needs a complete project with continuation and permanent up-date, for that we



need an adequate budget and a minimum staff, especially those with experience. In this sense we have the chance to count with Dr. Anthony Low from Hamburg (Germany), a very active IMHA member in research (we profit to congratulate him for his retirement that ... we can take advantage for scientific purposes) and our efficient IMHA secretary Kris Lemmens that we expect to count with for the office work. We can also combine different past or starting projects that have the same general or specific goals. In my experience, I can talk these days about MEDc@t & EduStance from URV University or Bibliomedmar from SEMM that have been used in our postgraduate maritime health course this year in Spain, mainly based on internet, with possibilities to be developed in English as joint efforts.

By now we'll confine ourselves to a brief outline of the problem to be discussed in Brest. What needs? What context? What do we want to find in this database? - Regulations/legislation, professional standards, reports, lectures from universities/theses, specialists, users, organisations: sailors, ship-owners, others, maritime medicine scientific societies, services? How to classify the information? What catalogue or index? Means to consult it? Internet data base? Which surveillance? The general control of the database could be under the authority of IMHA. It is necessary that a specific international community validates the entries in the database in agreement with the chosen criteria. A coherent teaching in maritime medicine must refer to the same accurate sources, why do not share didactic sources used in different universities? Big databases such as Medline for example already possess some data on this theme, but they are in a big pool, we want it more specific, in maritime health. A specialised database, supervised by experts, representatives of the international maritime health community, ... it would be a dream!. A great task – how to catalogue these data? An abstract? Full papers or presentations? Only in English? It would enable lecturers responsible for teaching maritime medicine to share common and accurate resources. Why do not validate it? This database, regularly up-dated, would also be an essential tool for medical research centres, which mission could consist of supplying information and identify some badly-known fields of this speciality as well, what about the so called grey-literature? It can also be useful. It could be a practical tool or a guideline for all physicians in maritime medicine, in several fields, like prevention, fitness examination aptitude, occupational maritime medicine or in specific seafarers pathologies, management of emergencies at sea, telemedicine and so on. I really enjoy talking about these subjects but just to finish and to be continued ... IMHA needs your participation and collaboration. You decide and propose us what to do, we we'll try to support you because we are interested in maritime health.

#### **Quality criteria of a database. Processing for collection of data - Generalities –operating system softwares. Refworks**

##### **Mrs Panagi CSA - Refworks**

Presentation of RefWorks, a programme available by internet, via a subscription quota you get a login and you can create, edit and organise you own database.

There are three ways to create a data base: importing data directly from an online database service [direct export is possible from CSA (Cambridge Scientific Abstracts), OCLC, OVID, ProQuest, ABC-Clio, BioMed Central, BioOne, NISC, Ei Engineering Village 2, Project Muse, SFX, 1Cate ] ; importing data from saved text files created by saving references from a number of online database services or other bibliographic managers; or manually typing in the data. When you do it manually you start selecting your output style (e.g. APA, Chicago or MLA) and designate the type of reference you are entering (e.g. journal, book, or dissertation).

To edit and organise you database there are different tools: adding descriptors to records globally; editing author, descriptor or periodical names globally; duplicate checking (exact matches, close matches based upon author names, title and year of publication fields); creating folders; putting records into folders, records can be assigned to more than one folder; retrieving records from your refworks database (quick search of all fields ranked by relevance, advanced search choosing the field in which you want to search and look up indexes). Searching online database using RefWorks is also possible (Publicly-available services such as NLM's PubMed); additionally, institutional subscribers may also provide access to subscription-based online database.

One practical use is to create your paper and bibliography. Write-N-Cite is a utility allowing Microsoft Word and Internet Explorer users to run an abbreviated version of RefWorks in their word processor, allowing users to cite references in a manuscript with the click of a button. Users accessing RefWorks with Netscape or using Macintosh computers can use the One Line / Cite Wiew function. There is an online tutorial and technical support. For more information <http://www.refworks.com>, e-mail: [refworksinfo@csa.com](mailto:refworksinfo@csa.com).

### **Presentation of SEMM bibliographic data base BIBLIOMEDMAR and MEDc@at project from the University RV of Tarragona (Spain)**

**Dr. M. Luisa Canals (SEMM), Dr. Rosa Fenoll and Javier Legarreta (URV), Tarragona, Spain  
Bibliomedmar**

This is the name of the SEMM bibliographic data base. Let's start with some historical background data:

- 1989 creation of the Spanish Society of Maritime Medicine
- From 1991 a periodical bulletin of news that began to include scientific articles related to maritime medicine
- The precursor: a bibliographic data base in maritime medicine with the programme "Knosys" with the possibility to search by any word
- 1995 our own scientific medical journal "Medicina Marítima" published every 6 months
- 1998 creation of SEMM website, with the possibility to ask for pdf files of the articles published in our Journal and others through the page of index in continuous education  
<http://www.semm.org/wsemm2.html>
- 1999 creation of Bibliomedmar, a data base available from internet through our server "Galenics" using php. Public pages with possibilities to consult by different fields (author, journal, keywords, all fields etc) and boolean combinations OR AND NOT, years and type of publication by references or summaries. Private pages to insert, delete or modify data, references and abstracts and other information like if it was reviewed, where to find it in full text etc..
- 2000 creation of a searcher of our website <http://www.semm.org/linkmm.html>
- 2003 the server was transfered, some information was lost, Update?

### **Medical EDucation C@talog (URV – Inst. Carlos III)**

Goals of MEDc@t:

- To create a contents server
- To spread, inform, share new technologies in health education
- Internet as a tool to find health research resources
  
- Weak points / advantages (optimisation of resources etc.)  
low cost.

Phases of the project:

- Phase I
  - Convention or agreement
  - Coordinators of each institution
- Phase II
  - Design of a server of contents
  - Standard data to be collected in a common record
  - Quality and labelling
- Phase III
  - Introduction of data

Contents:

- classification
- labelling
- Publication (Contents, server)

Educational resources:

- Digital ones
- Our own Materials
- Free access educational resources by internet
- interactive & multimedia material
- Computer Programmes
- Bibliographic references data base

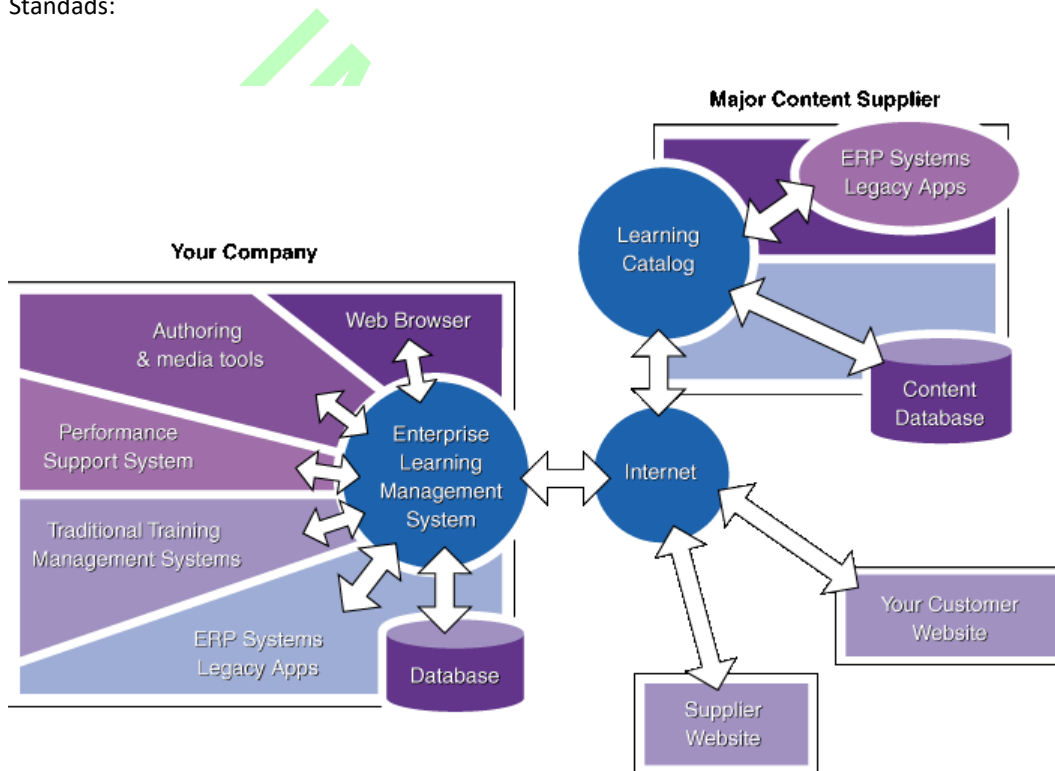
Training and education through Internet:

Specific tools for:

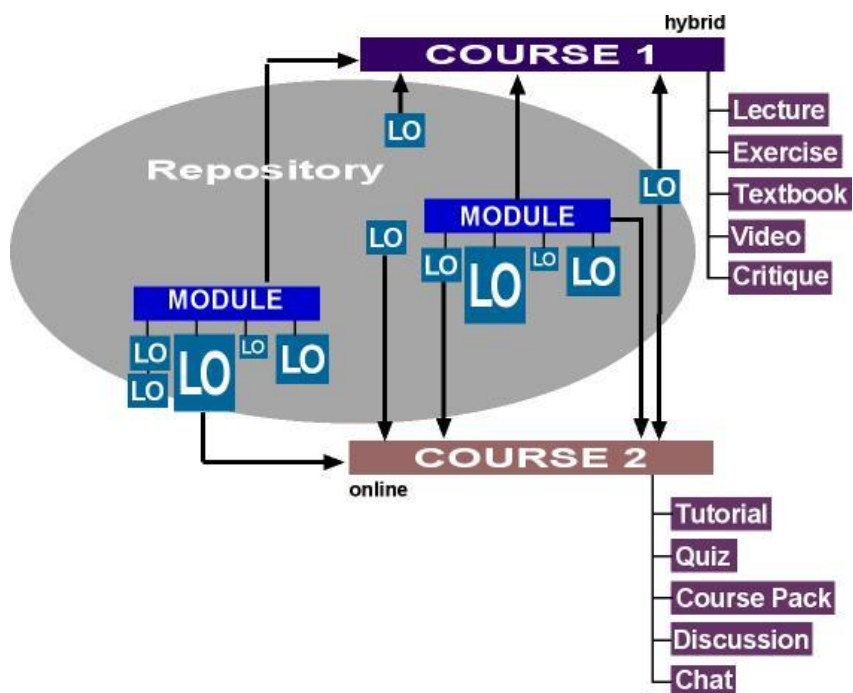
- users: teachers, pupils, tutorials, ...
- Communication systems: synchronic & asincronic
- Follow up and evaluation of the pupil

PLATAFORM of *E-LEARNING*

Standads:



Learning objectives



#### Communication – Evaluation – Education:

- Multimedia platform
- Internet net

(data, images, Multimedia, Video etc)

#### Contents Server:

- Search the information
  - By author
  - By title ...
  - By area / categories / key words
- Records of information
- *Meeting point / Teachers room*

#### At present:

- Contents server
- *EduStance*
- Didactic resources adaptation (records - forms)
- Key words selection
- Quality Criteria
- Labelling – Listing – Gathering – Classification ----- Catalogue

#### Other:

- Biblioteca Virtual de Sanidad (Virtual health library)
  - Unidad LIS
  - Unidad ScieLO
- Bireme compatibility
- Catalogue for items including maritime medicine

#### Sources and validation of data in maritime medicine

A. Low, HPHC, Hamburg, Germany

**MARITIME MEDICAL LITERATURE DOCUMENTATION**

As regards maritime medical literature and specialized documentation centers in this field, the following list refers to locations in Europe:

**Institute for Maritime and Tropical Medicine**

ul. Powstania Styczniowego 9b  
61-519 Gdynia  
Poland

**Transport Medical Institute**

110 Maria Luisa Blvd  
Sofia 1233  
Bulgaria

**Institute of Naval Medicine (INM)**

Alverstoke,  
Hampshire PO122DL  
United Kingdom

**Centre d'Études et de Recherches biophysologiques  
appliquées à la Marine (C.E.R.B.)**

H.I.A. Sante Anne, B.P.610  
83800 Toulon naval  
France

**Maritime Medical Institute of the German Navy**

(Schiffahrtsmedizinisches Institut der Marine)  
Kopperpähler Allee 120  
24119 Kiel - Kronshagen  
Germany

**Hamburg Port Health Center (HPHC)**

Seewartenstrasse 10  
20459 Hamburg  
Germany

## ORIGIN OF THE PRESENT HPHC DOCUMENTATION SECTION

After the 2<sup>nd</sup> World War, a number of maritime medical books and publications were retrieved – partly damaged through fire – from the badly destroyed Bernhard Nocht Institute of Nautical and Tropical Diseases (BNI) building in Hamburg.

They were later taken over by the re-activated Department of Maritime Medicine, i.e. Department 10 of the BNI, in the mid 1960s. In its early years, this library continued to expand, among others, by acquiring books - some very ancient – about maritime medicine and adjacent fields in second hand book shops, in particular through the initiative of and meticulous searching by Dr. Goethe, the former head of our department.

Meanwhile we receive scientific literature from many different domestic and foreign sources. . . .

At present our Documentation section, located on the 1<sup>st</sup> floor of the HPHC on the premises of the previous Hamburg Port Hospital, has at its disposal

a total of **1146 books** and more than **28000 publications and journals**

from many countries of the world, i.e. of national and international origin. It is probably still one of the largest libraries in the world dealing with maritime medicine.

## ACCESS TO THE HPHC BIBLIOGRAPHY/LIBRARY

The library can be contacted either by

Phone 0049-(0)40-428894-377/79,  
mail HPHC, c/o Mrs. J. Fischer, Seewartenstrasse 10,  
D-20459 Hamburg  
email [jana.fischer@bwg.hamburg.de](mailto:jana.fischer@bwg.hamburg.de)  
and/or fax 0049-(0)40-428894-511

Our library is as yet unfortunately not accessible via Internet, except the thesaurus by using the Homepage of our institute:

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the specific title or  
the key words**

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**BIBLIOGRAPHY OF NAUTICAL MEDICINE OF THE HAMBURG  
PORT HEALTH CENTER (HPHC), GERMANY**

Books, publications and papers are filed in accordance with the following general documentation system:

- 1 History
- 2 Summarized Reports, Encyclopaediae
- 3 Medical Care on Board/Ashore
- 4 Marine Biology in the Field of Nautical Medicine
- 5 Physiology in Nautical Medicine
- 6 Toxicology of Seafaring, Dangerous Cargo
- 7 Prophylaxis and Curative Medicine in Seafaring
- 8 Motion Sickness
- 9 Psychology and Mental Hygiene in Seafaring
- 10 Hygiene in Seafaring
  
- 11 Port Health**
- 12 Port Labour
- 13 Epidemiology in Seafaring
- 14 Occupational Medicine and Ergonomics in Seafaring
- 15 Medico-Technical Equipment and Procedures
- 16 Selection, Fitness, Qualification, Training
- 17 Shipwreck, Survival at Sea, Rescue Equipment, Death in the Water, Piracy
  
- 18 Diving, Living under Water**
- 19 Nautical Medical Themes in Respect to Ship Types
- 20 Inland Waterway Shipping
- 21 Laws, Regulations, Instructions, Leaflets
- 22 Living and Working in the Arctic and Antarctic

BIBLIOGRAPHY OF NAUTICAL MEDICINE OF THE HAMBURG PORT HEALTH CENTER (HPHC)

The documentation/filing system in detail is as follows:

## 1 History

- 1.1 Seafaring in general
  - 1.1.1 Emigrations
- 1.2 Nautical Medicine, general Problems
  - 1.2.1 Reviews and Manuals
  - 1.2.2 Medical Care
    - 1.2.2.1 Medical Care on Board, Medical Equipment,
    - 1.2.2.2 Ship's Hospitals and Sick-bays
    - 1.2.2.3 Medical Care ashore, Port Health Services,
    - 1.2.2.4 Hospitals, Social Institutions for Seamen
  - 1.2.2.3 Medical Training
  - 1.2.3 Physiology
  - 1.2.4 Prophylaxis and Curative Medicine
    - 1.2.4.1 First Aid and Emergency Care
    - 1.2.4.2 Surgery
    - 1.2.4.3 Internal Diseases, Avitaminosis
    - 1.2.4.4 Epidemic Diseases
    - 1.2.4.5 Tropical Diseases
    - 1.2.4.6 Skin and Venereal Diseases
  - 1.2.5 Kinetosis

- 1.2.6 Psychological Problems
- 1.2.7 Hygiene
  - 1.2.7.1 Hygiene of Ship Rooms
  - 1.2.7.2 Heating and Ventilation
  - 1.2.7.3 Disinfection, Disinsection, Deratisation (DDD)
  - 1.2.7.4 Water supply
  - 1.2.7.5 Nutrition
- 1.2.8 Quarantine
- 1.2.9 Fitness for Duty
- 1.2.10 Shipwreck, Life-saving Appliances, Life-saving Services
- 1.2.11 Fishery, Fishery Protection, Marine Sciences
- 1.2.12 Laws, Regulations
- 1.3 Bibliographies
- 1.4 General Matters
- 1.5 Museums

## **2 Summarized Reports, Encyclopaediae**

- 2.1 General Studies
- 2.2 Congress Reports, Collection of Papers, Annual Reports
- 2.3 Research Reports
- 2.4 Encyclopaediae, Handbooks
- 2.5 Bibliographies
- 2.6 Matters concerning Libraries
  - 2.7 Dissertations, Examination Papers
  - 2.8 Legal Problems (e.g. Proceedings of the Marine Court, Reports of the "See-Berufsgenossenschaft" – Professional Association for Seafarers -, Forensic Nautical Medicine)

## **3 Medical Care on Board/Ashore**

- 3.1 General Studies, Statistics
- 3.2 Medical Care on Board (By Ship's Doctor)
- 3.3 Medical Training (Ship's Doctor)
- 3.4 Medical Care on Board (by Non-Physicians)
- 3.5 Medical Training (Non-Physicians)
- 3.6 Radio-Medical Service
  - 3.6.1 Telecommunications
- 3.7 Ship's Hospitals
- 3.8 Rooms for Medical Treatment
- 3.9 Medical Chests
  - 3.9.1 Medical Equipment
- 3.10 Medical Care in Hospital Ships, Protection Vessels, Special Ships for Medical Care, Cure Ships and others
- 3.11 Medical Care ashore
- 3.12 Nautical Medical Institutions Ashore
- 3.13 Port Health Service
- 3.14 Vaccinations
- 3.15 Health Services, Health Insurances and Social Insurance for Seafarers
- 3.16 Old Men, Women, and Children on Board
- 3.17 Deaths on Board
- 3.18 Transportation of Sick and Injured Persons

## **4 Marine Biology in the Field of Nautical Medicine**

- 4.1 General Studies, Statistics
- 4.2 Dangerous Marine Organisms
- 4.3 Remedies from the Sea (e.g. Seawater)
- 4.4 Environmental Pollution, Pollution of the Sea



## **5 Physiology in Nautical Medicine**

- 5.1 General Studies, Statistics
- 5.2 Physiology of Respiration
- 5.3 Physiology of Cardiovascular Circulation
- 5.4 Physiology of the Senses
  - 5.4.1 Vision
  - 5.4.2 Hearing
- 5.5 Physiological Effects due to Pressure Variations
- 5.6 Physiology of Climate
  - 5.6.1 Heat
  - 5.6.2 Cold
  - 5.6.3 Hypothermia
- 5.7 Physiology of Swimming
- 5.8 Effects of Vibration
  - 5.8.1 Mechanical Vibrations
    - 5.8.1.1 Noise
    - 5.8.1.2 Infrasound, Ultrasound
    - 5.8.1.3 Vibrations
    - 5.8.1.4 Ship Motions
  - 5.8.2 Electromagnetic Waves
    - 5.8.2.1 Electric Current
    - 5.8.2.2 Microwaves (Radar)
    - 5.8.2.3 UV-Radiation, Infrared Radiation (Thermal Radiation)
    - 5.8.2.4 Ionizing Radiation
- 5.9 Time Lag and Time Shift
- 5.10 Biorhythm

## **6 Technology in Seafaring: Dangerous Cargo**

- 6.1 General Studies, Statistics
- 6.2 Organic Substances and Compounds
  - 6.2.1 Organic Acids
  - 6.2.2 Carbon Monoxide
  - 6.2.3 Carbon Dioxide
  - 6.2.4 Carbon Bisulfide (CS<sub>2</sub>)
  - 6.2.5 HCN/Cyanides, Nitrites and Cyanates
  - 6.2.6 Aliphatic Hydrocarbons
  - 6.2.7 Aromatic Hydrocarbons
  - 6.2.8 Aliphatic Halogenated Hydrocarbons and Aromatic Halogenated Compounds
  - 6.2.9 Alcohols and Alcohol Derivates
  - 6.2.10 Ether, Aldehydes, Ketones
  - 6.2.11 Phenols
  - 6.2.12 Nitro and Amino Compounds
  - 6.2.13 Organic Solvents
  - 6.2.14 Pesticides, Insecticides
- 6.3 Anorganic Substances and Compounds
  - 6.3.1 Anorganic Acids
  - 6.3.2 Metals and Metalloids
  - 6.3.3 Halogens
  - 6.3.4 Nitrogen and Nitrous Gases
  - 6.3.5 Radioactive Substances
- 6.4 Other Injurious Compounds, Paints, Gases and Dusts (e.g. Asbestos)
- 6.5 Intoxications in Seafaring (Proceedings of the Marine Court, Reports of the "See-Berufsgenossenschaft" - Professional Association for Seafarers)

## **7 Prophylaxis and Curative Medicine in Seafaring**

- 7.1 General Studies, Statistics

- 7.2 First Aid and Emergency Treatment
- 7.3 Accidents
- 7.4 Surgery
  - 7.4.1 Anaesthesia
- 7.5 Internal Medicine
  - 7.5.1 Cardiovascular Diseases
  - 7.5.2 Pulmology, Diseases of the Respiratory Tract
  - 7.5.3 Gastroenterology
  - 7.5.4 Rheumatology
  - 7.5.5 Haematology
  - 7.5.6 Allergics
  - 7.5.7 Endocrinology and Metabolic Diseases
  - 7.5.8 Infectious Diseases
    - 7.5.8.1 HIV
  - 7.5.9 Avitaminosis
- 7.6 Diseases of the Eyes
- 7.7 ENT Diseases
- 7.8 Diseases of the Skin
- 7.9 Venereal Diseases
- 7.10 Psychiatry, Psychosomatic Medicine
- 7.11 Neurology
- 7.12 Orthopedics
- 7.13 Urology and Nephrology
- 7.14 Dentistry
- 7.15 Gynaecology and Obstetrics
- 7.16 Tropical Diseases
- 7.17 Pharmacology
- 7.18 Bacteriology, Virology, Laboratory Technics
- 7.19 Parasitology
- 7.20 Travel and Tourist Medicine
  - 7.2.1 Shipping
  - 7.2.2 Aviation
    - 7.2.2.1 Time Lag
    - 7.2.2.2 Diseases by Air Travel

## **8 Motion Sickness**

- 8.1 General Studies, Statistics
- 8.2 Motion Sickness in General
  - 8.2.1 History of Motion Sickness
  - 8.2.2 Pathophysiology
  - 8.2.3 Clinical Aspects and Diagnosis
  - 8.2.4 Therapy and Prophylaxis
- 8.3 Sea Sickness
  - 8.3.1 History of Sea Sickness
  - 8.3.2 Pathophysiology
  - 8.3.3 Clinical Aspects and Diagnosis
  - 8.3.4 Therapy and Prophylaxis

## **9 Psychology and Mental Hygiene in Seafaring**

- 9.1 General Studies, Statistics
- 9.2 Psychological Diagnosis
- 9.3 Psychological Factors in the Nautical Service
  - 9.3.1 Ship Specific Factors
  - 9.3.2 Suicide
  - 9.3.3 Drug Addiction (Alcohol, Drugs and the like)
  - 9.3.4 Stress
  - 9.3.5 Fatigue, Exhaustion, Recuperation, Sleep
- 9.4 Mental Hygiene

## 9.5 Recreational Activity

# 10 Hygiene in Seafaring

## 10.1 General Studies, Statistics

## 10.2 Environmental Factors

### 10.2.1 Noise

#### 10.2.1.1 Impulsive Sound

#### 10.2.1.2 Infrasound, Ultrasound

#### 10.2.1.3 Sound Signals

#### 10.2.1.4 Noise Measurement

#### 10.2.1.5 Audiometry

#### 10.2.1.6 Noise Protection

##### 10.2.1.6.1 Individual Noise Protection

##### 10.2.1.6.2 Noise Protection by Constructive Measurements

##### 10.2.1.6.3 Noise Reduction at its Source (e.g. at the Engine)

### 10.2.2 Vibration

### 10.2.3 Ship Motions

### 10.2.4 Lightning

### 10.2.5 Climate

#### 10.2.5.1 Macroclimate

#### 10.2.5.2 Microclimate

##### 10.2.5.2.1 Air Hygiene

##### 10.2.5.2.2 Ventilation, Air Conditioning, Heating

## 10.3 Hygiene of the Ship's Rooms

### 10.3.1 Living and Sleeping Quarters

### 10.3.2 Sanitary Rooms

### 10.3.3 Work Rooms

#### 10.3.3.1 Engine

#### 10.3.3.2 Navigation

#### 10.3.3.3 Radio

#### 10.3.3.4 Deck

### 10.3.4 Galley, Provision Store Rooms

### 10.3.5 Pantries and Mess-Rooms

### 10.3.6 Common Saloons and Recreation Quarters

### 10.3.7 Swimming Pools

## 10.4 Water Supply

## 10.5 Waste Water

## 10.6 Solid Waste

## 10.7 Food Products and Nutrition

### 10.7.1 Diet

## 10.8 Clothes

### 10.8.1 General Studies

### 10.8.2 Physical Properties, Test Methods, Standards

### 10.8.3 Work Clothes

### 10.8.4 Cold Protective Clothing

### 10.8.5 Weather Protective Clothing

### 10.8.6 Heat Protective Clothing

### 10.8.7 Diving Suits and Clothing

## 10.9 Disinfection, Disinsection, Deratisation (DDD)

### 10.9.1 Rat and Rodent Control

### 10.9.2 Cockroach Control

### 10.9.3 Louse and Flea Control

### 10.9.4 Other Insect Control

### 10.9.5 Disinfection

## 10.10 Social Hygiene

## **11 Port Hygiene**

- 11.1 General Studies, Statistics
- 11.2 Disinfection
- 11.3 Insect Control
- 11.4 Rat Control
- 11.5 Disposal of Waste Water and Solid Waste
- 11.6 Accident Prevention
- 11.7 Quarantine

## **12 Port Labour**

- 12.1 General Studies, Statistics
- 12.2 Specific Work in Port
- 12.3 Work in Ship Yards

## **13 Epidemiology in Seafaring**

- 13.1 General Studies, Statistics
- 13.2 Various Types of Epidemics
- 13.3 Control of Epidemics
- 13.4 Morbidity, Mortality, Distribution of Diagnoses

## **14 Occupational Medicine and Ergonomics in Seafaring**

- 14.1 General Studies, Statistics
  - 14.1.1 Occupational Medical Themes, Occupational Physiology
    - 14.1.1.1 Capacity Performance
  - 14.1.2 Occupational Diseases and Occupational Injuries
  - 14.1.3 Intensity of Work, Workload, Fatigue, Stress, Monotony
    - 14.1.3.1 Multifactorial Stress
    - 14.1.4 Man-Machine System, Anthropotechnics
- 14.2 Work Place, Work Space Design
  - 14.2.1 Seats, Chairs
  - 14.2.2 Displays and Panels
  - 14.2.3 Controls and Consoles
  - 14.2.4 Control Stands and Control Rooms
  - 14.2.5 Radar, Sonar, Radio Location
- 14.3 Work Protection, Accident Prevention, Fire Protection
- 14.4 Day and Night Work (Shift Work)
  - 14.4.1 Timing of Work, Shifts
- 14.5 Specific Jobs
  - 14.5.1 Nautical and Radio Officers
  - 14.5.2 Deck Personnel
  - 14.5.3 Engineers, Electricians
  - 14.5.4 Machine Personnel
  - 14.5.5 Catering Personnel
  - 14.5.6 Pantry Personnel
  - 14.5.7 Other Personnel
- 14.6 Female Occupation, Juvenile Occupation

## **15 Medico-Technical Equipment and Procedures**

- 15.1 General Studies, Statistics
- 15.2 Efficiency Test Devices and Procedures
- 15.3 Medical Equipment and Procedures
- 15.4 Technical Equipment and Procedures

## **16 Selection, Fitness, Qualification, Training**

- 16.1 General Studies, Statistics
- 16.2 Selection, Fitness, Qualification of Seafarers
- 16.3 Selection, Fitness, Qualification of Other Personnel (Divers etc.)

- 16.4 Fitness of Ship Passengers
- 16.5 Education, Training

## **17 Shipwreck, Survival at Sea, Rescue Equipment, Death in the Water, Piracy**

- 17.1 General Studies, Statistics
- 17.2 Shipwreck
- 17.3 Survival at Sea, Distress
- 17.4 Collective Survival Equipment
- 17.5 Personal Survival Equipment
- 17.6 Death in the Water, Drowning
- 17.7 Immersion
- 17.8 SAR Services
- 17.9 Piracy

## **18 Diving, Living under Water**

- 18.1 General Studies, Statistics
- 18.2 Diving
  - 18.2.1 Diving Equipment and Devices
  - 18.2.2 Scuba Diving
    - Diving Physiology
  - 18.2.4 Compression, Decompression, Isopression
  - 18.2.5 Pressure Chamber
  - 18.2.6 Skin Diving
- 18.3 Diving Accidents and Diseases
  - 18.3.1 Diving Diseases by Compression, Isopression and Decompression
  - 18.3.2 Diving Diseases by other Causes
  - 18.3.3 Medical Supervision of Divers
- 18.4 Living and Working under Water
  - 18.4.1 Submarines
  - 18.4.2 Saturation Diving
    - 18.4.2.1 Underwater Habitats
  - 18.4.3 Diving Support Ships, Diving Mother Ships

## **19 Nautical Medical Themes in Respect to Ship Types**

- 19.1 General Studies, Statistics, Ship Building Problems
  - 19.1.1 Merchant Marine Ships, General
- 19.2 Cargo Ships (Dry Cargo)
- 19.3 Bulk Carriers, Container Ships, Ro-Ro Ships
- 19.4 Tankers
- 19.5 Passenger Ships, Ferries, Hovercraft
  - 19.5.1 High Speed Catamarans
- 19.6 Fishery Vessels
- 19.7 Fishery Protection Boats, Supply Ships
- 19.8 Research Ships
- 19.9 Hospital Ships
- 19.10 Cure Ships
- 19.11 Sailing Ships and Sporting Boats
- 19.12 Pilot Ships
- 19.13 Nuclear Powered Ships
- 19.14 Navy Ships, Submarines
- 19.15 Drilling Rigs, Offshore Operations, Offshore Medicine
- 19.16 Other Special Ships
- 19.17 Ship of the Future
- 19.18-Man-Ship

## **20 Inland Waterway Shipping**

- 20.1 General Studies, Statistics
- 20.2 Medical Care
- 20.3 Toxicology
- 20.4 Curative Medicine
  - 20.4.1 Accidents
  - 20.4.2 Diseases
- 20.5 Ship Hygiene, Port Hygiene
- 20.6 Labour, Ergonomics
- 20.7 Selection, Fitness, Qualification, Training
- 20.8 Shipwreck, Rescue Equipment
- 20.9 Drowning
- 20.10 Social Hygiene

## **21 Laws, Regulations, Instructions, Leaflets**

- 21.1 General Studies, Statistics
- 21.2 Federal Republic of Germany
  - 21.2.1 Ministries, Government Agencies
    - 21.2.1.1 See-Berufsgenossenschaft (Professional Association for Seafarers)
    - 21.2.1.2 Binnenschiffahrts-Berufsgenossenschaft (Professional Association for Inland-Waterway Employees)
    - 21.2.1.3 Other Professional Associations and Trade Unions
    - 21.2.1.4 German Industrial Standards (DIN)
    - 21.2.1.5 VDI Standards
- 21.3 German Democratic Republic
- 21.4 Europe
- 21.5 North America
- 21.6 South America
- 21.7 Africa
- 21.8 Asia
- 21.9 Australia, Oceania
- 21.10 International
  - 21.10.1 World Health Organization (WHO)
  - 21.10.2 International Labour Organization (ILO)
  - 21.10.3 International Maritime Organization (IMO)
  - 21.10.4 International Organization for Standardization (ISO)

## **22 Living and Working in the Arctic and Antarctic**

- 22.1 General Studies, Statistics
- 22.2 Qualification, Fitness
  - 22.2.1 Psychological, Mental
  - 22.2.2 Physical
- 22.3 Medical Care
  - 22.3.1 Special Diseases
- 22.4 Physiological Problems
  - 22.4.1 Physiology of the Senses, Neurophysiology
  - 22.4.2 Physiology of the Cardiovascular Circulation
  - 22.4.3 Physiology of the Respiratory System
  - 22.4.4 Metabolism
  - 22.4.5 Energy Balance
  - 22.4.6 Food, Provisions
- 22.5 Psychological Problems
- 22.6 Adaptation
- 22.7 Hygiene
  - 22.7.1 Hygiene of the Body, Activities
  - 22.7.2 Hygiene of the Rooms
  - 22.7.3 Hygiene of the Food
- 22.8 Working in the Cold

## ***REFERENTIAL OF ACTIVITIES AND ABILITIES IN MARITIME MEDICINE***

Jean Marie Filloque, UBO, Brest, France

*main activities that the targeted job, function of occupation covers.*

*main skills, abilities and knowledge mobilised in the practice of these activities.*

Main activities	Main mobilised skills, abilities and knowledge
General medicine aboard ships and/or with sailors	<ul style="list-style-type: none"> <li>- consultations, clinical examinations and common cares for sailors and passengers sick or injured during navigation</li> <li>- follow-up of chronically ill persons and of toxicological risks linked with transported goods.</li> <li>- Compliance and renewal of treatments.</li> </ul>
<p>Follow-up of pathologies specific to maritime environment :</p> <p><b>Organ pathologies and transmitted diseases.</b></p> <p><b>immunizations.</b></p>	<ul style="list-style-type: none"> <li>- Identifying symptoms and ensuring the treatment of the pathologies :</li> </ul> <p>Knowledge of pathologies and specific forms of organ pathologies, transmitted diseases most frequently found in among seafarers.</p> <p>Diagnosis and treatment.</p> <p>Psychopathology of the sailor, naupathia, malaria and dengue fever, risks linked with tropical environment, infectious risks, stings and bites of sea animals, etc...</p> <ul style="list-style-type: none"> <li>- taking charge of an addiction (alcohol, tobacco, drugs) : prevention, treatment, follow-up.</li> </ul>
<p><b><u>Occupational medicine :</u></b></p> <p><b>Systemic ergonomic analysis of working conditions on board.</b></p> <p><b>Epidemiological and clinical analysis of events: incidents, accidents.</b></p>	<ul style="list-style-type: none"> <li>- Medical surveillance of seafarers (hiring and periodical visits)</li> </ul> <p><b>Knowledge in oceanology and climatology.</b></p> <ul style="list-style-type: none"> <li>- Delivery and control of the aptitude to navigate and at the work post.</li> <li>- Study of the jobs and evaluation of the professional risks in accordance with surveys ratified before and after events.             <ol style="list-style-type: none"> <li>1. evaluation of nuisances and their impact on health : noises, vibrations, electromagnetic radiations through specialised equipment : sonometers, audiograms.</li> <li>2. evaluation of risks linked to chemical exposure. Participation in fire alert and chemical incidents exercises.</li> </ol> </li> </ul>

	<p>3. evaluation of infectious and biological risks.</p> <ul style="list-style-type: none"> <li>- Contribution to the fitting-out of work posts ( ergonomics in the bridge, positioning of the screens).</li> </ul>
<p><b>Maritime social medicine, health regulations</b></p> <p><b>Prevention, prophylaxis</b></p>	<ul style="list-style-type: none"> <li>- Implementation of the International Health Regulations : <i>Foundations, content, obligations, limits, diseases submitted to International Health Regulations (yellow fever, plague, cholera : diagnosis and treatment). Water and food onboard: health risks, supplying, prevention.</i></li> <li>- Participation in the CHSCT (hygiene, security and working conditions committee), study of infectious risks.</li> <li>- Control of disinfection (rat extermination, pest control).</li> <li>- Report writing (social security doctor advisor, COTOREP (technical commission for career advising and professional redeployment), work inspectorate).</li> </ul>
<p><b><u>Professional diving :</u></b></p> <p>Physiopathology of scuba diving and diving without breathing apparatus, aptitude, medical surveillance, accidents, regulation.</p>	<ul style="list-style-type: none"> <li>- Control of the aptitude to professional and leisure diving.</li> </ul> <p><b>Knowledge of diving physiology and pathology, recognition of symptoms, emergency interventions and prevention of common diving accidents, with or without breathing apparatus.</b></p> <p><i>Knowledge of regulations.</i></p>
<p><b><u>Medical preparation to yacht racing and polar expeditions</u></b></p>	<p><i>-knowledge of risk factors in extreme conditions, assessment of aptitudes, prevention of frostbite, adaptation to living in an isolated and enclosed environment, to specific working hours.</i></p> <p><i>-evaluation of specific needs and organisation of resupplying.</i></p> <p>Sleep and vigilance : physiology and perturbations, adaptation to sea and racing conditions. Hypovigilance, rhythm, watches.</p> <p>Nutrition.</p>



<p><u>Surveillance of the medical consequences of chemical, bacteriological and micro-organic pollution at sea and on the coast.</u></p>	<ul style="list-style-type: none"> <li>- Recognition of pathogen factors in maritime environment : long-term/ fundamental and accidental pollutions (oil pollution, toxic seaweeds, bacteria and viruses).</li> <li>- Recognition of the symptoms of chemical, bacteriological and micro-organic poisoning.</li> <li>- Taking adapted preventive measures.</li> </ul>
<p><b>Medical assistance onboard : First-aid, fishing fleet assistance, telemedicine, rescue plan for shipwrecked persons (medical part)</b></p>	<ul style="list-style-type: none"> <li>- Medical consultations through satellite with the CCMM (maritime medical consultation centre) of Toulouse.</li> <li>- Radioconsultations with ships at sea : long-distance transmission, diagnoses and prescriptions.</li> </ul> <p>Practice of medical (traumatology) and surgical emergencies (mild surgery).</p> <ul style="list-style-type: none"> <li>- Practice of resuscitation (mouth-to mouth breathing, chest compression, intubation, fitting an approach), cardio-pulmonary resuscitation (CPR) ;</li> </ul>
<p><u>Training/ awareness of the crew</u></p>	<ul style="list-style-type: none"> <li>- Ensuring the « medical » training for first-aid onboard according to the STCW95 code.</li> <li>- Supervision of alert exercises onboard for the first-aid team.</li> <li>- Ensuring the periodic retraining of ocean-going officers.</li> <li>- Setting-up and training a medical rescue unit</li> </ul> <p>- ensuring a medical preparation for yacht racers (pharmacy, physical preparation, sleep, food)</p>
<p>Management of medical and pharmaceutical equipment <b>And of healthcare workers.</b></p>	<ul style="list-style-type: none"> <li>- Checking the good functioning of emergency equipment (testing the defibrillator)</li> <li>- Controlling the medical allocation onboard. Maintaining and following through of the stock.</li> </ul> <p>- hiring and planning the common care tasks.</p>
<p><u>Relations with internal and external environment</u></p>	<ul style="list-style-type: none"> <li>- Ability to establish and maintain professional relationships in the interest of the sailor's health and living conditions :</li> </ul> <p><i>Knowledge of the maritime environment : types of ships, hierarchy aboard, work posts, professional organisations.</i></p> <p><i>Staff onboard : command, mastery, executive staff, sea administration and health</i></p>

*care service for seafarers.*  
*Social organisations and health authorities.*  
*Medical help at sea*  
*Occupational medicine; work inspectorate.*  
*COTOREP*

## APPENDIX

### Sources of data in maritime health

Ralph Nilsson, M.D., Ph.D.

Occupational and environmental medicine, Sahlgrenska University Hospital, Göteborg, Sweden

- Databases
  - General
    - Medline (PubMed)
    - CISILO (DataStar, Bern)?
    - Excerpta Medica (DIMDI)?
  - Maritime
    - Gdynia
    - Hamburg
    - IMHA?
    - IMO
    - SEMM
    - SFMM
- Websites
  - IMHA
  - ILO
  - IMO
  - ITF
  - FMM, SDU, Esbjerg
  - SEMM, Spain
  - SFMM, France
  - SIRC, Cardiff
- Symposia/conferences/workshops
  - ISMH
  - IMHA seminars and workshops
- Journals
  - International Maritime Health
  - Medicina Maritima
  - IMHA Newsletter
  - National journals (e.g. Documentum Navale, Norway)
- Organisations

- International
  - ILO
  - IMHA
  - IMO
  - ITF
  - WHO
- National
  - SEMM
  - SFMM
  - Other national organisations(e.g. Denmark, Norway, Philippines)
  - See-berufsgenossenschaft
  - National maritime authorities
- Institutes/universities/units
  - FMM, SDU, Esbjerg
  - Tarragona, Spain
  - UBO, Brest, France
  - SIRC, Cardiff
  - Port health authority, Hamburg
  - Gdynia
  - Göteborg
  - Bergen
  - Turkku
  - etc
- Telemedicine centers
- Lectures/tutorials

It also might be worthwhile to list and structure the potential users and their needs