Maritime Pharmacy:
Towards cooperation and standardization globally

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What is maritime pharmacy?

Maritime pharmacy can be defined as:
All activities involved in provisioning shipping vessels with medical supplies to ensure safety on board.

To ensure safety on board ships, large international shipping vessels carry pharmaceuticals and other medical supplies in cases of emergency when sailing in open sea. Requirements regarding these medical supplies are often specified by national regulations. For ships whose home nation do not have their own regulations regarding medical safety on board ships, the WHO published a guide with recommended supplies and background information.[1] In the international trade, ships often have an international crew and sail world wide. Ships may be based in Norway for example and may have a captain from the Phillipines and crew from Norway, Indonesia, Spain, Poland or Russia. English is common language for communication. Captains are mostly responsible for management and use of medication on board.

Maritime pharmacy is mainly performed by community pharmacists. Community pharmacists, specialized in maritime pharmacy will be addressed as maritime pharmacists in this report. A maritime pharmacist does not supply to sick patients, as they would do in their position as a general community pharmacist, but supplies ships for potential patients. So he or she is responsible for bulk supply for emergency safety.

Besides the tasks of a regular community pharmacist, a maritime pharmacist has some specific tasks:
• Inspector of current ship-based medical supplies
• Manager and supervisor of new medical supply (including appropriate information) on board ships
• Advisor to shipping companies or captain regarding shipboard medical equipment

Maritime pharmacists may also:
• Teach refresher courses
• Be consultant for national regulators or policy makers

History of the Working Group

Because medication for the medicine chest is bought many places around the world, several problems on board may occur:
• Drug information for the crew is lacking or not understandable
• Different names for same medication may be available in the medicine chest
• Different strengths are common in different countries
• Medicines are often unknown to crew
• Quality of medication differs a great deal
In 1993, Annelise Solheim, experienced maritime pharmacist in Norway, wrote a letter to FIP to draw attention to the problems of provisioning of medicines and medical equipment to shipping vessels internationally. In order to address these problems on an international platform of community pharmacists involved in maritime pharmacy a Working Group on Ships Medicines was established officially by the Community Pharmacy Section (CPS) of the FIP.

In 1996, the Working Group gathered for the first time in Jeruzalem at the FIP conference, chaired by Annelise Solheim and supported by Almar Grimsson (Iceland) as a representative of the CPS, ExCo. Steven Moore (USA) and Peter Krasemann (Germany) were present as members. After that, the working group gathered annually at FIP conferences. From Barcelona 1999 the meetings have been chaired by Evelyn Schaafsma (the Netherlands) and in Vienna 2000, Almar Gimson was followed by Astrid Kaegedal (Sweden) in representing the CPS, ExCo. Every year, the Working Group contacted actively maritime pharmacists in the region of the conference to join in. Also excursions in harbours were organized. In the attachments a full list of attendees is available.

Aims

The aims of the Working Group are:

- Quality improvement of supplies
  Improving pharmaceutical provisioning worldwide, for example by better information and high quality products (suitable for emergencies purposes on board ships worldwide)
- Professionalism on maritime pharmacy expertise
  Acknowledgement of the specific expertise needed to be a skilled maritime pharmacist and development of these professional skills
- International standardization
  Work towards international standards on board ships regarding medical supplies, labelling, patient information etc.

Activities & output

- Quality Management System
  Legal national regulations describe which medicines should be carried on board and inspection of the quality of the medicine chest by a pharmacist is often required. However, how a pharmacist should perform this job, is part of his professional responsibility. The Working Group feels there is a need for standards for quality control of maritime pharmacy and started formulating protocols on how to check a medicine chest, what labelling is appropriate, how to document for certificates etc[2].
- Research
At the start of the Working Group, there was no literature available on maritime pharmacy, except for a Norwegian study [3]. Therefore, the Working Group initiated several studies. The studies were done by the Science Shop for Medicines, University of Groningen (The Netherlands), free of charge. First of all, Schaapman, Schaafsma en collegues investigated problems caused by different regulations from the perspective of pharmacists.[4,5] Main conclusion was, although pharmacists did experience a lot of problems, they worried most about the crew on board: all different drugs, regulations and information in different languages.

Following these conclusions, the Working Group and Science Shop initiated a second study on board ships, aiming at responsables for the medicine chest. Although the researchers aimed at a study worldwide, but after a small pilot globally, only data from Dutch ships were collected, due to lack of resources. From this study it became clear that a medical shipping manual, either a Dutch one or the one from WHO was used as the main source of information. The responsible crew expressed a great need for more or better information in a manual (75%) and a reasonable amount of the respondents wanted more information on label (36%) or package inserts (38%). The crew reported several problems with medication supply: supplies arrive to late, supplies have different labels or drug namens, problems with customs (narcotics on board) and the outdated medical guide of WHO was mentioned quite often.

- **Review of the WHO guide**

From the study among crew and discussion with both maritime pharmacists and maritime doctors, gathered at International Maritime Health Association (IMHA), it is clear that the WHO Medical Guide for Ships [1], published in 1988, is outdated. The Working Group summarized suggestions for a new edition:

- Decrease amount of drugs in stock list, due to decrease of crew past years.
- Replace obsolete drugs with new, according to evidence-based, rational pharmacotherapy
- Introduce a more flexibel system, where the actual guide with background information is divided from the medication stock list. The list needs updating more often.
- Introduce a standardized labelling system, applicable in all countries in the world.

After some lobby work by the Working Group (correspondence with Hogerzeil and Brundtland) and the IMHA, the WHO finally started a project to develop a new medical guide for ships.* These developments are still in initial fase.

- **Exchange expertise on maritime pharmacy**

During the meetings of the Working Group and excursions in harbours and maritime pharmacies, attendees discussed problems and improved professional skills by exchanging ideas and procedures. In a presentation during FIP conference in Singapore 2001, these experiences were shared with other community pharmacists during the short communications.[8] The final report, research abstracts and presentations of the Working Group will be available on the internet. Except for the publications regarding the research, the current chair of the working group published about the work on maritime pharmacy in the Dutch Pharmaceutical Journal twice. [9,10]

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Recommendations

From the research and all other activities of the Working Group, it can be concluded that an international forum is needed to develop international standards further like a global quality management system for maritime pharmacy or an internationally accepted guide issued by the WHO.

The Working Group feels that the FIP as international association of pharmacists should promote this standardization and cooperate with IMHA, IMO or ILO to ensure emergency medical care and safety on board ships. Specific expertise in maritime pharmacy is needed to solve the problems on board regarding confusing and outdated medication supply.
References

Working Group Ships Medicines, members and attendees:

- Evelyn Schaafsma, the Netherlands (1998-2002). Chair from 1999
- Annelise Solheim, Norway (1996-2002). Chair until 1999
- Peter Krasemann, Germany (1996-2002)
- Steven Moore, USA (1996-1998)
- Dolores Pont & Jesus Benavides Helbig, Spain (1999)
- Ruben Moss, South Africa (1999)
- Jorgen Huse, Norway (2000)
- Tan Ah Bee, Singapore (2001-2002)
- Almar Grimsson (ExCo-CPS), Iceland (1996-1999)
- Astrid Kagedal (ExCo-CPS), Sweden (2000-2002)

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