

Guidance to the International Medical Guide for Ships 3rd edition: Interim advice regarding the best use of the medical chest for ocean-going merchant vessels without a doctor onboard

Joint Statement of WHO Collaborating Centres for the Health of Seafarers and the International Maritime Health Association – 2009 Version

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INTRODUCTION

Diagnosis and treatment of the sick and injured onboard is a challenge to seafaring. This has always been true despite recent developments in telemedicine. Where no doctor is on board – as it is the case on most merchant ships – a non-medical person holds the responsibility for medical care. He/she has to rely on his/her medical training, written information, and, if appropriate, shore-based radio-medical or telemedical advice. This information will help him/her to make best use of the medical chest and equipment on board. The appropriateness of the information

available, and the adequacy, uniformity, and quality of the medical chest and equipment is key to safeguarding the seafarer's health in his/her workplace.

The WHO International Medical Guide for Ships (IMGS) was first published in 1967. The IMGS has widely been used in the maritime world. The second edition [1], written in 1988, was replaced by the third edition [2] in 2007. Immediately after the publication of the current IMGS a discussion on the best use of the tool and on further needs developed among experts from the WHO Collaborating Centres [3] for the Health of Seafarers and the International Maritime Health Association [4].

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During a workshop of the INTERNATIONAL MARITIME HEALTH ASSOCIATION (IMHA) in Athens, Greece, November 14th–15th 2008, the concerns were summarized as follows: “Flag states that do not have national requirements for the contents of the medical chest have, in the past, relied on a list that has been provided by the WHO in the *International Medical Guide for Ships (2nd Edition, 1988)*. This list provided information on the quantities to be carried on board. It is not a formal international instrument, but the Guide is noted as a source of information in the non-statutory part of the relevant ILO Convention. Port State Control Inspectors use the IMGS list as the minimum requirement for medical supplies. The medication list is now very out of date and when WHO recently published a new edition of the Guide it included updated lists of recommended medications that were derived from the WHO Essential Medications List and of medical equipment taken from *The Inter-agency Emergency Health Kit 2006*. While this was a rational approach for the WHO to ensure that well validated treatments were available, it did not take into account the need for remedies for minor ailments at sea – the sort that can impair ability to work without being dangerous, nor did it cover all the medical equipment that was needed in maritime situations. More significantly, the WHO did not consider that they could specify quantities of medications to be carried, as there was a lack of information on the use and effectiveness of medications at sea. In the absence of such data, the WHO considered that quantities should be related to voyage pattern and to political/managerial decisions rather than being stated by the WHO. This lack of specification is not causing immediate problems where the flag state of the ship has its own national regulations or guidelines but it has led to great difficulties for maritime pharmacists called on to check and restock medical chests on ships from countries, including many of those with major open ship registries, that have no national lists. Pharmacists cannot continue to work to the outdated list and quantities in the old *International Medical Guide*, while they have no benchmarks for quantities required from the new one, nor the authority to make consistent decisions on the quantities to supply”.

WHO Collaborating Centres for the Health of Seafarers and IMHA agreed that there are a number of topics where improvements are needed. The aim is to produce a knowledge base to specify the contents of medical chests and the medical textbook. While this is a long-term approach requiring research efforts, it was also agreed upon the need to produce interim guidance on the medical chest for current users of the IMGS, even in the absence of further evidence. Symptom-oriented algorithms for diagnosis and treatment as a supplement to the current IMGS 3rd edition will follow soon.

In this paper, the authors, who are experts from the International Medical Health Association and the WHO Collaborating Centres for the Health of Seafarers, have published recommendations for the medical chest as given in the IMGS 3rd edition. This is interim advice to be available to ship-owners, masters and maritime authorities, and pharmacists for use on merchant ships not carrying a medical doctor, of those flags that do not follow the EU Directive 92/29 [5] and do not have national requirements. The readers and users of the interim advice need to be aware that the expert group does not judge on the contents of the current list as published by the World Health Organization in the 3rd edition of the IMGS.

The aim of the *Interim Advice* as given below **is**:

- to provide an aid for decision making regarding quantities required for seagoing and coastal vessels;
- to add items named in the textbook of the IMGS 3rd edition but missing from the list of medicines or equipment;
- to add page numbers from the medical textbook to the list of medicines for easier use.

The *Interim Advice* as given below **is not**:

- mandatory for ship-owners, suppliers, or port health authorities. It is the flag states responsibility to specify national requirements in a legally binding way;
- meant to substitute qualified medical consulting. Owners and operators bear the final responsibility for the content of the medical chests on board ships. Owners and operators will need to seek qualified medical consultation for the content and quantities carried on board. The particularities of the voyage will need to be considered by the consultant, e.g. travel to areas with malaria risk.

The authors of the *Interim Advice* are solely responsible for the content of all additions made to *The List of Recommended Medicines and Equipment of the International Medical Guide for Ships 3rd edition*, pages 430–446.

EDITORIAL NOTE

We appreciate the comments of the maritime community to this publication, which will be continuously revised. All comments and suggestions need to be directed to the corresponding author. Please mail to Clara.Schlaich@bsg.hamburg.de.

HOW TO USE THE PROPOSED LIST OF RECOMMENDED MEDICINES AND EQUIPMENT OF THE INTERNATIONAL MEDICAL GUIDE FOR SHIPS 3RD EDITION, PAGES 430–461

- The *Interim Advice* is **only** to be used in conjunction with the *International Medical Guide for Ships 3rd edition* [2], as published by the WHO in 2007.

- All items suggested by the WHO in the original list on pages 430–461 are included.
- Any additions to the original list (items and comments) are made visible by the use of italic letters. Reference pages from the medical textbook to the list of items that justify the additions are given.
- Running numbers have been given to the list of medicines and equipment, including added items.
- Drugs, forms, books, and equipment that are mentioned in the textbook but have not been displayed in the list of medicines are added to the list in alphabetical order.
- Reference pages to the medical textbook are given for all items to aid use of the list.
- If an item may be omitted under special circumstances, this is mentioned in italic letters in the last column.
- Suggestions for quantities have been included. Quantities are calculated on the basis of the following assumptions: Ocean-going merchant vessels without a doctor onboard. Maximum duration of travel of 3 weeks. Crew sizes of 10, 20, 30, or 40 persons.
- For merchant vessels without a doctor onboard, engaged in coastal trade or going to nearby foreign ports, and not more than 24 hours away from a port of call, for fishing boats and private craft: Quantities may be adapted or omitted on the advice of a qualified medical practitioner or pharmacist with regards to the destination, medical facilities ashore, number of crew members, and cargo.
- **For dosage, contra-indications, unwanted effects, radiomedical advice, and further remarks the users should refer to the original text of the IMGS 3rd edition.**
- Recommended quantities will not always reflect the standard packs in a given country. In this case, the recommendation is for the nearest available dispensing sales pack above the minimum required quantity.
- Owners and operators may substitute exact equivalents on the advice of a qualified medical practitioner or pharmacist, provided they are satisfied that an equivalent level of treatment is assured.
- Specific items will not be available in certain countries; for example, Chlorpyrifos was banned in the European Community (Directive 98/8 EEC of March 16th 1998). The pharmacist will have to supply an analogous drug in corresponding quantities. The same is true for items which have transport restrictions and cannot be delivered locally.
- For ships carrying dangerous goods according to the IMDG Code [6]: medicines and equipment already available in the IMGS list may be counted toward the Medical First Aid Guide (MFAG) numerical requirement, if appropriate.

Ocean-going merchant vessels without a doctor onboard
Maximum duration of travel of 3 weeks
Crew sizes of 10, 20, 30, or 40 persons
Only to be used in conjunction
with the International Medical Guide for Ships 3rd edition

Running numbers are given to the alphabetical list of medicines and equipment. Items which have been added by the authors appear in alphabetical order and are written in italic letters

Quantities for the recommended minimum number of items for ocean-going vessels are based on an estimated 3 weeks inventory for a crew complement of 10–40 persons

Comments in italic letters refer to added items which are mentioned in the textbook but have not been displayed in the list of medicines. Remarks on items which may be omitted under special circumstance are given. For dosage, contra-indications, doctor consulting, unwanted effects, and remarks, refer to IMGS 3rd ed. p. 430–461 and textbook

MEDICINES, p. 431–450

Item No.	Recommended Item					Indications (on board ships) Added comments
Dosage form, Strength	Per 10	Per 20	Per 30	Per 40		
1	Acetylsalicylic acid, tablet 300 mg	100	200	300	400	<ul style="list-style-type: none"> – High dose (600–900 mg): to reduce pain, fever, inflammation – Low dose (100–150 mg) to inhibit formation of blood clots in angina pectoris, myocardial infarction, stroke See pages: 17–25 and 113–116, 133–135, 137, 138

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Running numbers are given to the alphabetical list of medicines and equipment. Items which have been added by the authors appear in alphabetical order and are written in italic letters		Quantities for the recommended minimum number of items for ocean-going vessels are based on an estimated 3 weeks inventory for a crew complement of 10–40 persons				Comments in italic letters refer to added items which are mentioned in the textbook but have not been displayed in the list of medicines. Remarks on items which may be omitted under special circumstance are given. For dosage, contra-indications, doctor consulting, unwanted effects, and remarks, refer to <i>IMGS 3rd ed. p. 430–461 and textbook</i>	
MEDICINES, p. 431–450							
Item No.	Recommended Item						
Dosage form, Strength	Per 10	Per 20	Per 30	Per 40	Indications (on board ships) Added comments		
2	Aciclovir, tablet 400 mg	35	35	70	70	– Treatment of primary or recurrent herpes simplex virus infection – May be useful for severe varicella and herpes zoster infection (doctor should be consulted) See pages: 125–126, 198–199, 256	
3	Adrenaline 1:1000, ampoule 1 ml = 1 mg	10	10	10	10	– To raise blood pressure in anaphylaxis – To dilate airways in severe asthma or anaphylaxis See pages: 145–147	
4	Amethocaine (<i>tetracaine hydrochloride</i>), 0.5% eye drops, single-use vial 1ml	20	20	20	20	for eye examination and procedures See pages: 33–34	
5	Amoxicillin + clavulanate, tablets 875 mg/125 mg	15	30	30	45	– To treat infections responsive to this antibiotic See Pages: 7–776, 140–144, 181–183, 204, 216–217, 221–223, 262, 288	
6	<i>Antimalarial prophylaxis</i>	<i>Quantity dependent on crew number, risk of acquiring malaria in a given port, and duration of stay in risk area. Seek medical advice</i>				Prophylaxis and treatment of malaria as recommended by www.who.int/malaria/publications.html or: www.cdc.gov/travel/regionalmalaria/index.html See pages: 265–269	
7	Artemether, ampoule 1 ml = (80 mg)	5	5	5	5	Treatment of severe malaria. See pages: 265–269 required only for voyages to areas where malaria transmission is a risk	
8	Artemether + Lumefantrine, tablets 20 mg + 120 mg	24	24	48	48	Treatment of malaria. See pages: 265–269 Required only for voyages to areas where malaria transmission is a risk	
9	Atropine, ampoule 1.2 mg/ml	10	10	10	10	– To treat slow heart rate in myocardial infarction – To treat organophosphate insecticide poisoning See Pages: 96, 136	
10	Azithromycin, tablets 500 mg	3	3	6	6	– To treat infections responsive to this antibiotic See pages: 141–144, 195–207, 260, 274, 277, 281	
11	Ceftriaxone, ampoule 1 g powder for injection (dissolve in water for injection)	15	30	45	60	– To treat infections responsive to this antibiotic See pages: 16, 141–144, 153, 160–161, 172, 175, 187, 194, 195–207, 269–270	
12	Cetirizine, 10 mg tablet	30	30	30	30	– To treat allergy symptoms in hay fever, hives, allergic dermatitis, etc. See page: 145	
13	Charcoal, activated, 50 g in 300 ml purified water	2	2	2	2	– To absorb ingested poisons. See pages: 93–96	
14	Ciprofloxacin, tablet 250 mg	40	40	40	40	– To treat infections responsive to this antibiotic. See pages: 77, 156–157, 181–183, 195–207, 221–223, 262 and 277	

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MEDICINES, p. 431–450						
Item No.	Recommended Item					
Dosage form, Strength	Per 10	Per 20	Per 30	Per 40	Indications (on board ships) Added comments	
15	Cloves, oil of 10 ml	1	1	1	1	Toothache. See pages 287–289
16	Dexamethasone, ampoule 4 mg/ml	5	5	5	5	– To treat life-threatening and severe asthma – To treat anaphylaxis – To treat severe allergic reactions
17	Diazepam, tablets 5 mg	50	50	100	100	To treat alcohol withdrawal. See pages: 235–239
18	Docusate with Senna, tablet 50 mg + 8 mg	20	20	40	40	– To avoid straining in patients with anal fissure and haemorrhoids – To prevent constipation caused by opioid use See pages: 168–169
19	Doxycycline, tablet 100 mg	20	20	40	40	As recommended in IMGS3 for specific infections See pages: 195–207, 209–210, 221–223, 271–272
20	Ethanol 70%, hand cleanser gel 250 ml	2	4	6	8	An alternative to hand-washing when hands are not obviously soiled
21	Ethanol 70%, liquid, Liquid 500 ml	1	1	2	2	To disinfect instruments and surfaces
22	Fluorescein 1%, strips or single use vials 1 ml	20	20	20	20	To detect damage to cornea: damaged area stains yellow/green. See pages: 33–34
23	Frusemide, ampoule 4 ml = 40 mg	5	5	5	5	To treat severe fluid retention in lungs (pulmonary oedema) due to cardiac failure. See pages: 15, 136
24	Glucagon, ready to use, ampoule 1 mg amp.	1	1	1	1	To treat low blood sugar (hypoglycaemia) due to insulin when oral intake is impossible and intravenous glucose cannot be given. See pages 123, 125. <i>It is recommended to carry a glucose measuring instrument on board.</i>
25	Haloperidol, ampoule 1 ml = 5 mg	5	5	10	10	– To treat psychotic hallucinations and delusions – To treat severe agitation and aggressiveness See pages: 126–132
26	Hydrocortisone 1%, cream (20–30 g)	2	4	6	8	To treat allergies and some other inflammatory skin conditions. See pages: 169, 212–213, 219–221
27	Ibuprofen, coated tablet 400 mg	50	100	150	200	– To treat inflammation – To reduce mild-to-moderate pain, especially if associated with inflammation See pages 17–25
28	<i>Insect repellent lotions for skin. Vials for personal use DEET 20–35% formulation or Picaridin or p-menthane-3,8-diol</i>	<i>One vial per person in areas of risk of acquiring a disease transmitted by mosquitoes in a given port</i>				<i>Consider diseases transmitted by mosquitoes as Dengue Fever p. 258–259, Malaria p. 265–269, Yellow fever p. 284 See also pages 363–364 for mosquito control in general</i>
29	Isosorbide dinitrate, tablet 5 mg sublingual	20	20	40	40	– To treat angina pectoris (chest pain) – To treat myocardial infarction

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MEDICINES, p. 431–450						
Item No.		Recommended Item				
Dosage form, Strength		Per 10	Per 20	Per 30	Per 40	Indications (on board ships) Added comments
30	Lignocaine 1% (without adrenaline), ampoule 5 ml	5	5	10	10	For local anaesthesia when suturing wounds or performing minor surgery <i>See pages: 71–74, 216–219</i>
31	Loperamide, tablet 2 mg	30	60	90	120	To treat symptoms of diarrhoea <i>See pages: 156–157</i>
32	Mebendazole, tablet 100 mg	10	10	20	20	To treat intestinal worm infections, not effective for tapeworm infection or hydatid disease. <i>See pages: 281–284</i>
33	Metoprolol, tablet 100 mg	30	60	60	60	– To treat hypertension (high blood pressure) – To treat atrial fibrillation (irregular or rapid heart rate) – To treat angina pectoris (chest pain) – To prevent migraine <i>See pages: 133–137</i>
34	Metronidazole, tablet 500 mg	30	30	30	30	To treat infections responsive to antibiotics <i>See pages 160–163, 172, 203–204</i>
35	Miconazole 2%, cream	2	4	6	8	To treat fungal skin infections <i>See pages 203–204, 214</i> <i>If women on board, supply also Miconazole vaginal cream</i>
36	Midazolam, ampoule 1 ml (= 5 mg)	5	5	10	10	To terminate epileptic fits <i>See pages: 121, 128–130</i>
37	Misoprostol, tablet 200 µg	3	3	3	3	To prevent post-partum haemorrhage <i>Page 192</i> <i>If women on board</i>
38	Morphine (injectable), ampoule 1 ml = 10 mg	10	20	30	40	– To reduce severe pain – To reduce pain not relieved by other analgesics <i>See pages: 17–25</i>
39	Morphine (oral) liquid 1 mg/ml, 100 ml bottle or 10 tablets with 10 mg	1	1	1	1	To reduce severe pain likely to last several days in patients able to eat and drink <i>See pages: 17–25</i>
40	Naloxone, ampoule 1 ml (= 0.4 mg)	10	10	10	10	To reverse effects of opioids, especially in case of overdose <i>See pages: 123, 240</i>
41	Omeprazole, tablets 20 mg	30	30	60	60	– To treat gastro-oesophageal reflux – To treat peptic ulcer disease <i>See pages 152, 163–167, 173</i>
42	Ondansetron, tablet 4 mg or Scopolamin transdermal patches	10 5	10 5	20 10	20 10	– To prevent vomiting – To prevent seasickness <i>See page: 347</i> <i>Caution: Scopolamine treatment causes sedation, see remarks on page 347</i>

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MEDICINES, p. 431–450						
Item No.	Recommended Item					
Dosage form, Strength	Per 10	Per 20	Per 30	Per 40	Indications (on board ships) Added comments	
43	Oral rehydration salts sachets of powder for reconstitution	10	10	20	20	To prevent or treat dehydration, especially due to diarrhoea See pages: 257–258, 347
44	Oxymetazoline 0.5% (or equivalent) drops or spray	4	5	6	7	– To treat nasal obstruction due to allergies or viral infection – To improve sinus drainage in sinusitis
45	Paracetamol, tablets 500 mg	100	200	300	400	To reduce pain and fever (but not inflammation) See pages 17–25
46	Permethrin 1%, lotion 250 ml	1	1	2	2	to eliminate hair, pubic, and body lice See pages: 219–221
47	Permethrin 5% Lotion, vial of 250 g	1	1	2	2	To treat scabies See pages: 219–221
48	Povidone iodine ointment 10%, 25 to 50 g	2	3	4	5	To disinfect skin and wounds See pages: 67–77, 215–219
49	Povidone iodine solution 10%, 30 to 120 ml	2	3	4	5	To disinfect skin and wounds See pages: 67–77, 215–219
50	Prednisone, tablet 25 mg	30	30	60	60	– To treat severe asthma – To treat other inflammatory conditions (on medical advice) See pages: 125–126, 145–147
51	<i>Petroleum jelly, 50 g to 100 g (Vaseline)*</i>	2	3	4	5	– To treat chapped skin See page: 212, 261 for lubricating rectal thermometer
52	Salbutamol aerosol, inhaler 0.1 mg/dose	1	2	3	4	– To treat asthma – To treat chronic bronchitis – To treat emphysema – To treat other lung diseases See pages: 145–147
52a	<i>Volume spacer for Salbutamol inhaler</i>	1	1	1	1	To make inhaling Salbutamol more effective See page: 146
53	Sodium chloride 0.9% infusion plastic-bottle 1 litre or 2 × 500 ml plastic bottles	5	5	5	5	For fluid replacement Can also be used for sterile eye irrigation See page: 38
54	<i>Sodium chloride 0.9% infusion plastic-bottle 10 ml</i>	2	2	2	2	For sterile eye bathing and application of wet compresses. See page 38
55	Tetracycline 1% ointment Eye – ointment 5 g	2	4	6	8	To treat minor eye infections; to prevent infections following damage to the cornea See pages: 33–34, 40–42, 261
56	<i>Tetanus Immunoglobulin, ampoule (keep at 2–8°C)</i>	1	1	1	1	Part of wound care if state of vaccination is unknown, see page: 68

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MEDICINES, p. 431–450										
Item No.	Recommended Item									
Dosage form, Strength	Per 10	Per 20	Per 30	Per 40	Indications (on board ships) Added comments					
57	<i>Tetanus toxoid vaccination ampoule (keep at 2–8 °C)</i>				1	1	1	1	<i>Part of wound care if state of vaccination is unknown, see page: 68</i>	
58	<i>Tramadol, tablets 50 mg</i>				50	50	50	50	<i>Against moderate pain; see pages: 22–23 In severe pain use morphine; see pages: 17–25</i>	
59	<i>Vitamin K (Phytomenadione) Ampoule 1 ml = 10 mg</i>				2	2	2	2	<i>To reverse excessive or unwanted effects of warfarin or related drugs See pages: 96, 173</i>	
60	<i>Water for injection Ampoules 5 ml</i>				20	30	40	50	<i>Reconstitution of injectable drugs provided as powders</i>	
61	<i>Zidovudine plus Lamivudine tablets, 300 mg + 150 mg</i>				<i>Carry at least 60 tablets</i>				<i>Prophylaxis against HIV infections after needle-stick injury. One tablet daily twice daily for four weeks. See page 252</i>	
	<i>Consider adding further or using other antiviral substances following current guidelines</i>				<i>Qualified medical advice needed for general risk assessment on board</i>				<i>In case of exposure, immediately seek radio-medical advice for risk assessment in individual persons</i>	
	<i>http://www.who.int/hiv/pub/prophylaxis/pep_guidelines/en/index.html</i>				<i>Omit only if very low risk of infection with exposure on board</i>					
	<i>www.liv.ac.uk/hiv/guidelines.htm</i>				<i>Add further or other antivirals following guidelines with moderate to high risk for infection in case of exposure</i>					
	<i>http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5409a1.htm</i>									
62	<i>Zinc oxide 20% paste or ointment 50–100 g</i>				5	5	5	5	<i>Protection of irritated skin</i>	

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
1. RESUSCITATION EQUIPMENT						
1.1	Portable oxygen set, complete containing:	1	1	1	1	Appliance for the administration of oxygen See pages: 4–5
1.1a	1 oxygen cylinder, 2 l/200 bar	1	1	1	1	Ready to use See pages: 4–5
1.1b	1 spare oxygen cylinder, 2 l/200 bar	1	1	1	1	See pages 4–5. <i>If no additional equipment from the MFAG is on board, consider increasing the amount of oxygen to 4 × 10 l</i>
1.1c	Pressure regulating unit and flow meter with tubes such that ship's industrial oxygen can also be used	1	1	1	1	See pages: 4–5
1.1d	3 disposable face masks of choice: including simple face mask and non-rebreathing mask	1	2	3	4	See pages: 4–5
1.2a	Guedel airway (Mayo-tube): size medium	1	1	1	1	Oropharyngeal airway, see pages: 4–5, 315
1.2b	Guedel airway (Mayo-tube): size large	1	1	1	1	Oropharyngeal airway, see pages: 4–5, 315
1.3a	Manual aspirator to clear upper airways	1	1	1	1	Mechanical aspirator, see pages: 4–5
1.3b	Catheters for aspirator,	2	2	2	2	Mechanical aspirator, <i>different sizes</i> ; see pages: 4–5
1.4	Ambubag or equivalent; supplied with small, medium, and large masks	1	1	1	1	Bag and mask resuscitator <i>including oxygen reservoir bag and oxygen tubing</i> , see pages: 4–5
1.5	Brook Airway, Lifeway, pocket face mask or equivalent	1	1	1	1	Cannula for mouth-to-mouth resuscitation, see pages: 4–5
2. DRESSING MATERIAL AND SUTURING EQUIPMENT						
2.1	Assorted wound-plaster or plaster strips, water resistant – <i>slim and broad</i>	200	200	200	200	Adhesive dressings
2.2a	Sterile gauze compresses, 5 cm × 5 cm, sterile	50	50	100	100	Sterile gauze compresses
2.2b	Sterile gauze compresses, 10 cm × 10 cm	50	50	100	100	Sterile gauze compresses
2.3	Gauze roll, 5cm and 60 or 90 cm × 100 m, non-sterile	1	1	1	1	Gauze roll <i>60 cm/90 cm may be substituted by gauze roll of smaller size</i>
2.4	Non-adherent gauze dressing, square 10 cm	10	20	30	40	Gauze dressing with non-adherent surface
2.5	Paraffin gauze dressing, 10 × 10 cm, sterile	40	40	40	40	Vaseline gauze

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
2.6	Elastic fixation bandage, 4 m × 6 cm	3	6	9	12	Bandage
2.7a	First-aid absorbent gauze-covered cotton pad sewn onto a cotton bandage (ambulance dressing) small	5	5	10	10	Sterile compression bandages
2.7b	First-aid absorbent gauze-covered cotton pad sewn onto a cotton bandage (ambulance dressing) medium	5	5	10	10	Sterile compression bandages
2.7c	First-aid absorbent gauze-covered cotton pad sewn onto a cotton bandage (ambulance dressing) large	5	5	10	10	Sterile compression bandages
2.8a	Tubular gauze bandage for finger bandage, 5 m	1	1	1	1	Tubular gauze for finger bandage See pages: 43–58
2.8b	Applicator for finger bandage	1	1	1	1	See pages: 43–58
2.9	Adhesive elastic bandage 4 m × 6 cm	10	10	10	10	Adhesive elastic bandage
2.10	Triangular sling	5	5	5	5	Triangular sling. See pages 43–58 and 77
2.11	Sterile sheets for burn patients	2	2	4	4	Sterile sheet for burn victims. Different sizes See pages: 79–83
2.12	Honey for dressing burns 1 kg (only purified 1000 g)	1	1	2	2	Only if honey for medical purposes available Otherwise use a hydrogel-burnkit. See pages: 79–83
2.13	Adhesive tape, waterproof, skin-friendly, 5 × 1.25 cm	3	3	6	6	Adhesive sutures or zinc oxide bandages
2.14	Q-tips (wooden)	100	100	100	100	Q-tips
2.15	Safety pins (stainless steel), 12 pieces	1	1	2	2	safety pins
2.16	Butterfly sutures, Steristrip® or Leukostrip®, sterile	50	50	50	50	Butterfly sutures. See pages: 69–74
2.17	2-octyl cyanoacrylate liquid, 0.5 ml	1	1	1	1	Skin adhesive for closing small wounds. See pages: 69–74
2.18a	Sutures, absorbable with curved, non-traumatic needles, 1–0	3	3	6	6	Suturing equipment. See pages: 71–74 Replace with non-absorbable sutures for easier use See page: 71
2.18b	Sutures, absorbable with curved, non-traumatic needles, 3–0	3	3	6	6	Suturing equipment. See pages: 71–74 Replace with non-absorbable sutures for easier use, See page: 71
2.18c	Sutures, absorbable with curved non-traumatic needles, 4–0 or 5–0	3	3	6	6	Suturing equipment. See pages: 71–74 Replace with non-absorbable sutures for easier use, See page: 71

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
2.19a	Disposable examination gloves, size <i>M</i>	100	100	100	100	Gloves
2.19b	Disposable examination gloves, size <i>L</i>	100	100	100	100	Gloves
2.19c	Surgical gloves size 6.5, sterile in pairs	3	4	5	6	Gloves (<i>sterile</i>)
2.19d	Surgical gloves size 7.5, sterile, in pairs	3	4	5	6	Gloves (<i>sterile</i>)
2.19e	Surgical gloves size 8.5, sterile, in pairs	3	4	5	6	Gloves (<i>sterile</i>)
2.20	<i>Eye pads</i>	1	2	3	4	See pages: 36, 38
3. INSTRUMENTS						
3.1	Scalpel, sterile, disposable	10	10	10	10	Disposable scalpels See pages: 71–74, 216–219
3.2	Instrument box (stainless steel)	1	1	1	1	Stainless-steel instrument box.
3.3	Operating scissors, straight (stainless steel)	1	1	1	1	Scissors
3.4	Bandage scissors (stainless steel)	1	1	1	1	Scissors
3.5	Splinter forceps, pointed (stainless steel)	1	1	1	1	Forceps
3.6	Teeth tissue forceps (stainless steel)	1	1	1	1	Forceps. See pages: 71–74, 216–219
3.7	Needle holder, Mayo-Hegar 180 mm, straight	1	1	1	1	Needle holder. See pages: 71–74
3.8	Haemostatic clamp, Halstead mosquito, 125 mm, stainless steel	2	2	2	2	Haemostatic clamps
3.9	Razor, disposable	5	5	5	5	Disposable razors
4. EXAMINATION AND MONITORING EQUIPMENT						
4.1	Tongue depressors, disposable	100	100	100	100	Disposable tongue depressors
4.2	Reactive strips for urine analysis: blood/glucose/protein/nitrite/leukocytes	50	50	100	100	Reactive strips for urine analysis, see pages: 311–312, 324
4.3	Microscope slides	12	12	12	12	Microscope slides, see pages: 265–269
4.4	Stethoscope	1	1	1	1	Stethoscope
4.5	Sphygmomanometer (blood pressure set), preferably automatic	1	1	1	1	Aneroid sphygmomanometer, see pages: 305–307

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
4.6a	Standard thermometer, digital if possible	2	2	3	3	Standard thermometer, see pages: 302–304
4.6b	Rectal thermometer, digital if possible	1	1	1	1	Rectal thermometer, see pages: 302–304
4.7	Thermometer 32–34 °C, digital if possible	1	1	1	1	Hypothermic thermometer, preferable range 26–42 °C to differentiate between severe-moderate-mild hypothermia; see pages: 343–344
4.8	Penlight + blue cover	1	1	1	1	Penlight (blue light) to detect damage to cornea. See pages: 33–34
4.9	<i>Waterproof indelible marker</i>	1	1	1	1	See page: 29
4.10	<i>Magnifying glass (a × 8 loupe)</i>	1	1	1	1	See pages: 33–34
FORMS AND BOOKS						
4.11	<i>Temperature cards/charts</i>	10	10	10	10	Use as master copy from page 302
4.12	<i>Cards for telemedical advise</i>	10	10	10	10	Use as master copy. Should be filled in before calling radiomedical advise
4.13	<i>Medical logbook</i>	1	1	1	1	See page 455
4.14	<i>Controlled drug register</i>	1	1	1	1	Controlled drug register
4.15	<i>International Medical Guide for Ships 3rd</i>	1	1	1	1	Hard-copy
4.16a	<i>Forms from Annex A Ship master's report form</i>	10	10	10	10	Use as master copy (see pages 455–461) file in medical log page 455
4.16b	<i>Forms from Annex A Ship's identity and navigational status form</i>	10	10	10	10	Use as master copy (see pages: 455–461)
4.16c	<i>Forms from Annex A Patient health status form</i>	10	10	10	10	Use as master copy (see pages: 455–461)
4.16d	<i>Forms from Annex A Primary physician's report form</i>	10	10	10	10	Use as master copy (see pages: 455–461)
4.17	<i>Vaccination requirements</i>	1	1	1	1	International Travel and Health, current edition (WHO)
4.18	<i>Malaria prophylaxis and treatment</i>	1	1	1	1	www.who.int/malaria/publications.html or www.cdc.gov/travel/regionalmalaria/index.html , see Page 266
5. EQUIPMENT FOR INJECTION, INFUSION, AND CATHETERIZATION						
5.1	Syringes, Luer connection, 2 ml, sterile, disposable	10	20	30	40	Equipment for injection, see pages: 324–329
5.2	Syringes, Luer connection, 5 ml, sterile, disposable	10	20	30	40	Equipment for injection, see pages: 324–329

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
5.3	<i>Syringes, Luer connection, 10 ml, sterile, disposable</i>	10	10	20	20	<i>Equipment for injection, see pages: 324–329</i>
5.4	<i>Hypodermic subcutaneous needle, Luer connection, 16 × 0.5 mm (23 G or 25 G), sterile, disposable</i>	20	30	40	50	<i>Equipment for subcutaneous injection, see pages: 324–329</i>
5.5	<i>Hypodermic intramuscular needle (19 G or 21 G), Luer connection, 40 × 0.8 mm, sterile, disposable</i>	20	30	40	50	<i>Equipment for intramuscular injection, see pages: 324–329</i>
5.6	<i>Needles, 19 G or 21 G, blunt, „drawing up” type</i>	20	30	40	50	<i>Equipment for drawing the medicine into the syringe, see pages: 324–329</i>
5.7a	<i>Intravenous infusion cannula 16 G (1.7 mm) or 19 G, Luer-lock connection, sterile, non-recap type + mandarin</i>	5	5	10	10	<i>Equipment for intravenous fluid infusion, see page: 326</i>
5.7b	<i>Intravenous infusion cannula 22 G (0.8 mm) or 21 G, Luer-lock connection, sterile, non-recap type + mandrin</i>	5	5	10	10	<i>Equipment for intravenous fluid infusion, see page: 326</i>
5.8	<i>Intravenous giving set, Luer-lock connection, sterile + 3-way valve/connection</i>	5	5	10	10	<i>Equipment for intravenous infusion, see pages: 324–329</i>
5.9	<i>Tourniquet, blood-taking type, to be used with intravenous infusion cannula</i>	1	1	1	1	<i>Equipment for infusion, see pages: 324–329</i>
5.10a	<i>Penile sheath set with condom catheter, tube, and bag</i>	1	1	1	1	<i>Bladder drainage equipment, see page: 308–309</i>
5.10b	<i>Indwelling urine catheter 14 CH</i>	1	1	1	1	<i>Bladder drainage equipment, see pages: 319–321</i>
5.11a	<i>Short-term urine catheter</i>	2	2	2	2	<i>Bladder drainage equipment, see pages: 319–321</i>
5.11b	<i>Short-term urine catheter with soft-eye straight tip Thiemann No 16, or equivalent</i>	2	2	2	2	<i>Bladder drainage equipment, see pages: 319–321</i>
5.11c	<i>Complete sterile urine catheterization set with lubricant, drapes, cotton swabs, skin disinfection, forceps, sterile container</i>	2	2	2	2	<i>Bladder drainage equipment, see pages: 319–321</i>
5.12	<i>Urine collecting bag and tube</i>	2	2	2	2	<i>Bladder drainage equipment, see pages: 319–321</i>
6. GENERAL MEDICAL AND NURSING EQUIPMENT						
6.1	<i>Plastic goggles or full-face mask</i>	1	1	1	1	<i>Eye protection</i>
6.2	<i>Disposable plastic apron</i>	10	10	10	10	<i>Plastic apron</i>

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
6.3	Kidney dish, stainless steel, 825 ml	1	1	2	2	Kidney dish
6.4	Towels, plastic backed, absorbent, 600 × 500 mm	10	10	10	10	Plastic-backed towels
6.5	Safety box for sharps disposable, 5 l	1	1	1	1	Safety box Size of 1–5 litres may be chosen
6.6	Mask, duckbill type, disposable	50	50	100	100	Mask
6.7	Tape measure, vinyl coated, 1.5 m	1	1	1	1	Tape measure
6.8	Draw sheet, plastic 90 × 180 cm	1	1	1	1	Draw sheet
6.9	Bedpan, stainless steel	1	1	1	1	Bedpan
6.10	Hot-water bag	1	1	1	1	Hot-water bottle
6.11	Urinal, male (plastic)	1	1	1	1	Urine bottle
6.12	ColdHotpack maxi	1	1	1	1	Ice bag
6.13	Aluminium foil blanket	1	1	1	1	Aluminium foil blanket
6.14	Male condoms	100	200	300	400	Condoms, assorted sizes
6.15	Plastic wash bottle, 250 ml	1	1	1	1	Wash bottle
6.16	Bottle, 1 l plastic with screw top	1	1	1	1	Plastic bottle
6.17	Stainless steel dressing tray 300 × 200 × 30 mm	1	1	1	1	Dressing tray
6.18	Bowl, stainless steel, 180 ml	1	1	1	1	Bowl
6.19	Jars, plastic, with lids and labels 100 ml	10	20	30	40	Specimen jars
6.20a	Bandages, POP, 5 cm × 2.7 m	6	6	6	6	Plaster-of-Paris bandages, <i>may be omitted if splints are carried</i>
6.20b	Bandages, POP, 10 cm × 2.7 m	6	6	6	6	Plaster-of-Paris bandages, <i>may be omitted if splints are carried</i>
6.21a	Stockinet sizes for arm splints 10 m roll	1	1	1	1	Stockinet See pages: 43–58
6.21b	Stockinet sizes for leg splints 10 m roll	1	1	1	1	Stockinet See pages: 43–58
6.22	Cotton wool roll 500 g	1	1	2	2	Cotton wool See pages: 43–58
6.23	Alcohol swabs	100	100	100	100	70% alcohol swabs for skin cleansing prior to injection
6.24	Nail brush	1	1	1	1	Nail brush
6.25	<i>Thermometer for refrigerator</i>	1	1	1	1	<i>If Tetanus vaccine and Immunoglobulin are on board</i>

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EQUIPMENT p. 451–461						
Item No.	Recommended item	Per 10	Per 20	Per 30	Per 40	Category Added comments
6.26	<i>Mortuary transfer bag</i>	1	1	1	1	See pages: 334–336
DISINFECTANTS, DISINSECTANTS						
6.27	<i>Water disinfection set including measure kit/test strips for pH and for residual chlorine</i>	1	1	1	1	<i>To disinfect potable water tanks with chlorine effectively. See pages: 359–360</i>
6.28	<i>Disinfectant solution for medical instruments, 1000 ml: 3% aqueous phenolic solution</i>	1	1	1	1	<i>For disinfection of used instruments* and thermometers, see page: 331. *Caution: All items entering the skin or in direct contact with mucous membranes should be single use (i.e. injection needles, urinary catheters)</i>
6.29	<i>Disinfectant for surfaces and floor, 1000 ml concentrate: 2% cetrimide solution or 3% aqueous phenolic solution</i>	1	1	1	1	<i>For disinfection of contaminated surfaces, hard-surface objects and floors (non-food-handling area), see page: 331</i>
6.30	<i>Disinfectant for surfaces and floor 1000 ml concentrate: sodium hypochlorite 100 mg/litre</i>	2	2	2	2	<i>For disinfection of food-handling area: cutlery, dishes, plates, glasses See page: 331</i>
6.31	<i>Chlorpyrifos 5 g/l in Bait stations or gels</i>	20	20	20	20	<i>To use against cockroaches in food storage and preparation area, see pages: 362–365</i>
6.32	<i>Chlorpyrifos-methyl 7–10 g/l Spray – 1 piece</i>	10	10	10	10	<i>To use against cockroaches in other areas than food storage and preparation area See pages 362–365</i>
6.33	<i>Insecticide spray Permethrine, natural pyrethrins or chlorpyrifos-methyl</i>	1	2	3	4	<i>For space spraying, not for skin See pages 362–365</i>
7. IMMOBILIZATION AND TRANSPORTATION EQUIPMENT						
7.1	<i>Malleable finger splint</i>	1	1	1	1	<i>Malleable splints (small). See pages: 43–58</i>
7.2	<i>Malleable forearm/hand splint</i>	2	2	2	2	<i>Malleable splints (medium). See pages: 43–58</i>
7.3	<i>Malleable splint legs</i>	2	2	2	2	<i>Malleable splints (large). See pages: 43–58</i>
7.4	<i>Stretcher</i>	1	1	1	1	<i>Stretcher equipment (a system for trauma management, i.e. immobilization and stretcher equipment most suited for treatment in the vessel concerned. Preferably allowing crane/helicopter lifting). See page: 7</i>
7.5	<i>Cervical rigid collar variable size</i>	1	1	1	1	<i>For neck immobilisation. See pages: 7, 45</i>

REFERENCES

1. International Medical Guide for Ships. 2nd Edition. World Health Organization, Geneva 1988.
2. International Medical Guide for Ships. 3rd Edition. World Health Organization, Geneva 2007.
3. <http://www.who.int/collaboratingcentres/>. The WHO collaborating centres are institutions such as research institutes, parts of universities, or academies, which are designated by the Director-General of the World Health Organization to carry out activities in support of the Organization's programmes.
4. <http://www.imha.net/>. The IMHA is the sole international association concerned exclusively with Maritime Health. It is an association of professionals from a wide range of disciplines who are committed to improving the health of seafarers by developing better approaches to health protection, health promotion, and health treatment.
5. Council Directive 92/29/ EEC of 31 March 1992 on the minimum safety and health requirements for improved medical treatment on board vessels.
6. Medical First Aid Guide (MfAG) for use in accidents involving dangerous goods. International Maritime Organization, London 2004.