

UNITED NATIONS
NATIONS UNIES

MEDICAL SUPPORT MANUAL FOR UNITED NATIONS FIELD MISSIONS

3rd Edition



UNITED NATIONS

DEPARTMENT OF
PEACEKEEPING
OPERATIONS
AND DEPARTMENT
OF FIELD SUPPORT
(DPKO/DFS)

UNITED NATIONS

**MEDICAL SUPPORT MANUAL FOR UNITED NATIONS
FIELD MISSIONS**



3rd Edition

**UNITED NATIONS
DEPARTMENT OF PEACEKEEPING OPERATIONS
AND
DEPARTMENT OF FIELD SUPPORT
(DPKO/DFS)**

Medical Support Manual for United Nations Field Missions
(3rd Edition)

This manual is distributed by the Department of Field Support/Logistics Support Division/Strategic Support Service/ Medical Support Section, New York. The first edition was issued in 1995 and the second revised edition was issued in 1999.

Copyright © United Nations 2015

This document enjoys copyright under Protocol No. 2 of the Universal Copyright Convention. Member States' governmental authorities may, however, photocopy this document for exclusive use within their training institutes. The number of this copy, which is shown at the end of this page, should be noted for future distribution of updates and amendments.

No portion of this document may be reproduced for resale or mass publication without the expressed written consent of the Medical Support Section. No part of the document may be stored in a retrieval system without the prior authorization of the Medical Support Section. Any communications with regards to the above are to be directed to:

DFS/LSD/Medical Support Section
Room DC1 - 1372A
New York NY, 10017
Telephone No: (212) 963 - 3998
Fax No: (212) 963 - 0383

Preface

A. General

The revised Medical Support Manual 2015 Edition is to serve as a standard reference document on medical support aspects of United Nations peacekeeping operations and political missions in the field. The first Medical Support Manual for United Nations Field Missions was published and distributed in 1995 and last reviewed in 1999. The current revision aims to strengthen United Nations Headquarters oversight structure as well as the operational and procedural guidelines for medical support in the field.

The surge in peacekeeping and political missions in recent years has come with complexities and challenges in the provision of the human and material resources and services required for the achievement of mission mandates. This has highlighted the need to adapt medical procedures and guidelines to meet these challenges and provide more efficient, timely and responsive medical support for the well-being of the peacekeepers

The revision of the Medical Support Manual is the deliverable of the Pilot Project on Military Medical Support Capability Development, a component of the three pilot projects undertaken by the Department of Peacekeeping Operations/Department of Field Support under the four pillars of the United Nations new horizon priority agendas. The Pilot Project on Military Medical Support Capability Development was undertaken by the Department of Field Support/Logistics Support Division/Medical Support Section, with inputs from the Department of Management/Office of Human Resources/Medical Services Division of United Nations Headquarters, field missions, a Technical Advisory Group made up of senior military medical officers from major hospital contributing countries to peacekeeping operations. The Project involved traveling to field missions to assess the functionality of medical support deployed in the field, as well as organizing workshops outside of New York, during which participants were able to review the Medical Support Manual in line with findings from field visits. These field travels were sponsored by some supporting member states, including Australia, Norway and the United States.

B. Structure of the manual

This manual comprises of a glossary with a table of contents and a table of acronyms and abbreviations to facilitate a quick understanding of the text, and a set of chapters, annexes and enclosures. It serves as a reference document for troop contributing countries/police contributing countries deploying personnel in peacekeeping operations and field medical officers responsible for the day-to-day execution of medical support in the field, as well as a guide for medical planners in United Nations Headquarters. It is also a useful reference source for the training of United Nations peacekeepers and medical personnel.

C. Relationship to other official documents

The contents of this manual are compatible with the financial rules and regulations of the United Nations, administrative issuance, official United Nations guidelines and other documents relevant to the administration of United Nations field operations. Chapter 9, which deals with public health issues, is written with reference to World Health Organization policies and guidelines on healthcare. Chapter 9 is considered a living document and therefore when used, all references should be checked to ensure that it is still current and reflects the latest advice from the World Health Organization. The hope is that this manual will create uniformity in medical support work in all missions all around the globe, as the same standards will be maintained.

D. Distribution and revision

The Chief, Department of Field Support/Logistics Support Division/Medical Support Section, controls the distribution of this manual. In consultation with the Department of Management/Office of Human Resources/Medical Services Division, the Chief is responsible for the regular review of its contents and for revision of its text where required. The manual will be updated and distributed every three years. This manual is a working document and all suggestions and comments from its users will be welcome to ensure valuable improvements in its contents after every revision.

E. Acknowledgements

The Department of Field Support/Logistics Support Division/Medical Support Section would like to thank the Technical Advisory Group members (Argentina, Bangladesh, China, Egypt, Ghana, India, Jordan, Morocco, Nigeria, Norway and Pakistan) and the other supporting member states (Norway, United States, Singapore, Germany and Australia) for all of their invaluable input and support in ensuring the success of this revision.

Table of contents

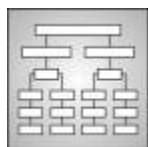
Preface	III
Table of contents	V
Glossary and commonly used abbreviations	XIV

Chapter 1	The United Nations Headquarters medical organization	1
------------------	---	----------



Introduction	1
The functions of the Medical Services Division	2
The functions of the Medical Support Section	4

Chapter 2	Medical structures and organization in field missions	7
------------------	--	----------

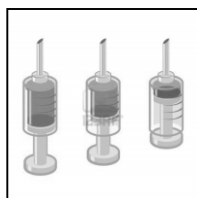


Introduction	7
Structure and organisation	8
Roles and responsibilities of medical appointment holders in peacekeeping missions	9

Annex:

Chapter 2 Annex A: Troop/Police Contributing Country Hospital Monthly Performance Report	19
--	----

Chapter 3	Planning and deployment of medical support in the field	22
------------------	--	-----------



Principles of medical support	22
Medical support planning process	22
Medical planning considerations	23
The medical support plan	26
Pre-deployment visit	31

Annexes:

Chapter 3 Annex A: Medical aspects of technical assessment mission.....	32
Chapter 3 Annex B: Medical support plan - sample format.....	34
Chapter 3 Annex C: Medical aspects of reconnaissance visits.....	39
Chapter 3 Annex D: Medical aspects of pre-deployment visits.....	41

Chapter 4 Levels of medical support in the field and eligibility criteria for reimbursement of troop/police contributing countries	46
--	----



Introduction.....	46
Concept of medical support.....	46
Levels of care.....	47
Integrated modular services.....	49
Description of modules.....	50
Medical standard of care.....	52
Eligibility for reimbursement.....	52
Blood and blood products.....	53
Epidemiological self-sustainment.....	53
Entitlement to and provision of medical services.....	54

Annexes:

Chapter 4 Annex A: Chain of Survival.....	56
Chapter 4 Annex B: Patient assessment triangle.....	57
Chapter 4 Annex C: Patient assessment aide-memoire.....	58
Chapter 4 Annex D: Benchmark staffing requirement.....	63

Chapter 5 Health care policies and procedures - 1 (medical screening / fitness to work)	66
---	----



Introduction.....	66
United Nations medical standards.....	66
HIV testing policy for United Nations field missions.....	69

Annex:

Chapter 5 Annex A: Medical conditions precluding participation in peacekeeping operations.....	72
--	----

Enclosure:

Chapter 5 Enclosure 1: MS-2 or Entry Medical Examination Form

Chapter 6 Health care policies and procedures - 2 (entitlement to and provision of medical services)	74
---	----



Introduction.....	74
Guidelines.....	74

Chapter 7 Health care policies and procedures - 3 (compensation for injury, illness or death attributable to service for uniformed personnel)	77
--	----



Introduction.....	77
Criteria to qualify for compensation.....	77
Disallowed items/claims.....	78
Submission procedure for Notification of Casualty.....	78
Responsibilities of member states in submission of documentation in support of death and disability claims.....	78
Timeframe for submission of claims.....	79
Medical confidentiality.....	80

Enclosures:

Chapter 7 Enclosure 1: Notification of Casualty Form

Chapter 8	Minimum professional qualification requirements and technical clearance procedures for deployment of medical personnel in field missions	81
------------------	--	----



Introduction.....	81
Qualification and experience of medical care providers.....	81
Technical clearance procedure for uniformed medical professionals.....	84
United Nations minimum medical care standards.....	85
Ethical code for medical practitioners.....	85
Principles of medical ethics.....	85
Duties of physicians in general.....	86
Duties of physicians to patients.....	86
Duties of physicians to colleagues.....	87
Gender perspective in medicine.....	87
Use of chaperones during physical exams.....	87
HIV-positive patients and physicians.....	88

Annex:

Chapter 8 Annex A: Technical review of troop/police contributing countries medical personnel professional qualifications and experience.....	89
--	----

Chapter 9	Public health issues	91
------------------	----------------------	----



Introduction.....	91
Preventive medicine.....	92
Immunization policy.....	92
Vector-borne diseases.....	94
Prevention and control of vector-borne diseases.....	95
Control of communicable disease.....	95
United Nations Headquarters action in response to Ebola Virus Disease.....	96
Influenza pandemic.....	98
Foodborne and waterborne diseases.....	99
Field hygiene and sanitation.....	99

Medical waste management.....	100
Environmental safety and occupational health.....	100
The goal of environmental safety and occupational health in the United Nations.....	100
Road traffic accidents.....	101
Medical-related Minimum Operating Security Standards.....	101
Mental health and psychological well-being.....	101
Stress factors in peacekeeping operations.....	102
Basic facts on mental health and psychological well-being.....	104
Mental and substance use disorders.....	104
Mental health and psychological support after crises.....	104
Mental health and psychological support resources in the United Nations system.....	105

Annexes:

Chapter 9 Annex A: Vector-borne diseases.....	107
Chapter 9 Annex B: Malaria.....	109
Chapter 9 Annex C: Dengue fever.....	114
Chapter 9 Annex D: Lassa fever.....	117
Chapter 9 Annex E: Leishmaniasis.....	118
Chapter 9 Annex F: Japanese encephalitis.....	123
Chapter 9 Annex G1: Animals in mission environments: Health and hygiene benefits and hazards.....	125
Chapter 9 Annex G2: Rabies.....	127
Chapter 9 Annex H: Integrated vector management.....	131
Chapter 9 Annex I-1: Ebola Virus Disease.....	133
Chapter 9 Annex I-2: United Nations Medical Services Division: Checklist of Ebola preparedness and response activities for United Nations health facilities.....	138
Chapter 9 Annex J: HIV, AIDS and sexually transmitted infections.....	142
Chapter 9 Annex K1: Water-related diseases.....	144
Chapter 9 Annex K2: Foodborne diseases.....	146
Chapter 9 Annex L: Planning health education programmes for peacekeepers.....	148
Chapter 9 Annex M: Hygiene and sanitation task force.....	149
Chapter 9 Annex N: Environmental policy for field missions.....	151
Chapter 9 Annex O: Peacekeeping operation-related health hazards.....	153
Chapter 9 Annex P: Road safety.....	155
Chapter 9 Annex Q: Medical-related Minimum Operating Security Standards.....	157
Chapter 9 Annex R-1: Mental health and psychological well-being: Major mental and substance use disorders.....	159
Chapter 9 Annex R-2: Psychological first aid.....	164
Chapter 9 Annex R-3: Stress management.....	165



Introduction.....	167
Golden hour concept.....	167
Triage.....	168
SORT triage protocol.....	169
Triage categories.....	170
Treatment and holding policy.....	171
Medical evacuation/repatriation policies and procedures.....	172
Medical repatriation.....	174
Procedure for Notification of Casualty incidents.....	175
Arrangements concerning the deceased.....	177

Annexes:

Chapter 10 Annex A: Death at the field mission: Actions to be taken at the field mission.....	180
---	-----

Chapter 11 Mass casualty situations and disaster management 184



Introduction.....	184
Definition.....	184
United Nations Medical Emergency Reaction Team.....	187

Chapter 12 Medical logistics 188



Introduction.....	188
Medical logistics planning considerations.....	188
Categories of medical logistics support	189

Responsibilities for effective medical logistics.....	190
Medical standards and quality controls.....	190
Procurement, contracts and strategic deployment stocks.....	193

Annexes:

Chapter 12 Annex A: United Nations Department of Peacekeeping Operations requirements for the provision of medical supplies.....	196
Chapter 12 Annex B: Details of United Nations Headquarters systems contracts.....	198

Chapter 13 Reimbursement of troop and police contributing countries 201



Introduction.....	201
Mechanisms of reimbursement.....	201
Contribution Agreement/Memorandum of Understanding.....	201
Reimbursement under Contribution Agreement/Memorandum of Understanding.....	202
Letter of Assistance arrangement.....	204
Integrated missions.....	204
Verification and controls.....	205

Chapter 14 Medical records and reports 207

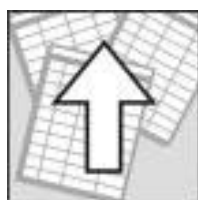


Medical information management policy.....	207
Medical records.....	207
Medical documentation.....	207
Pre-deployment documentation.....	208
Deployment documentation.....	208
Post-deployment/re-deployment.....	208
Medical reports.....	208
Electronic Medical Records and Occupational Health Management System Medgate (Earthmed).....	211
Medical Support Section Reporting Tool.....	212
Transmission of medical reports.....	212
End of Tour of Duty Report.....	212

Enclosures:

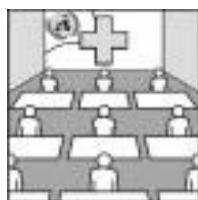
Chapter 14 Enclosure 1: MSA-1A
Chapter 14 Enclosure 2: MSA-1B
Chapter 14 Enclosure 3: MSA-2
Chapter 14 Enclosure 4: MSA-3A
Chapter 14 Enclosure 5: MSA-3B

Chapter 15 Medical standard operating procedures 213



Development of medical standard operating procedures.....	213
Format of medical standard operating procedure.....	213
Medical standard operating procedure for peacekeeping missions.....	214

Chapter 16 Medical training 217



Introduction.....	217
Uniqueness of peacekeeping operations.....	217
Need to operate independently.....	217
Multi-national participation in peacekeeping operations.....	217
Absence of experience in medical practice.....	217
Types of medical training.....	218
First aid training.....	218
Pre-deployment training for peacekeeping operations.....	218
Senior medical appointment holders.....	219
Contingent members (military and police).....	219
United Nations Military Experts on Mission and United Nations individual police officers....	219
Medical staff deployed in various contingents.....	219
Mission-specific training.....	220
Continuing medical training.....	220
Health education for military contingents.....	220
Oversight/key performance indicator.....	220

Annexes:

Chapter 16 Annex A: First aid training for peacekeepers.....	222
Chapter 16 Annex B: Medical training for medical professionals.....	224
Chapter 16 Annex C: Pre-deployment training for peacekeeping operations.....	225
Chapter 16 Annex D: Training proposal on cholera prevention and hygiene awareness for United Nations peacekeeping and civilian personnel in the field.....	228

Glossary and commonly used abbreviations

ABCC	Advisory Board on Compensation Claims
AIDS	Acquired Immune Deficiency Syndrome
AMET	Aero-Medical Evacuation Team
BP	blood pressure
C34	Special Committee on Peacekeeping Operations
CASEVAC	casualty evacuation
CBRNE	chemical, biological, radiological, nuclear, environmental
CMO	Chief Medical Officer
CMS	Chief of Mission Support
CMT	Crisis Management Team
COC	Crisis Operations Centre
COE	contingent-owned equipment
COE-WG	Contingent Owned Equipment Working Group
CONOPS	Concept of Operations
CPR	cardiopulmonary resuscitation
DFS	Department of Field Support
DM	Department of Management
DMS	Director of Mission Support
DPKO	Department of Peacekeeping Operations
DMS/CMS	Director of Mission Support/Chief of Mission Support
EarthMed	Electronic Health Information Management
ECG/EKG	electrocardiogram
EHO	Environmental Health Officer
EVD	Ebola Virus Disease
FBFD	Field Budget and Finance Division
FC	Force Commander
FGS	Force Generation Service
FHO	Force Hygiene Officer
FMC	Force Medical Cell
FMO	Force Medical Officer
FPU	Formed Police Unit
GCS	Glasgow Comma Scale
HF	high frequency
HIV	human immunodeficiency virus
HQ	Headquarters
HR	heart rate
IPO	individual police officer
IVM	integrated vector management
JE	Japanese encephalitis
LOA	Letter of Assistance
LSD	Logistics Support Division
MCI	mass casualty incident
MEDEVAC	medical evacuation
MMC	Mission Medical Cell

MOSS	Minimum Operating Security Standards
MOU	Memorandum of Understanding
MSA	Medical Staff Aid
MSS	Medical Support Section
MSD	Medical Services Division
NGO	non-governmental organization
NOTICAS	Notification of Casualty
OCHA	Office for the Coordination of Humanitarian Affairs
OHCHR	Office of the High Commissioner for Human Rights
OHRM	Office of Human Recourse Management
OMA	Office of Military Affairs
PCC	police-contributing country
PDV	pre-deployment visit
PEP	post-exposure prophylaxis
PKO	peacekeeping operation
PM/EO	Preventive Medicine/ Epidemiology Officer
PPE	personal protective equipment
RR	respiration rate
SCTM	skin colour, temperature, moisture
SMO	Senior Medical Officer
SO	Staff Officer
SOP	standard operating procedure
SORT	A process for sorting injured people into groups based on their need for or likely benefit from immediate medical treatment. Triage is used in medical emergency.
SSS	Strategic Support Service
START	Simple Triage and Rapid Treatment
STI	sexually transmitted infection
TAM	Technical Assessment Mission
TCC	troop-contributing country
TNR	trapping, neutering and releasing
UNAIDS	Joint United Nations Program on HIV/AIDS
UNCCS	United Nations Common Coding System
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
UNDSS	United Nations Department for Safety and Security
UNFICYP	United Nations Peacekeeping Force in Cyprus
UNFPA	United Nations Population Fund
UNGSC	United Nations Global Service Centre
UNICEF	United Nations Children's Fund
UNMEM	United Nations Military Experts on Mission
UNMERT	United Nations Medical Emergency Reaction Team
UNOE	United Nations Owned Equipment
UNV	United Nations Volunteer
VHF	very high frequency
WFP	World Food Programme
WHO	World Health Organization

Chapter 1

The United Nations Headquarters medical organization

A. Introduction

United Nations Headquarters (HQ) provides oversight and support for the efficient and effective delivery of United Nations standard health care in field missions. These roles are performed by two bodies: the Medical Services Division (MSD) in the Office of Human Resource Management (OHRM) in the Department of Management (DM), which coordinates the system-wide implementation of United Nations medical standards and health policies and addresses clinical health care issues arising from all duty stations; and the Medical Support Section (MSS) of the Strategic Support Service (SSS) in the Logistics Support Division (LSD) in the Department of Field Support (DFS), which coordinates, plans, executes and monitors all operational requirements and logistics support for the provision of medical services in field operations.

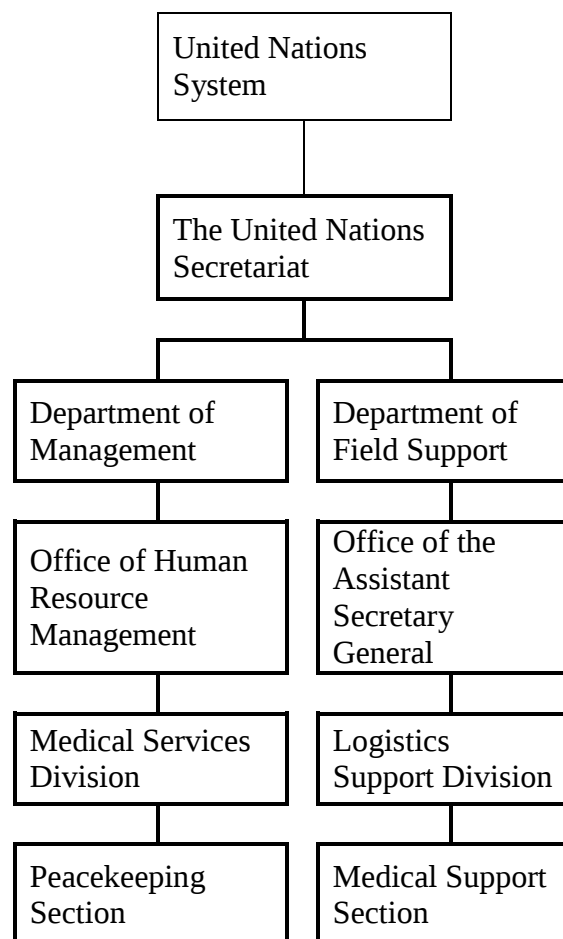


Figure 1. United Nations Headquarters medical organization

B. The functions of the Medical Services Division

MSD/OHRM/DM is responsible for medical policy-making and medical standards for the United Nations and subsidiary organs. In addition, MSD/OHRM/DM is responsible for a number of important administrative functions. The following description identifies the roles and responsibilities of MSD.¹

1. Policy and advisory role

- (a) Formulate and review United Nations medical standards, policies and guidelines and ensure coordination and monitoring of their system-wide implementation.
- (b) Provide medical guidance and oversight to medical professionals in the United Nations civilian and military medical facilities deployed in United Nations field missions, as well as medical facilities contracted by the United Nations.
- (c) Promulgate policies, standards and guidance to protect and promote staff health, taking account of their working environment, job demands and personal health status.
- (d) Provide travel health advice, pre- and post-mission consultations, as well as guidance on preventive medicine, occupational medicine, public health and health promotion programmes, as well as psychosocial support to United Nations field operations.
- (e) Provide medical advice to the United Nations Joint Staff Pension, the Advisory Board on Compensation Claims (ABCC), the Field Budget and Finance Division (FBFD) on compensation claims of troops, United Nations Military Experts on Mission (UNMEM) and United Nations individual police officers (IPOs) and the International Civil Service Commission, regarding medical aspects of hardship classifications of duty stations.

2. Administration

- (a) Undertake substantive assessment of candidates for recruitment of civilian medical personnel.
- (b) Set accreditation and professional competency standards for civilian and military medical personnel deployed in United Nations Owned Equipment (UNOE) and troop-contributing countries/police-contributing countries (TCCs/PCCs) medical facilities.
- (c) Provide medical clearances for the recruitment, reassignment and mission deployment of United Nations staff, UNMEM, United Nations IPOs and United Nations Volunteers (UNVs).
- (d) Advise on medical aspects of sick leave, and the evaluation and certification of sick leave for staff worldwide.
- (e) Verify and administer all claims of death or disability benefits by United Nations staff and military and police personnel.

¹ The following activities derive from the authorities described in the Secretary-General's bulletin ST/SGB/2011/4.

3. Coordination

- (a) Advise on and assist with medical evacuation and repatriation requests by all United Nations personnel and their recognized dependants, including UNVs, and all military and police personnel.
- (b) Provide medical inputs to the Crisis Operations Group in the event of a mass casualty incident (MCI).

4. Planning

- (a) In conjunction with MSS, develop preparedness plans for pandemics, such as influenza and other chemical, biological, radiological, nuclear or environmental (CBRNE) emergencies as a result of natural and/or man-made disasters.
- (b) In conjunction with MSS, assist missions to develop the medical portion of their MCI plan.
- (c) Provide inputs to MSS for developing the medical support component of mission Concept of Operations (CONOPS) and Mission Support Plans.
- (d) Provide inputs to MSS during the planning of integrated missions.

5. Monitoring and evaluation

- (a) Conduct periodic on-site assessments of all United Nations health facilities at field duty stations.
- (b) In connection with procurement exercises for contracted medical facilities conducted by MSS, MSD shall, in conjunction with MSS, conduct medical assessments of potential regional medical evacuations centres. MSD and MSS shall also periodically assess existing regional medical evacuation centres to ensure that the required healthcare standards are maintained.
- (c) Ensure that mission-developed guidance conforms to United Nations medical policies.
- (d) Organise expert interview panels for the appointment of chief medical officers (CMOs) and, in conjunction with MSS, undertake the review of credentials of uniformed medical personnel deploying in the field.

6. Training

- (a) In conjunction with MSS, review the medical component of training materials prepared by the Department of Peacekeeping Operations (DPKO) or DFS for formed military and police units or individual military and police personnel.
- (b) In conjunction with MSS, develop medical training materials for mission medical personnel, particularly for emergency and disaster response.

7. Medical intelligence/health information management

- (a) In conjunction with MSS, collect, collate, analyse and disseminate medical data and intelligence in the mission area.
- (b) Implement and manage the electronic Health Information Management System (EarthMed), mission-wide.

B. The functions of the Medical Support Section

MSS/SSS/LSD/DFS is responsible for facilitating medical operational and logistical activities in United Nations field missions [peacekeeping operations (PKOs) and special political missions]. The following description identifies the roles and responsibilities of MSS.²

1. Planning

- (a) Develop the medical support component of Mission CONOPS and Mission Support Plans.
- (b) Participate in integrated mission planning teams.
- (c) Participate in HQ Technical Assessment Mission (TAM) prior to deployment.
- (d) Review the standard operating procedures (SOPs) and guidelines on medical issues for field missions.
- (e) Develop/review the medical component of the Secretariat issue papers for the Contingent Owned Equipment (COE) Working Group (COE-WG) and review the medical component of the Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual).
- (f) Undertake a triennial review of the Medical Support Manual for United Nations field missions.
- (g) Act as adviser to all HQ departments and stakeholders, including member states, on all medical operational and logistical issues.

2. Coordination

- (a) Plan and coordinate operational requirement and logistical component of United Nations medical support for field missions, in collaboration with other HQ stakeholders and member states.
- (b) Take the lead in the coordination of the medical aspects of uniformed capability development projects aimed at identifying and rectifying shortfalls in the capacities and capabilities of TCC/PCC medical support deployed in the field.

² The following activities derive from the authorities described in the Secretary-General's bulletin ST/SGB/2010/2.

3. Execution

- (a) Participate in the negotiation of the medical aspect of the Memorandum of Understanding (MOU) and Letter of Assistance (LOA) for the deployment of new contingents, including enabling capabilities. During the initial MOU negotiations, it is incumbent on MSS to brief member state(s) on the medical challenges in the area of operations.
- (b) Execute medical support plans for field missions.

4. Monitoring and evaluation and technical clearance

- (a) Participate in pre-deployment visits (PDVs) to assess the level of preparation and readiness of the medical components of newly deploying contingents and military medical capabilities for field missions.
- (b) Conduct independent medical TAM and evaluation of medical support in start-up, on-going and liquidating missions.
- (c) Report annually on mission medical support statistics.
- (d) Provide necessary support to MSD in the technical clearance of uniformed medical staff and staff officers.
- (e) Participate in expert panels set up by MSD for the selection of CMOs. Also participate in reviewing the credentials of military medical personnel deploying in PKOs, in conjunction with MSD/DM and Force Generation Service (FGS) of the Office of Military Affairs (OMA).

5. Medical logistics

- (a) Review missions' budgets and finance for medical support.
- (b) Develop the medical component of Material Resource Plan for start-up or on-going mission undergoing reconfiguration.
- (c) Review the medical component of missions' Material Acquisition Plan.
- (d) Develop or review Proposed Asset Disposition Plans for liquidating missions.
- (e) In conjunction with the United Nations Global Service Centre (UNGSC), manage the medical component of the Strategic Deployment Stock (SDS), the United Nations reserve and other medical contingency stockpiles.
- (f) Act as HQ requisitioning office for all HQ solicitation exercises for medical commodities and services. This involves developing/reviewing technical specifications and statements of work for global system contracts for medical equipment, medical consumables and pharmaceuticals, blood and blood products and commercial medical services to be procured at HQ.
- (g) Verify, certify and process claims submitted by TCCs/PCCs for reimbursement of medical commodities and services (such as vaccines, etc.), but not for death and disability claims.
- (h) Verify, certify and process invoices submitted by vendors for medical commodities and services procured at the HQ.

- (i) Provide oversight role in mission local procurement for medical equipment, supplies and services by providing technical clearance for Local Procurement Authorizations requests.

6. Training

- (a) Review and implement the medical component of training materials for contingents, UNMEM and United Nations IPOs.
- (b) In conjunction with MSD, conduct medical support workshops, including the CMO and force medical officer (FMO) Annual Workshop.

7. Medical intelligence/health information management

- (a) In conjunction with MSD, collect, collate, analyse and disseminate medical data and intelligence in the mission areas.
- (b) In conjunction with MSD, conduct medical briefings at United Nations HQ to Special Committee on Peacekeeping Operations (C34) and visiting CMOs, FMO, senior mission administrative officers, contingent commanders and force commanders (FCs)

Chapter 2

Medical structures and organization in field missions

A. Introduction

In a multi-dimensional PKO, medical support is usually made up of both civilian and military/police components. A clear understanding of the roles and responsibilities of the various medical components of such missions, and well defined professional reporting lines for civilian and military/police medical personnel, are critical to sustaining efficient medical support operations in the field.

Chapter 2 aims to clarify the roles and responsibilities of senior civilian and military medical appointment holders in the field. The reporting relationship for medical professional and technical matters are defined within the structure of an integrated civilian-military/police mission. Recognizing that all peacekeeping missions vary, the following guidance shall be interpreted as necessary to fit actual mission structures. Smaller missions, for example, may not have a CMO or an FMO, in which case these functions would be combined.

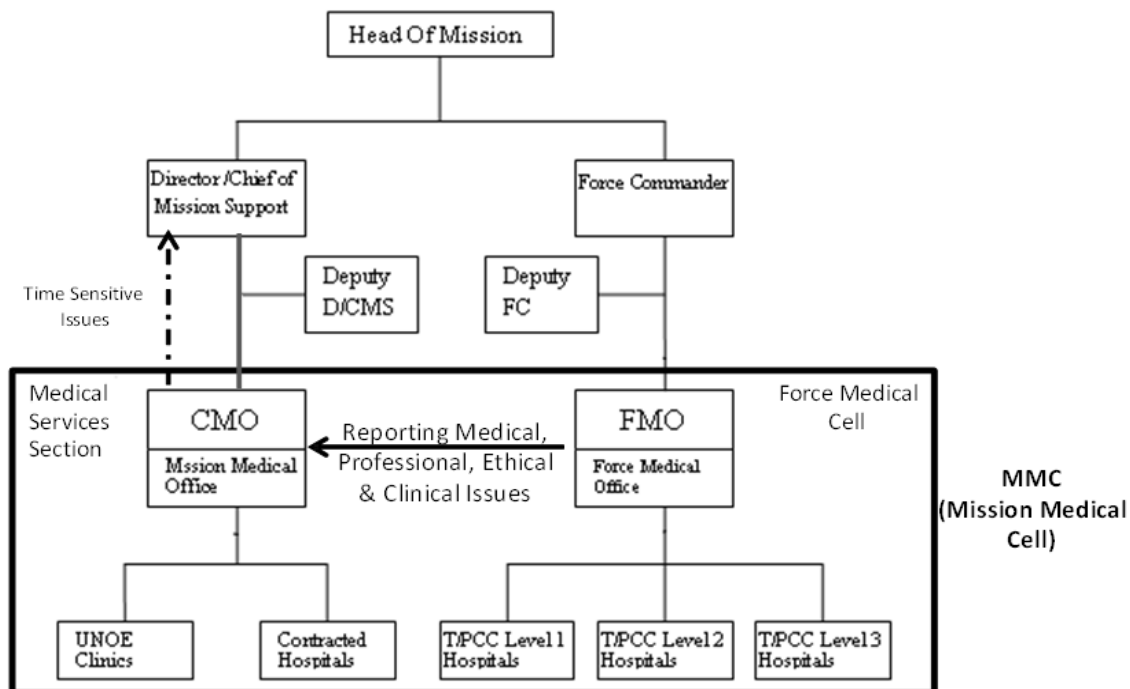


Figure 2: Integrated Mission Medical Support Structure

B. Structure and organisation

Figure 2 provides a simplified example of how medical support is situated within an integrated civilian and military mission structure.

1. Medical Services Section

The mission's civilian Medical Services Section, led by the CMO, is responsible for overall medical support operations in the field. In order to accommodate timely approval of critical, time-sensitive medical operations, including medical evacuations (MEDEVAC), the Medical Services Section shall report directly to the Director of Mission Support (DMS) or Chief of Mission Support (CMS) for certain operational matters, such as life-threatening emergencies, and administratively to the Deputy DMS/CMS for all other routine matters. The roles and responsibilities of the Medical Services Section are defined in the mission medical policies, SOPs and guidelines, which at a minimum shall include:

- (a) Protecting and promoting staff health, taking into account their working environment, job demands and personal health status;
- (b) Coordinating and delivering integrated civilian-military medical services;
- (c) Coordinating medical and casualty evacuations (CASEVAC) within and out of the mission area;
- (d) Planning for medical contingencies, including adapting the overall medical plan to operational requirements and to developing surge capacity for emergency situations;
- (e) Ensuring that the medical component of the MCI plan is up to date and well-rehearsed;
- (f) In cooperation with other elements of the mission, oversee the implementation of hygiene and sanitation, preventive medicine and health education measures within Level 1, 2 and 3 facilities, along with the mission and force personnel;
- (g) Coordinating Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) prevention measures with the mission's HIV/AIDS Policy Advisor; and
- (h) Conducting training on health issues for mission personnel.

These services fall within the framework of a mission's integrated support concept and encompass United Nations-owned, troop-contributed and commercially-contracted medical facilities. The integrated support concept ensures optimal and cost-effective use of all mission medical assets to serve both civilian and uniformed personnel, and also maintains a single set of standards for the mission's medical facilities.

2. Force Medical Cell

The Force Medical Cell (FMC) is led by the FMO, and includes all other force medical staff officers. The FMO is accountable to the FC for ensuring that the

military operational requirements of the force are met by all military medical support deployed in the mission. However, since all such units are mission assets, and not exclusively force assets, they form part of the integrated mission medical support structure.

3. Mission Medical Cell

The Mission Medical Cell (MMC) is an informal structure that incorporates the mission Medical Services Section with the FMC to form a single office to better facilitate cooperation. Where possible, the offices of the CMO and FMO should be co-located to maximize their collaborative efforts. The CMO leads the MMC and collectively executes all of the medical functions of the mission. Functions that are officially delegated to either the CMO or the FMO can only be implemented through cooperation between their respective offices. The importance of their cooperation will be emphasized throughout this chapter.

C. Roles and responsibilities of medical appointment holders in peacekeeping missions

Due to the hybrid civilian and military medical structures in peacekeeping missions, the CMO and FMO are required to work in close collaboration, as shown in Figure 2. This chapter details the roles and responsibilities of both to support improved coordination between the officers.

Overall, the CMO is in charge and accountable for all medical issues within the mission, and is also the point of contact with MSD and MSS. At the mission level, the CMO plans and administers the medical component of the mission's budget; is accountable to the CMS or Director of Mission Support (DMS) for all medical-related issues with financial implications. The FMO is accountable to the FC for the health of the peacekeeping force and the operational readiness of TCC medical units and contingents. Based on this understanding, clear terms of reference for the CMO, FMO and other medical staff officers have been developed. The selection and vetting of the CMO and FMO is the joint responsibility of MSD and MSS, in accordance with their delineated roles as described in Chapter 1 of this manual.

1. Responsibilities of the Chief Medical Officer

The CMO is the most senior ranking civilian medical appointment in the mission. The CMO oversees the overall medical support operations in the field and further provides medical administrative support to all mission personnel. The CMO has delegated authority from the CMS/DMS for the functions mentioned above and also acts as the medical adviser to the head of mission. The CMO is ultimately responsible for all clinical services, including clinical services provided by COE Level 1, 2 and 3 medical facilities. The CMO has a functional relationship with the Medical Director, MSD/DM for clinical and administrative matters, and with the Chief of MSS/DFS, for medical logistical and operational matters. The CMO's responsibilities are outlined in the terms of reference, as follows:

- (a) The CMO is the most senior ranking civilian medical officer in the mission and is the Chief of Mission Medical Services Section. The CMO's authority supersedes the authority of all other medical officers (military and civilian) in the mission.
- (b) The CMO exercises supervisory control over all enabling medical facilities (UNOE and TCC Level 1, 2 and 3 medical facilities), including contracted or commercial hospitals.
- (c) The CMO shall plan, organize, manage, supervise and coordinate all medical services in missions.

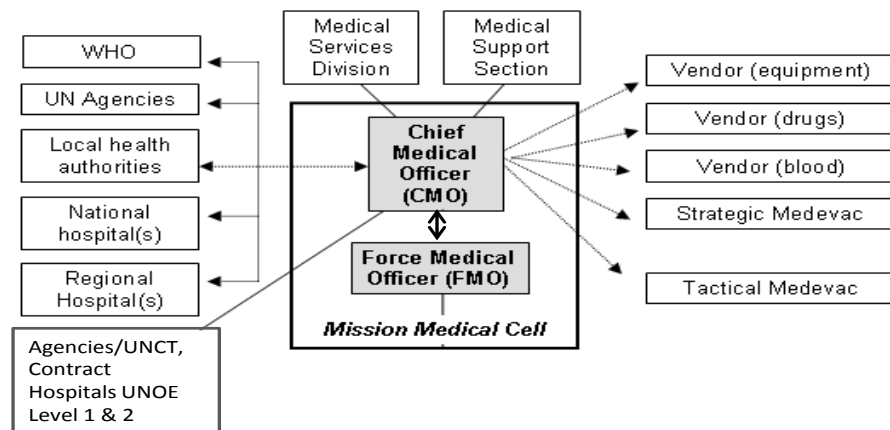


Figure 3: Relationship of stakeholders in healthcare delivery of PKOs

- (d) The CMO shall prepare mission medical budgets and ensure optimum and rational use of resources.
- (e) The CMO shall procure supplies, arrange for their distribution and control the assets in the mission medical warehouse.
- (f) The CMO shall verify the medical qualifications of all locally employed medical staff.
- (g) The CMO shall initiate and technically evaluate contracts with providers of medical evacuations and specialist and hospital services to mission staff.
- (h) The CMO, in collaboration with all stakeholders at United Nations HQ shall develop and implement Medical Support Plans, SOPs and guidelines for the mission.
- (i) The CMO shall authorize medical evacuations within the mission area and liaise with MSD, United Nations HQ in all matters of out of mission medical evacuations and repatriations.
- (j) In collaboration with the FMO, the CMO shall conduct inspections, assessments and surveys of TCC medical facilities.
- (k) In collaboration with the FMO, the CMO shall ensure that appropriate training programmes are established and implemented in order to maintain and develop the medical capabilities of the medical staff. Examples of such training include health education, HIV prevention, first aid, cardiopulmonary resuscitation (CPR), etc.

- (l) In cooperation with the mission HIV/AIDS Policy Adviser and the FMO, the CMO shall provide training to mission personnel on HIV and AIDS awareness and ensuring compliance with mission policy on HIV and AIDS.
- (m) The CMO shall promulgate an efficient policy on malaria prophylaxis for all mission personnel, as required.
- (n) In cooperation with relevant sections, the CMO shall initiate and organise health campaigns promoting road and workplace safety and accident prevention.
- (o) The CMO shall set up systems to verify standards of safety and hygiene of buildings and accommodation for the mission, and address the work environment and occupational health issues.
- (p) The CMO shall be the focal point of the mission on all medical matters between the mission and other United Nations bodies, governmental and non-governmental organizations (NGOs) and local health authorities.
- (q) In collaboration with the FMO, the CMO shall oversee the collection and reporting of epidemiological and casualty data from all facilities, as required by United Nations HQ, and relay compiled monthly mission statistics (military and civilian) to MSS through the MSS Reporting Tool.
- (r) The CMO shall conduct assessments of referral centres/contracted facilities to ensure optimal medical care is provided to all United Nations personnel.
- (s) The CMO shall verify sick leave notes, evaluate entry examinations of locally employed staff and, where applicable, verify medical insurance plan medical bills.
- (t) The CMO shall undertake clinical duties as and when required and will ensure the availability of sufficient and timely dental care and support for the mission to maintain the health and readiness of United Nations peacekeepers.
- (u) The CMO shall be responsible for the execution of the terms and conditions of the MOU for the provision of joint medical services to United Nations agencies, funds and programmes. The CMO shall also be responsible for the execution of any other arrangements by which staff of other United Nations-recognised institutions are to access the medical services provided in United Nations medical facilities.
- (v) Notwithstanding the foregoing specific requirements, as the senior-most ranking civilian medical appointee in any mission, the CMO may undertake any other actions or measures within their delegated financial authority to provide the best possible medical care and support to all United Nations personnel within the mission as may be reasonably required by the operational circumstances in the mission.

2. Responsibilities of the Force Medical Officer

In an integrated civilian-military mission, the FMO³ is the most senior ranking military medical officer within the peacekeeping force and heads the FMC. The FMO

³ In smaller political missions (e.g. the United Nations Peacekeeping Force in Cyprus (UNFICYP) where there is no integrated civilian-military component, the FMO plays the role of the CMO and has the delegated authority to obligate funds.

is the medical adviser to the FC on all military operational and tactical medical matters. In addition, under the supervision and tasking of the CMO, the FMO manages and reports to the CMO on a monthly basis on professional and clinical performance, as well as all ethical issues regarding the TCC/PCC medical facilities and preventive medicine and health education programmes of the force. The FMO also ensures that force military medical resources meet the United Nations standard through regular participation in the COE inspections. In an integrated mission, the FMO does not have the delegated responsibility to obligate funds. The FMO is required to be of the rank of colonel or at least of the same rank as the commanding officer of the highest level of any military medical facility under his supervision. The responsibilities of the FMO are as follows:

- (a) The FMO shall exercise technical command over all TCC Level 1, 2 and 3 medical facilities.
- (b) The FMO shall assist the CMO in developing or reviewing the Medical Support Plan, SOPs and guidelines for mission medical facilities and supervise their implementation in the military medical facilities in the mission.
- (c) The FMO shall develop an SOP and a roster of TCC medical personnel where uniformed personnel participate in medical evacuations.
- (d) Under the tasking of the CMO, the FMO shall conduct functional inspections, assessments, surveys and exercises in TCC medical facilities to ensure adherence to professional and clinical standards.
- (e) The FMO shall submit a monthly report to the CMO on the professional and clinical performance of the TCC Level 2 and 3 medical facilities.
- (f) In collaboration with the CMO, the FMO shall provide guidance and oversee the implementation of preventive health measures, disease prophylaxis and field hygiene, including food and water inspections, sanitation and waste disposal.
- (g) In collaboration with the CMO, the FMO is responsible for updating medical knowledge and first aid training and ensuring that regular follow up on these trainings is offered to uniformed peacekeepers being deployed to remote locations.
- (h) In cooperation with the mission HIV/AIDS Policy Adviser and the CMO, the FMO shall provide training for all troops on HIV and AIDS awareness and ensure compliance by the military elements with mission policy on HIV and AIDS.
- (i) The FMO shall enforce strict policy on malaria prophylaxis for all uniformed peacekeepers.
- (j) In cooperation with the Military Transport Officer and other relevant partners, the FMO shall initiate and organise campaigns promoting road safety and accident prevention.
- (k) In collaboration with the CMO, the FMO shall ensure cooperation and coordination between all TCC/PCC medical facilities and other United Nations bodies, governmental organizations, NGOs and local health authorities, within the mission area.

- (l) The FMO shall oversee the collection and reporting of epidemiological and casualty data from all uniformed facilities, as required by United Nations HQ, and relay them to the CMO.

3. Deputy Force Medical Officer

The Deputy Force Medical Officer is the next most senior ranking military medical officer with delegated authority to deputize in full for the FMO in his/her absence.

4. Staff Officer Medical

The Staff Officer (SO) Medical is a member of the FMC in the integrated MMC. Large missions may have more than one individual serving in this capacity, in which case, he/she may be designated a specific function (e.g. Deputy Force Medical Officer, Medical Operations and Planning Officer, MEDEVAC Coordinator, Medical Training Officer, Medical Logistics Officer). While the selection and initial clearance of the SO Medical is the responsibility of FGS/OMA, the technical clearance and vetting of same remain the joint responsibility of MSD and MSS, as previously mentioned. The responsibilities of the SO Medical are as follows:

- (a) Monitors the medical support situation in the force, including the operational status of TCC medical units and force evacuations assets.
- (b) Assists the FMO to audit TCC medical units, ensuring that they maintain standards for self-sustainment, in accordance with the United Nations COE Manual.
- (c) Coordinates MEDEVAC and CASEVAC within the force and mission (if so designated).
- (d) Monitors status of all force/mission personnel who have been warded in Level 2 and above hospitals.
- (e) Oversees medical component of mass casualty and contingency planning.
- (f) Oversees medical training at all levels of the force.
- (g) Where applicable, oversees central medical warehouse and coordinates medical logistics to units that are not self-sustaining for medical categories.

5. Staff Officer (Operations/Medical Evacuation Coordinator)

The MEDEVAC Coordinator is a member of the FMC in the integrated MMC. The Officer coordinates both the tactical and strategic medical evacuations with the Office of the CMO. The Officer is responsible for the following:

- (a) Monitors the medical support situation in the mission, including operational status of TCC medical units and mission evacuation assets.
- (b) Assists FMO in ensuring that all TCC medical units maintain standards for self-sustainment in accordance with the COE Manual.
- (c) Plans and coordinates tactical medical evacuation in the mission.

- (d) Supervises training of medical personnel on CASEVAC/MEDEVAC procedures and inspects readiness of CASEVAC/MEDEVAC teams.
- (e) Monitors status of all force personnel who have been warded in Level 2 and above hospitals.
- (f) Coordinates medical support activities with other staff branches in the force HQ and with the civilian mission HQ.
- (g) Where applicable, coordinates medical logistics.

6. Force Hygiene Officer/Environmental Health Officer

The Force Hygiene Officer (FHO)/Environmental Health Officer (EHO) is a member of the FMC in the integrated MMC. He/she serves as the technical specialist who oversees and advises on issues of hygiene (water, food, sanitation); environmental health; occupational safety; vector control; and disease outbreak response. The FHO/EHO is responsible for the following:

- (a) Advises the FC (through the FMO) and deployed contingents on issues of hygiene, environmental health, vector control and infectious disease outbreak response.
- (b) Assists the FMO to monitor the health of the force, including disease and injury trends.
- (c) Issues mission/force medical directives, guidelines and communications on preventive medicine and public health.
- (d) Provides technical supervision over environmental health and vector control facilities and personnel at each level of the force.
- (e) Conducts regular inspections of bases, buildings and transit facilities to ensure compliance with health standards, including environmental health, occupational safety, vector control, food hygiene, water safety and sanitation.
- (f) Supervises environmental health and vector control measures for United Nations bases and facilities, and ensures compliance of TCC/PCC contingents with force-wide preventive medicine measures.
- (g) Investigates and compiles reports for disease outbreaks in the force.
- (h) Oversees preventive medicine and health education in the mission/force and coordinates implementation of HIV prevention measures with the mission's HIV/AIDS Policy Advisor. The FHO/EHO works with the HIV/AIDS Policy Advisor on the implementation of HIV and AIDS initiatives.

7. Preventive Medicine/Epidemiology Officer

The Preventive Medicine (PM)/Epidemiology Officer (EO) is a member of the FMC in the integrated MMC. The PM/EO conducts health surveillance within the mission/force, including collation of medical statistics and analysis of health and disease trends. The PM/EO is responsible for the following:

- (a) Assists the FHO/EHO with daily duties.

- (b) Compiles monthly medical statistics reports and ad hoc medical reports for submission to United Nations HQ through the FMO and the CMO.
- (c) Supports the development of training programmes and assists the FHO/EHO in the implementation of environment health, occupational safety and vector control measures in the force.
- (d) In conjunction with the FHO/EHO, conducts regular inspections of bases, buildings and transit facilities to ensure compliance with health standards, including environmental health, occupational safety, vector control, food hygiene, water safety and sanitation.

8. Force Psychiatrist/Psychologist

The Force Psychiatrist/Psychologist is a member of the FMC in the integrated MMC. Working in collaboration with the Staff Counselling and Welfare Section he/she serves as the specialist advisor on mental health and psychological support issues for the force. The Force Psychiatrist/Psychologist is responsible for the following:

- (a) Provides professional advice on mental health issues concerning the mission.
- (b) Supervises psychological support services within the mission, including the coordination of debriefing and counselling following critical or traumatic incidents.
- (c) Conducts surveys on troop morale and psychological health.
- (d) Oversees education, training and measures for managing stress in the mission.
- (e) Assists professional staff with management and supervision of patients with stress and mental health disorders, as well as advising the CMO on repatriation of individuals with serious mental health disorders.

9. Regional/Sector Staff Officer Medical

The Regional/Sector SO Medical are members of the Sector Medical Cells in the integrated MMC and are deployed to the regions or sectors. They replicate functions of the FMC at the sector/regional level. The roles and responsibilities of the Regional/Sector SO Medical include the following:

- (a) Monitors the medical support situation in the force at the sector level, including the operational status of TCC/PCC medical units and force evacuations assets.
- (b) Assists the FMO to audit TCC/PCC medical units, ensuring that they maintain standards for self-sustainment in accordance with the United Nations COE Manual.
- (c) Coordinates CASEVAC/MEDEVAC within the mission area at the sector level.
- (d) Monitors the status of all force personnel who have been warded in Level 2 and above hospitals.
- (e) Oversees medical component of mass casualty and contingency planning at the sector level.

- (f) Oversees medical training at all levels of the force.
- (g) Where applicable, oversees central medical warehouse and coordinates medical logistics to units that are not self-sustaining for medical categories.

10. Senior Medical Officer, national contingent

The Senior Medical Officer (SMO) of a national contingent is the most senior ranking medical officer of his contingent and reports directly to the national contingent commander. However, the SMO remains the FMO's point of contact on health issues pertaining to his contingent. The SMO reports to the FMO on professional matters concerning the health of troops and on medical services provided by the respective contingent. The duties of the SMO of a national contingent are as follows:

- (a) Responsible for the health and well-being of all national contingent members and of all United Nations personnel supported by the contingent's medical units.
- (b) Oversees medical services provided by the contingent and ensures that all medical units meet standards for self-sustainment, in accordance with the COE Manual.
- (c) Coordinates medical support and CASEVAC for the contingent with the FMO and medical unit commanders within the respective sector(s).
- (d) Coordinates medical logistics support to contingent medical units and team sites with the respective national support and logistics elements.
- (e) Oversees the implementation of preventive medicine, hygiene and environmental health measures within the contingent's area of operations.
- (f) Oversees medical training and health education of contingent peacekeepers and medical personnel, including HIV prevention.
- (g) Compiles health statistics and prepares reports required by the FMO for submission to United Nations HQ.

11. Level 1 Medical Unit Commander

The Medical Unit Commander reports to the National Contingent Commander and/or the national SMO. The terms of reference are as follows:

- (a) Responsible for the day-to-day operations of his/her medical unit and for the services it provides to the supported United Nations population dependency.
- (b) Oversees medical services provided by the unit and ensures that this meets the standards for self-sustainment, in accordance with the United Nations COE Manual.
- (c) Coordinates medical logistics support to the unit with the contingent's SMO and/or the respective national support and logistics elements.
- (d) Oversees the implementation of preventive medicine, hygiene and environmental health measures within the unit's area of operations.
- (e) Oversees medical training and health education of all personnel in the unit, including HIV prevention.

- (f) Compiles statistics and prepares reports required by the CMO/FMO for submission to United Nations HQ.
- (g) Provides professional supervision and is responsible for the welfare and conduct of medical staff in the unit.

12. Levels 2 and 3 hospital commanders

The TCC Level 2 or 3 hospital commanders report to the FMO on all operational matters and to the CMO on all professional, clinical and ethical matters concerning the hospital. The terms of reference are as follows:

- (a) Responsible for the day-to-day operations of the hospital and for the services it provides to supported United Nations population dependency, ensuring that this meets the standards for self-sustainment, in accordance with the United Nations COE Manual.
- (b) Provide input to the FMO's daily briefs to the FC on the well-being of troops and the operational readiness of medical support deployed in the field.
- (c) Oversee and report to the CMO through the FMO on all aspects of the medical services provided by the hospital, taking into consideration its professional, clinical and ethical implications. In this regard, the hospital commander will prepare a comprehensive monthly report on the operation of the hospital for the CMO through the FMO. The monthly report shall contain the following:
 - A monthly summary of the daily report/medical statistics of patient attendance at the hospital during the period;
 - A summary of administrative and logistical issues, including the status of hospital personnel, major equipment and self-sustainment; and
 - Professional, clinical and ethical concerns arising during the period (see Chapter 2 Annex A for a sample template).
- (d) Coordinate all aspect of medical logistics support for the hospital with their respective national authorities and the United Nations to ensure the full operational status of the hospital at all times.
- (e) Support the CMO/FMO in coordinating all CASEVAC/MEDEVAC activities involving the hospital.
- (f) Support the CMO/FMO in coordinating all visits of mission administrative staff including the FC, CMO, DMS/CMS and delegations of non-mission stakeholders to the hospital and provide necessary briefings during such occasions.
- (g) Ensure the proper implementation of preventive medicine, hygiene and environmental health measures within the hospital environment, particularly with reference to effective hospital waste disposal and prevention of cross infection diseases among hospital staff and patients.
- (h) Cooperate and coordinate all hospital medical staff certification verification exercises with the CMO/FMO on reporting to the mission.
- (i) Coordinate weekly clinical meetings for medical staff for knowledge and information sharing on current approaches to diagnosis and treatment.

- (j) In cooperation with the CMO/FMO, formation medical units and other stakeholders, participate in medical training and health education of all personnel in the mission, including HIV prevention, personal and environmental hygiene and other aspects of public health campaigns required in the mission's area of responsibility.
- (k) Compile statistics and prepare reports required by the CMO/FMO for submission to HQ.
- (l) Provide professional supervision and is responsible for the welfare and conduct of medical staff in the unit.
- (m) Promptly process and submit to the CMO for verification and payment, all bills that the hospital may accrue for services provided to non-entitled peacekeepers in the mission area that have been officially granted access to the hospital services by the mission administration. In such cases, all costs shall be in accordance with the 'fee for service' provision in the United Nations COE manual.

Annex:

Chapter 2 Annex A: Troop/Police Contributing Country Hospital Monthly Performance Report

Chapter 2 Annex A

Troop/Police Contributing Country Hospital Monthly Performance Report

(Note: Heading should include Mission Logo and all necessary contact information)

MONTHLY PERFORMANCE REPORT: COE LEVEL II AND LEVEL III HOSPITALS BY HOSPITAL COMMANDING OFFICER

DATE:.....

Name of the hospital:.....

Level (Level II or Level III):.....

Date of deployment:.....

Date of next rotation:.....

Period of report:.....

Name and rank of the Hospital Commanding Officer:.....

ADMINISTRATION

No. of doctors. Ref: COE Manual:.....

No. of specialists, Ref COE Manual:.....

Number of nurses:.....

Credentials of the doctors/specialists (submitted/not submitted):

Current availability of specialists and other clinical staff for the period:

Continued Medical Education (C.M.E.) (lectures held/topics):.....

Hygiene inspections done this month and summary of report:.....

LOGISTICS

Major equipment:

- Status of medical equipment, Ref MOU:.....
- Non-functional equipment requiring repairs/replacement and replacement plan:.....

CONFIDENTIAL

Self- sustainment:

- Sufficiency of stockpile of drugs, pharmaceuticals and medical consumables for 60 days:.
- Availability of stockpile replenishment plan:.....
- Status of hospital accommodation/infrastructure:.....
- Electricity and water supply:.....
- Medical waste disposal:.....

CLINICAL

- Total number of patients seen during the period (out-patients):.....
- Total number of patients seen during the period (in-patients):.....
- Total number of emergencies (combat injuries) received:.....
- Total number of surgeries performed:.....
- Total number of referrals to other facilities:.....
- Referral Hospitals:.....
- Justification for referrals to other facilities (specialist, equipment or high risk patient):.....
- No. of cross infection in the hospital:.....
- Incidence of notifiable/ communicable diseases:.....
- Number of deaths in the facility:.....
- Number of D.O.A. (Dead On Arrival) received:.....

SUMMARY/COMMENTS/REMARKS BY COMMANDING OFFICER

.....
.....
.....

Add more sheets of papers if necessary.

Name/Rank & Signature of Commanding Officer:

Date:

Comments and Endorsement after verification by FMO:

Name/Rank & Signature of FMO:

Date:

Comments and Endorsement by CMO after verification:

Name & Signature of CMO:

Date:

Comments and Endorsement by DMS:

Name & Signature of DMS:

Date:

Chapter 3

Planning and deployment of medical support in the field

A. Principles of medical support

The United Nations medical system aims to ensure the health and well-being of the personnel in the field. Medical support planning is guided by the following principles:

1. Provision of timely and responsive medical care based on the 10-1-2 timeline concept in all medical emergencies or in the chain of patient transfer from the primary care level to the appropriate higher level of medical care. This requires ensuring access to skilled first aid within 10 minutes of the point of injury or the onset of symptoms; advanced life support as soon as possible, and no later than 60 minutes; and access to limb- and life-saving surgery, no later than two hours. This first 60 minutes of time is referred to as the golden hour.
2. Timely access to health facilities and services for all personnel of a peacekeeping mission.
3. The provision of a standard of healthcare that is acceptable to United Nations personnel and to member states.
4. The provision of continuous medical care from the point of injury until the final recovery of the patient.
5. The above should be supported by a responsive combination of land and air evacuation capabilities involving fully equipped road worthy ambulances, military or civilian rotary or fixed wing air facilities, well trained and equipped Aero Medical Evacuation Teams (AMETs) and a well-functioning communication network linkage for rapid and expert medical response.

Medical support shall be determined in accordance with the operational requirements of the mission. The COE Manual provides a flexible framework that shall be adjusted according to in-mission requirements.

B. Medical support planning process

All mission planning, including the medical support planning process, must be in line with the integrated assessment planning process. This process is outlined in the United Nations policy on integrated assessment and planning,⁴ which provides guidance on the strategic engagement of the wider United Nations-system in a country. The integrated assessment process informs the mission concept, from which the mission support plan follows. The medical support plan is a component of the mission support plan.

⁴ Reference the Secretary-General's Policy on Integrated Assessment and Planning dated 9 April 2013. Integration refers both to internal civil and military integration within the field mission, as well as the strategic partnership between United Nations field missions and the UNCT. At mission start-up, the Integrated Mission Task Force is responsible under the leadership of the lead department, for the production of the following fundamental documents: Planning Directives, Commitment Authority, TAM reports, the Secretary-General's Report, Security Council Mandate, mission CONOPS, mission budget and Directive to the Special Representative to the Secretary-General.

Developing and implementing the medical support plan requires close interaction and coordination with other sections and units within DPKO/DFS and the mission HQ. The medical support plan serves all United Nations personnel in the mission and encompasses all categories of medical assets in the mission. These assets include UNOE medical facilities, TCC/PCC personnel and units, commercially-contracted services and national and regional health facilities. The plan must consider the optimal and cost-effective use of available medical assets.⁵

C. Medical planning considerations

The medical requirements for every peacekeeping mission differ and are influenced by a number of factors, including the mission mandate, its CONOPS, the assessment of its area of operation, prevailing health threats, the United Nations medical standard of care, the available medical facilities, and operational efficiency. Other factors to be considered include how to bridge the gap between issuance of mandate and deployment of facilities at full operation capacity, as well as the accommodation infrastructure into which the facilities will be installed. The medical support plan should be determined in reference to the mission requirements, and should be adjusted at least annually to reflect changes in the mission operating environment. Medical support plans are often drafted based on the CONOPS before TAM is undertaken, but finalised after the exercise (see Chapter 3 Annex A: Medical aspects of TAM; and Chapter 3 Annex B: Medical support plan – sample format). The main considerations in medical support planning include:

1. Mandate

The scope of healthcare provisions and the population size supported depends on the mission mandate, which determines the nature of peacekeeping activity and security risks. United Nations medical assets primarily serve the peacekeeping population and are not extended to the local populace. In specific missions where the mandate specifies the provision of humanitarian assistance, medical services may be expanded to cover the local population.

2. Concept of operations

The medical plan is determined by the military and police CONOPS, which includes the troop strength, force composition, deployment concept, nature and intensity of peacekeeping tasks, and command and control structure. The CONOPS will assist planners in assessing the risks faced by mission personnel and contingents, which will affect the degree of medical support required. Mission risk levels may change over the life of the mission, warranting increases or reductions in mission medical support. The medical system requires a built-in surge capacity to deal with unanticipated contingencies. In this regard, the provision of medical services by the mission to United Nations agencies, funds and programmes shall be considered, should they lead

⁵ The mission's SOPs are developed based on the medical support plan. For additional detail, refer to Chapter 15.

to increased system-wide efficiency, and as outlined in the *Integrated Assessment and Planning Handbook*.⁶

3. Area of operations

The medical plan may be influenced by factors in the mission's area of operations, including:

- (a) Geography: land masses, water bodies, mountains, jungle, desert and risk of natural disasters.
- (b) Infrastructure: state of electrical, water, gas and sewage services.
- (c) Road and rail network: state and suitability of land transport system for evacuation by land.
- (d) Airports: location and suitability of airports and helicopter landing zones for evacuation by air and maintenance of medical supply chain.
- (e) Seaports and rivers: location and suitability of seaports and/or rivers for evacuation, deployment of hospital ships and maintenance of medical supply chain.
- (f) Medical facilities: state and quality of host nation's and regional health facilities and their capability and capacity to support the United Nations mission.
- (g) Climate: impact of yearly weather pattern and extremes of temperature on health of deployed personnel.
- (h) Security: The security situation will impact on the level of medical capability to be deployed

4. Health threats

There is an essential requirement for reliable, timely and up-to-date medical intelligence, from the initial planning stages through each phase of an operation. It is therefore important that a reconnaissance visit is undertaken to the mission area of operation to conduct a realistic health threat analysis, upon which the mission's force protection plan shall be formulated. A comprehensive health threat analysis needs to take into account endemic diseases (particularly infectious diseases), hostile action and other potential hazards like landmines, CBRNE and occupational and workplace hazards. Environmental safety and occupational health considerations have to be integrated into the overall force protection plan (see Chapter 3 Annex C: Medical aspects of reconnaissance visits).

5. Medical standard of care:

The United Nations medical support concept, particularly the golden hour concept,⁷ shall primarily guide the contingent first aid training requirements; the composition of

⁶ Integrated Assessment and Planning Handbook 2013, by the Integrated Assessment Planning Team of the United Nations System Wide Integrated Stirring Group.

the force medical personnel; the size and location of local, TCC or UNOE medical facilities; and air and ground in-mission evacuation capabilities. For PKOs facing foreseeable risk of accident or violent threats, the medical support plan golden hour concept shall ensure that all mission personnel at risk:

- (a) Receive skilled first aid within 10 minutes of injury or onset of symptoms.
- (b) Receive resuscitation or stabilization (Level 1 care) from medical professionals (normally from a physician trained in emergency response either at the site of injury or at a medical facility as soon as possible, and not longer than 60 minutes after the injury. This is inclusive of the 10 minutes mentioned above.
- (c) Receive advanced life support (including limb- and life-saving surgery, or Level 2 care) as soon as possible, but no later than two hours after injury.

These treatment response times must be considered according to mission ambulance (with reference to ground travel times) or MEDEVAC capabilities (rotary or fixed wing), proximity to medical facilities, or inclusion of medical professionals (i.e. deployed personnel from a Level 1 unit) or adequately trained non-medical professionals or a mix of both categories in patrols or convoys. Trained AMETs must be able to provide Level 1 care on site, and return patients directly to higher-level medical facilities. Ambulance drivers in missions are normally not medically trained. Deviations from these timelines due to operational requirements or resource limitations may result in additional risk to mission personnel and uniformed contingents, and should be identified and justified in the medical support plan.

6. United Nations medical facilities

United Nations medical facilities are described in Chapter 4, and include three levels of in-mission facilities, and one level of out-of-mission facility. Each level of facility can be upgraded with additional capabilities to ensure that operational capability requirements can be efficiently met. Remotely-deployed Level 1 or other medical personnel attached to convoys or patrols, ground ambulances and aero-medical capabilities may be used to increase the range in which medical support may be provided.

7. Availability of accommodation infrastructure

A standard construction layout plan for various levels of field medical facilities should be developed jointly by the Engineering Section and MSS/SSS/LSD/DFS to facilitate standard and timely build-up of infrastructure for UNOE medical facilities and TCC medical contingents. This will assist mission administration in coordinating the rapid installation of UNOE and TCC/PCC medical facilities in the field.

⁷ For more information on the United Nations medical support concept and levels of care, see Chapter 4.

8. Bridging gaps in medical support requirements in the field

In the planning process, possible gaps in medical support requirements between the issuance of mandate and the achievement of full operational capacity of deploying UNOE or TCC medical facilities can be bridged by identifying member states with medical capabilities that meet international standards and are willing to deploy at short notice for short-term periods. Such deployment can also be achieved by outsourcing medical services complete with self-sustaining capabilities through contracts (LOA, MOU or other long-term agreements) with member states or commercial sources.

9. Efficiency of care

Medical planning shall identify the most cost-effective means to achieve the degree of medical coverage required. The MSS/SSS/LSD/DFS, in collaboration with partners in DFS, will assist in providing cost estimates.

D. The medical support plan

The medical support plan identifies the principal considerations and recommendations for establishing an integrated healthcare system, which is aimed at maintaining the physical and mental well-being of United Nations personnel in a mission. It also covers the staffing and materiel resources required to execute the plan, (see Chapter 3 Annex B: Medical support plan – sample format). Key components of the medical support plan are described below:

1. Medical facilities

The medical support system aims to ensure timely access of a patient or casualty to the appropriate level of medical care. This is achieved through establishing medical facilities within the mission, with land and air evacuation services to bridge the different levels of medical care. A tiered, multi-level medical support concept is adopted with incremental treatment capability and capacity at each level, for which the United Nations standards for staffing and equipping have been defined. At lower levels of medical support, the emphasis is on resuscitating and stabilising casualties for evacuation to the next level with a minimum delay. At higher levels, the focus is primary or definitive treatment, as well as patient recovery and rehabilitation. Where difficulties or delays in evacuation are anticipated, there may be a corresponding increase in the treatment capability and holding capacity of a facility. The different levels of medical support are described in detail in Chapter 4. There are different options for establishing medical services in a mission. These take into consideration the availability, lead-time for deployment, costs, sustainability and standards of a medical facility or service.

- (a) TCCs/PCCs medical facility: This comprises either a Level 1 facility that is an integral sub-unit of a larger military or formed police unit, or a stand-alone Level 2 or 3 field hospital. AMETs may also be deployed by TCCs as a stand-

alone unit or as part of a parent medical unit. TCC medical units are deployed under an MOU between the United Nations and the respective member state.

- (b) UNOE medical facility: This is typically a Level 1 clinic run by United Nations staff or UNVs or a combination of both, which is fully equipped, sustained and administered by the mission. UNOE medical facilities may also be operated by a TCC or a mix of United Nations and TCC personnel. UNOE Level 2 hospitals can also be deployed in the field in the absence of TCC medical units.
- (c) Contracted medical services: Contracts or agreements may be established with a medical service provider, hospital or member state for health services. These range from deployable medical teams to hospital and specialist services. The contractual arrangements include commercially awarded contracts, LOAs, MOUs or other bilateral arrangements.

2. Casualty/medical evacuation

CASEVAC/MEDEVAC is a fundamental component of medical support, which involves not only the transportation of the sick or injured to the nearest medical facility, but also the entire continuum of medical treatment and rehabilitation. The casualty management process should be driven only by the golden hour principle. Following this principle, the model aims to provide skilled first aid by trained⁸ personnel⁹ within 10 minutes of a trauma injury or the onset of symptoms, and resuscitation and/or stabilization, by a trained medical professional as soon as possible, and not exceeding one hour. After resuscitation, the evacuation of the casualty is to the nearest appropriate medical facility. In developing a MEDEVAC plan, it is important to note travel distances; evacuation times by land, rotary and fixed-wing platforms; availability of suitable evacuation routes, landing zones and air-fields; evacuation by night and in bad weather conditions; requirements for cross-border flight clearance; and the activation system for CASEVAC/MEDEVAC. The following MEDEVAC standards are to be established in the medical support plan:

- (a) Ability to evacuate casualties on a 24-hours-per-day/7-days-per-week basis, in all weather, over all terrain and in any operational scenario.
- (b) Ability to stabilise and sustain a casualty during evacuation, which requires trained staff (e.g. paramedic), AMET and dedicated equipment and supplies.
- (c) Ability to coordinate and regulate the evacuation of patients between different levels of medical care and to accurately track patients throughout evacuation.

3. Medical evacuation assets

To meet the evacuation demands, a spectrum of evacuation assets are required:

- (a) Ambulances: These comprise wheeled or tracked ambulances that may be UNOE or COE. To overcome the challenges posed by the difficult and uneven

⁸ Accreditation and experience requirements for all medical personnel are described in Chapter 8.

⁹ This refers to properly trained contingent members, including combat medics, paramedics, nursing assistants.

terrain, wheeled ambulances are recommended to be 4x4 vehicles. All ambulances are to be appropriately staffed and fully equipped, including with dedicated major equipment for advanced first aid, resuscitation and stabilization (life support).

- (b) In-mission (tactical) air evacuation assets: This involves casualty evacuation from the incident site or a transfer between two in-mission medical facilities, typically using the mission's air assets (both rotary and fixed-wing).
- (c) Out-of-mission (strategic) evacuation assets. This involves transfer of a casualty or patient to a Level 3 or above hospital outside the mission, using the mission's fixed-wing aircraft or commercial air ambulance.

4. Health protection

Health protection involves the protection and maintenance of the health of individuals in a mission against potential health threats, including the physical environment, disease and work-related hazards. The purpose of health protection is to conserve the operational capacity of a mission, so that it is healthy and can perform its mandated tasks. The components of a comprehensive health protection programme include:

- (a) Pre-deployment medical screening and fitness examination, including physical, dental and mental fitness.
- (b) Immunisation and medical prophylaxis.
- (c) Preventive medicine and environmental health programme, including vector control.
- (d) Medical surveillance and outbreak response.
- (e) Laboratory testing: voluntary confidential counselling and testing for HIV and AIDS and other sexually-transmitted diseases and pregnancy testing.
- (f) Health education.

5. Medical staffing

There are two main categories of medical staff in the field: military/police and civilian personnel.

- (a) TCC/PCC medical facility: While the standard staffing configuration for TCC/PCC medical units is described in the COE Manual, this serves primarily as a frame of reference to facilitate planning and provides a basis for reimbursing troop-contributors. In developing a medical support plan, the composition and strength of a medical unit at any level may vary in line with the actual operational requirements, and shall be as agreed upon in the respective MOU. Medical facilities may be strengthened with additional capabilities, or staffed with a larger component to address a requirement for a Level 1 facility to split into more than two to support secondary positions or forward operations.
- (b) UNOE medical facility: United Nations clinics are staffed by international civilian staff, national staff and UNVs. The medical manpower requirements

are to be incorporated into the mission's staffing table from the planning stages. The benchmark staffing requirement will depend on whether it is a small, medium or large mission (see Chapter 3 Annex B: Medical support plan - sample format, for details).

6. Materiel resourcing¹⁰ and medical logistics plan

In maintaining a medical system in the field, there is a need to establish, in collaboration with MSS/LSD, a medical logistics support framework, which covers the following commodities and services:

- (a) Medical equipment procurement/contracting, installation, training, maintenance (preventive and corrective).
- (b) Medical consumables and supplies.
- (c) Drugs and pharmaceutical products.
- (d) Blood products.

Medical logistics have special technical requirements. For example, shipping and storage of certain products require maintenance of a cold chain (e.g. blood, vaccines and laboratory reagents); requisition and storage of controlled drugs and narcotics have to comply with international regulations; maintenance and calibration of medical equipment have to meet manufacturer's certification standards. Drugs, vaccines and laboratory reagents also have relatively short shelf-lives and require effective stock management and rotation. Even the disposal of medical products has to take into consideration the potential for abuse and the need for environmental protection. The medical logistics can be viewed from the military and civilian components:

- (a) TCC/PCC medical facility: TCC medical units are generally self-supporting, and are reimbursed under the COE reimbursement mechanism, including major equipment and self-sustainment categories. However, it must be mentioned that reimbursement is dependent on confirmation that the equipment is of optimal functional status.
- (b) UNOE medical facility: There are different options available to initiate or sustain medical logistics support for a mission. These include:
 - Strategic deployment stockpile: The SDS is an integral component of DFS materiel readiness and rapid deployment capacity, and has the capacity to support the start-up phase of a complex mission of up to 10,000 personnel. The medical component of SDS comprises start-up kits for Level 1 clinics and Level 2 hospitals, as well as independent specialist modules (e.g. dental, X-ray, laboratory, environmental health). This is administered by the MSS/SSS/LSD/DFS and the warehousing and inventory management functions have been outsourced to a commercial vendor.

¹⁰ For additional detail on medical logistics and reimbursement of TCCs, refer to Chapter 12 and 13. Also see Paragraph 8.3.4, Page 133 of Vol. 1 of the Infantry Battalion Manual (August 2012) for details regarding manpower for a Level I clinic.

- United Nations reserve or mission transfers: major equipment and consumables from United Nations reserve or downsizing or liquidating missions are an important component of medical commodities for initiating or expanding missions, where available.
- United Nations global systems contract: To minimize procurement lead-time and to ensure quality control of medical products, UN-wide systems contracts have been established with various contractors to provide different categories of medical commodities. These contracts presently cover medical equipment, consumables, drugs and blood products, and are available to all peacekeeping missions, as well as United Nations agencies, funds and programmes.
- HQ or local procurement: In the event that the medical logistics requirements of a mission cannot be met through SDS, United Nations reserve, a liquidating mission or an existing systems contract, the required items or services may be procured through United Nations HQ or locally.

7. Training of medical and non-medical personnel

Professional and technical training of medical personnel remains the responsibility of the TCC/PCC. Though such training will take place in accordance with national requirements for registration or certification of such personnel, core curriculum should include the training criteria set in this manual by United Nations HQ.¹¹ Prospective TCC/PCC must draw up an all-inclusive training programme to cover both the pre-deployment phase and in-mission training. Medical skills and experiences tend to vary significantly among medical personnel in peacekeeping missions. This is more so when there is a multi-national force, with medical units and personnel from different countries. Even among those who are highly skilled and experienced, professional skills may deteriorate with time if not used. There is a need, therefore, to have a regular in-mission training programme, with the training plan targeted at the maintenance and standardization of core skills and procedures.

8. Command and control

The medical support plan incorporates the medical management structure and reporting system within the mission, including medical staff requirements at the mission HQ, force HQ, sector HQ and military HQs. Full-time medical SOs are required at the mission/force HQ, while medical staff functions at sector HQs and below may be assigned as full-time or secondary appointments. It is important for civilian, military and police medical facilities to be fully integrated. The CMO is responsible for overseeing all medical facilities and health services provided within the mission.

¹¹ For additional detail, see Chapter 16.

9. Communications and information management¹²

The medical support plan has to be adequately supported by an effective communication and information management system, particularly for activating CASEVAC/MEDEVAC; emergency response; mass casualty response; and other medical support functions. A dedicated medical communication network for rapid and expert medical response must be in place.

E. Pre-deployment visit

PDV is a critical component of mission planning. PDVs are undertaken to ascertain the state of the contingent's preparedness before deploying in the theatre of operation and to facilitate the negotiation of the terms and conditions of deployment of contingents (MOU/LOA negotiations). There is a high incidence of medical repatriations and deaths arising from the deployment of peacekeepers with chronic pre-existing diseases that preclude deployment into PKOs, as well as related consequences for morale, resources and the image and mandate of the mission. It has therefore become essential that the medical aspects of PDVs go beyond just medical equipment counting/inspection to briefing on the necessity for adequate pre-deployment medical screening, assessment of training and proficiency in the administration of first aid, knowledge of personal and environmental hygiene, disease threats and environmental protection. For more detail, see Chapter 3 Annex D: Medical aspects of pre-deployment visits.

Annexes:

Chapter 3 Annex A: Medical aspects of technical assessment mission

Chapter 3 Annex B: Medical support plan - sample format

Chapter 3 Annex C: Medical aspects of reconnaissance visits

Chapter 3 Annex D: Medical aspects of pre-deployment visits

¹² For additional information on communications and information management, see Chapter 2.

Chapter 3 Annex A

Medical aspects of technical assessment mission

A. Introduction

In conducting an assessment of medical requirements for a Mission area, the following checklist would come in useful for formulating the Medical Support Plan.

B. General information

General information that must be taken into consideration include:

1. Size of mission area
2. Topography, drainage and vegetation
3. Climate, seasonal changes
4. Natural hazards
5. Political and humanitarian situation
6. Security threats
7. Civilian population centres, displaced populations
8. Religious and cultural factors

C. Mission factors

Mission specific factors to be considered include:

1. Mission size, CONOPS
2. Mission phases
3. HQ and sector locations
4. Transit camps, logistics hubs and entry points
5. Re-hatting of troops

D. General and medical infrastructure

General and medical infrastructural considerations include:

1. Airfields, seaports
2. Road conditions
3. Hard-wall infrastructure, green-field sites
4. Communications systems
5. Power supply, water and sanitation
6. Local markets

E. Medical Situation

The medical situation/health risks considerations include:

1. Public health situation
2. Endemic disease threats
3. Environmental health threats
4. Medical infrastructure: public, private, military, international organization, NGO
5. Evacuation services: land, air
6. Medical supply and distribution systems
7. Regional hospitals

Chapter 3 Annex B

Medical Support Plan – sample format

A. Medical Situation

This heading provides the summary of key issues and considerations that impact the health of mission personnel and the provision of medical support. It also provides a brief assessment of health infrastructure in the area of operations and regional countries.

B. Mission

This heading provides the statement of medical mission, including desired end-state and deadline.

C. Assumptions

This heading provides the statement of circumstances and facts taken for granted in the development of the medical plan.

D. Execution

This heading provides the layout of how the plan is to be implemented, which includes:

1. Concept of medical support:

- (a) Overview of how medical support will be provided.
- (b) Outline of key medical tasks by phases of operation.

2. Tasks/responsibilities:

- (a) Assign specific support responsibilities to the United Nations or TCC/PCC medical facilities for each level of support (who, where, by when?).

3. Host nation or regional support

- (a) Identify support provided by National or Regional hospitals, and mechanisms for such provisions.

4. Medical evacuation:

- (a) Establish overall plan for surface and air medical evacuation.
- (b) Delineate assets and responsibilities for tactical (in mission) and strategic (out-of-mission) air evacuation.
- (c) Identify authority and channel for activating air MEDEVAC, attaching workflow diagram for air MEDEVAC as separate appendix.

E. Medical Treatment Policies

This heading provides the medical treatment policies of the mission. It covers the following aspects:

1. Health services:

- (a) Specify population groups (e.g. international staff, national staff, uniformed peacekeepers) supported by both United Nations and TCC medical facilities, and where applicable, the mechanisms for such support.

2. Dental services:

- (a) Outline general policy for provision of dental services.

3. Laboratory, mortuary and x-ray services:

- (a) Outline general policy for provision of laboratory, x-ray and other investigative services.
- (b) Outline general policy for the arrangements concerning Deceased Mortuary Affairs Services. United Nations medical facilities must have the appropriate equipment needed to properly store and transport deceased personnel and human remains, with dignity, back to the home country.

4. Medical assistance to local community:

- (a) State policy for medical assistance to the local community or displaced populations, including mechanisms for such support.

5. Support to other United Nations agencies:

- (a) Medical services will be integrated and available to all members of the mission, irrespective of their status. Mission staff, both international and local, will access TCC/PCC medical facilities on a 'fee-for-service' arrangement between mission HQ and TCC/PCCs.
- (b) The newly introduced concept of integrated services in field missions provides for common services for all United Nations systems, including the UNCT in a mission area. Staff members of other agencies and their locally recruited staff are therefore eligible for medical care in mission medical facilities in accordance with arrangements agreed upon during the integrated mission planning and the MOU negotiations. During the planning and deployment stages, extensive consultation will be held with a view to optimizing the use of resources on the ground without duplicating efforts or competing for resources.
- (c) These medical services are generally provided in integrated missions through

United Nations or TCC/PCC medical facilities, under mission MOUs. United Nations entities are prohibited from entering into unilateral agreements for the provision of medical services with any contingent owned facility deployed under an MOU with the missions. In certain instances, United Nations entities can, under similar MOUs, access commercial medical services contracted through the United Nations procurement process within the host country or contracted under the LOA with Governments, if they are military facilities located outside of the host country.

- (d) In the future, a United Nations medical facility will be that which is procured, deployed and managed by an individual United Nations organization or jointly deployed and managed under the UNCT management concept under an agreed MOU. In this case, the MOU will clearly define the responsibilities of every United Nations organization with regard to staffing, funding, and managing of the facility.
- (e) This could embrace the inter-office voucher approach, whereby all payments by United Nations agencies are made through the mission HQ into TCC accounts. This will ensure that there is no direct financial transaction between the United Nations agencies and the TCCs. A further consultation with United Nations agencies in this regard is recommended.

F. Health protection

This heading provides the public health protection strategy for the mission, which includes:

1. Preventive medicine:

- (a) Assess the main health threats to mission personnel.
- (b) Outline mission and TCC responsibilities for force health protection, including but not limited to, pre-deployment medical preparation, immunizations, vector control and health education.
- (c) Outline mission's immunization and drug prophylaxis regimen.

2. Environmental Health:

- (a) Outline mission and TCC responsibilities for environmental health, including, but not limited to, food hygiene, water safety, sanitation and waste disposal, and, where applicable, veterinary medicine.
- (b) Outline policy for medical and biohazard waste management, according to WHO guidelines.
- (c) Decontamination services: Level 1, 2 and 3 medical facilities must be able to identify, segregate and decontaminate CBRNE chemical, biological, radiological, nuclear and environmental casualties so that they do not infiltrate, contaminate and compromise the medical capabilities of the medical facilities.

3. Occupational safety and accident prevention:

- (a) Outline mission and TCC responsibilities for occupational safety and accident prevention.

G. Medical logistics

This heading describes the medical logistics components of the plan:

1. Medical logistics support:

- (a) Outline mission and TCC responsibility for the provision, supply and maintenance of medical equipment, medical supplies and drugs, and the mechanisms for such provisions.
- (b) Outline policy for supply and allocation of blood products in the mission.

H. Command, control and communications

This heading describes the chain of command communication and reporting channel for all medical issues in the mission:

1. Medical chain of command:

- (a) Outline structure for medical supervision and reporting in the mission.
- (b) Medical organization chart to be attached as separate appendix.

2. Medical reporting:¹³

- (a) Outline requirements and procedures for routine and ad hoc medical reporting.
- (b) Identify channels for medical communications, including dedicated radio networks for medical reporting and activating medical assets.

I. Medical considerations for Status-of-Forces Agreement/Status-of-Mission Agreement

The medical issues that must be properly addressed in the Status-of-Forces Agreement/Status-of-Mission Agreement¹⁴ include the following:

1. Importation of drugs and consumables, narcotics and dangerous goods:

- (a) The mission has been granted import license for drugs and consumables, narcotics, and dangerous substances for use in the mission medical facilities. Outline structure for medical supervision and reporting in the mission.

¹³ For more information, see Chapter 14 on medical records and reporting.

¹⁴ Status-of-Mission Agreement relations between the United Nations and the host Government are generally formalized through the conclusion of a Status-of-Forces Agreement/Status-of-Mission Agreement covering the rights, privileges and immunities of the mission and its personnel and the mission's obligations to the host government.

2. Use of Red Cross and Red Crescent insignia:

- (a) Rules governing the movement of medical vehicles should favour the mission and should be guided by Red Cross and Red Crescent regulations.

3. Flight clearance for MEDEVAC:

- (a) Blanket flight clearance for MEDEVAC should be approved, including night flights.
- (b) Identify channels for medical communications, including dedicated radio networks for medical reporting and activating medical assets.

Chapter 3 Annex C

Medical aspects of reconnaissance visits

A. Purpose

Reconnaissance visits (recce visits) are visits to a mission to which formed units of TCCs or PCCs will be deploying in the near future. Recce visits are undertaken to assess the effects of the ground on the capability of the contingent to undertake its CONOPS tasks.

B. Composition

Based on the DPKO Policy Directive,¹⁵ recce visits are usually conducted for new peace operations or existing peace operations that are expanded or otherwise significantly changed. The visits are closely coordinated with the related contributing country pre-deployment visits to designated field mission and MOU negotiations for the same peace operation. Where warranted, a joint DPKO/DFS mission and contributing country reconnaissance might take place in the mission area. No more than two DPKO personnel from United Nations HQ should participate in the joint reconnaissance. Contributing country participants should include, as a minimum, the designated contingent commander and a logistics expert. Larger reconnaissance teams should include expert representatives from force protection and other enabling capability areas, such as the AMET leader, etc.

C. Roles and responsibilities for medical recce visits

A successful recce visit depends on the concerted and coordinated effort of both the United Nations recce team and the representatives of TCC/PCC. Recce visits will follow the policies and procedures periodically set by the OMA. For recce visits involving medical units, the following shall also apply:

1. Responsibilities of the concerned United Nations recce team:

- (a) Force generation/police generation seeks timely approval for inviting contributing country to conduct reconnaissance in the mission area. The invitation shall convey the purpose, key locations, maximum number of reimbursable participants and duration.
- (b) Promptly provide to the TCC/PCC all relevant official documents including the latest copies of the United Nations manual on policies and procedures concerning the reimbursement and control of COE of troops and police contributors participating in peacekeeping missions (COE Manual), as well as this medical support manual and copies of the draft MOU and CONOPS.
- (c) Promptly provide to the TCC/PCC data sheets on major detailed characteristics and a list of major equipment and self-sustainment items.

¹⁵ *Planning and Implementing Contributing Country Reconnaissance Visits*, 5 October 2005 (2400/MIL/SOP/0503).

2. Responsibilities of the concerned TCC/PCC, through it's permanent mission, include the following:

- (a) The permanent mission should respond to the invitation with a written proposal providing a suggested itinerary, preferred dates and names and appointments of the participants. The itinerary must cover the locations in the mission area that are essential for undertaking the tasks specified in the CONOPS.
- (b) The contributing country arranges the return travel for its participants to the mission area and shall coordinate its travel arrangements within the mission area through the force/police generation services.

D. Implementation

During the recce visits, partnerships with DPKO, DFS and mission teams should allow for the identification of the issues that will likely arise from specific key locations and associated infrastructure and environmental factors.

The suitability of the contingent's capabilities must be carefully crafted and should be based on all elements contributing to specific capabilities, including personnel, training, organization, procedures, major equipment, equipment maintenance, self-sustainment and re-supply capabilities of these units.

A reconnaissance report should be signed by the head of the recce team, DMS and the FC or their representatives and submitted after the visit. The report is to be submitted for decision on any unresolved issues that may affect the contingent's capability to undertake its tasks, as contained in the CONOPS.

Chapter 3 Annex D

Medical aspects of pre-deployment visits

A. Purpose

PDVs are visits to countries that are negotiating the contribution of TCCs/PCCs to a United Nations mission. PDVs are undertaken to assess the personnel and the major equipment and self-sustainment capabilities of these units, and to ensure that member state contributions match the demanding operational requirements and deployment timelines of the mission. The medical component of the PDVs also affords the TCC/PCC the opportunity to be informed of mission health threats, first aid training, personal hygiene and environmental health requirements, as well as disease threats in the mission area.

B. Composition of re-deployment visit team

Based on the DPKO policy directive on the conduct of PDVs,¹⁶ the visits are usually conducted for new or existing peace operations that are expanded or otherwise significantly changed. The visits are closely coordinated with the related contributing country reconnaissance visit to designated field mission and MOU negotiations for the same peace operation. PDVs are usually coordinated and led by DPKO and jointly conducted by DPKO, DFS and field mission teams if necessary, comprising representatives from appropriate functional areas (FGS, FBFD, LSD, etc.). As far as is feasible, staff from appropriate functional sections shall represent United Nations HQ and the mission, if necessary, in PDV, reconnaissance and MOU negotiations.

Contributing countries are encouraged to nominate the same representatives for participation in all visits, reconnaissance and negotiation activities, where possible. The determination of participants shall be made on a case-by-case consideration of operational requirements, and include generation, planning, logistics and functional experts. In addition to attending all PDVs for military medical hospital contributions, the MSS will normally also participate in PDVs for specialist medical functions (including medical modules such as surgical or dental capacity), as well as military or police units with organic medical units, from TCC/PCCs that are new to United Nations PKOs, or returning after an absence of many years.

C. Roles and responsibilities for medical PDVs

A successful PDV depends on concerted and coordinated effort by both the United Nations PDV team and the representatives of the TCC/PCC to be assessed (usually the military adviser in the permanent mission to United Nations). PDVs will follow the policies and procedures set out from time to time by the OMA. For PDVs involving medical units, the following shall also apply:

¹⁶ 2005.3 Policy Directive on Pre-deployment Visits, 5 October, 2005.

1. Responsibilities of the United Nations PDV Team:

- (a) Promptly provide to the TCC/PCC all relevant official documents, including the latest copies of *UN Manual on Policies and Procedures Concerning the Reimbursement and Control of COE of TCC/PCCs* (COE Manual), this medical support manual, and copies of the draft MOU.
- (b) Promptly provide to the TCC/PCC data sheets on the list of major equipment and self-sustainment items.

2. Responsibilities of the concerned TCC/PCC, through its permanent mission, include the following:

- (a) Submit a draft major equipment list and personnel list (together with personal history forms/P-11 and/or curriculum vitae and professional credentials), as requested by DPKO/DFS before the PDV is conducted.
- (b) Coordinate the programme for the visiting PDV team. This should include briefings to TCC/PCC senior administrative officials, site inspection for major equipment and self-sustainment, interaction with contingent personnel, a wrap-up evaluation session and debriefing.
- (c) Submit data sheets on major detailed characteristics and list of major equipment and self-sustainment items on the first day of PDV.
- (d) Coordinate and brief the on-site PDV team on how the briefings and inspections are arranged.
- (e) Coordinate related administrative arrangement for the PDV team, including provision of office space and clerical support, such as computers, printer, photocopier, scanner and Internet connection, or as requested.

The medical sub-team or representative in the PDV team shall assess the deployment readiness and operational capability of Level 1, 2 and/or 3 medical facilities, as well as pre-deployment medical examination and pre-deployment medical-related training¹⁷.

D. Main aspects for assessment

- 1. Medical personnel:** Based on the defined size, structure and capability of medical units at each level for United Nations PKOs, the medical representative should assess and confirm the ability of TCC/PCCs to deploy the required categories of professional and support personnel according to the force requirement and the draft MOU. This should take into account the medical unit strength and structure, medical professional competence and experience, language capability, gender balance, previous United Nations field experience and/or operations other than war, and other related factors.
- 2. Major medical equipment:** Based on the draft MOU and the COE Manual, the assessment and verification of major equipment shall ensure the categories and quantities of major equipment, and the operational serviceability and suitability. All the major and special case medical and dental equipment should be displayed in a single location, and

¹⁷ For additional information, see Chapters 5, 8 and 16.

arranged and grouped in accordance with the COE Manual categories. Functional components for units of a standard Level 2 medical facility should include outpatient services, consultation, pharmacy, radiography, laboratory, dental services, surgery and emergency, operation theatres, sterilization room, wards (general wards and intensive care ward) and support services (including catering, laundry, storage/supplies room, maintenance, communications, generator room, fuel storage, water and sanitation system, and waste disposal facility and system).¹⁸ Fully equipped ambulance(s) and first aid kits should also be displayed for review.

3. **Medical drugs, pharmaceuticals and consumables:** Based on the draft MOU and the COE Manual, the TCC hospital shall be deployed with sufficient and appropriate stocks of drugs, pharmaceuticals and consumables, and shall have an efficient resupply system. Procurement of pharmaceuticals and consumables should be initiated to meet the timeframe for PDV and deployment. All drugs and pharmaceuticals must meet the WHO standards, be labelled in English, and must have at least 80 per cent of their shelf life on arrival to the mission area. The list of drugs must be exhaustive enough to cover the profile of diseases expected to be treated and all surgical procedures in the medical facilities. Tablets should be in blister packs instead of hospital packs for ease of dispensing, to reduce the risk of exposure and contamination and to cover all ailments expected to be treated in that medical facility
4. **Other self-sustainment categories and capabilities:** Based on the draft MOU, the PDV team is to assess and verify the self-sustainment capability under various categories. The medical representative in the PDV team will focus on assessing the self-sustainment capabilities:
 - (a) This encompasses a review of the procurement, transportation, distribution, storage and accounting practices related to medical supplies, pharmaceuticals, consumables and medical stationery for various levels of medical units to ensure the continuous running of medical facilities deployed in the field.
 - (b) It also encompasses maintenance services, which may be provided by the United Nations, the TCC/PCC, an international contractor or local contractor depending on the type of lease established with the TCC/PCC. Under a ‘wet lease’ arrangement, the TCC/PCC shall assume responsibility for periodic preventive maintenance of medical equipment deployed, as well as all repairs, including labour costs, spare parts and transportation of maintenance or repair personnel (as required). Under a ‘dry lease’ arrangement, the United Nations shall be responsible for on-going maintenance.
 - (c) To be eligible for medical self-sustainment rates, the TCC/PCC must provide the standard medical services for each level as stipulated in the COE Manual. For basic level self-sustainment, the following requirements must be met: training in basic first aid, individual basic first aid kits and basic first aid kits for vehicles and other facilities. For epidemiological high-risk areas self-sustainment, there shall be adequate provision and sustainment of prophylactic pharmaceuticals (e.g. anti-malarials) and preventive health equipment and

¹⁸ Refer to Chapter 3, Annexes A and B of the COE Manual for table of equipment and manpower requirement.

consumables, including individual mosquito net, repellent, foggers, pesticides, rodent control measures and other related measures.

5. **Pre-deployment medical examination and vaccination:** Based on the *Generic Guidelines for Troop Contributing Countries Deploying Military Units to the UN Peacekeeping Missions* (TCC Guidelines), the *Guidelines for Formed Police Units on Assignment with Peace Operations* (PCC Guidelines) and this medical support manual, it is the responsibility of member states to deploy physically, mentally and emotionally fit personnel for United Nations PKOs. The medical representative in the PDV team should assess the procedures and documentation of the pre-deployment medical examination, prophylaxis and vaccination applied for contingents and units in line with the requirements in the COE Manual.
6. **Pre-deployment training:** The core pre-deployment training is required for all medical personnel. Particularly for senior medical personnel such as FMOs, pre-deployment training must include the different aspects of PKOs, such as medical support organization, medical policies and administrative and logistics procedures, as well as mission specific medical requirements relating to the treatment and prevention of common health threats encountered in field missions. These include tropical diseases, HIV and AIDS, stress-related disorders, and other aspects of environmental and occupational health. Refresher skills training and exercises on advanced cardiac life support and pre-hospital trauma management should also be included. United Nations peacekeeping missions operate in remote, inaccessible locations resulting in possibly limited medical support from contingent members, particularly during the 'golden hour'. Initial treatment provided at the point of injury is critical to saving a life, organ or limb. Therefore, basic first aid knowledge and skills are pre-requisites in core pre-deployment training for all individuals in formed units, which are required to operate in small groups, often with no immediate access to medical care. The medical representative in the PDV team should conduct spot assessments of practical first aid skills of individual contingent members.

E. Ways and methods of assessment

1. **Overview and briefings:** The medical representative in the PDV shall brief national officials and key contingent personnel on the United Nations medical support concept for PKOs, including pre-deployment medical examination and immunization policies, medical capability requirements, medical-related COE issues, mission-specific health threats and management protocols for various disease patterns peculiar to the mission area, with emphasis on specific pharmaceuticals that match the disease profile, and United Nations medico-administrative procedures-referrals, repatriation on medical grounds, etc. TCC/PCCs shall brief the PDV team on deployment preparation in terms of medical personnel selection and qualification, major equipment, medical and logistic self-sustainment capability, pre-deployment training and pre-deployment medical examination.
2. **Site assessment:** The PDV team should first be briefed about the layouts of site inspection. All medical major equipment and self-sustainment capability should be

displayed in one location and items should be arranged and grouped into units or departments and in accordance with the COE Manual. The TCC/PCC should ensure medical experts and operators are readily available to demonstrate all equipment are functioning. A TCC/PCC representative should explain and demonstrate the agreed self-sustainment capability.

3. **Field demonstration:** Field demonstration of casualty evacuation is a good way to assess the emergency medical treatment and casualty evacuation capabilities of a medical contingent. First aid skill demonstration could also be covered in field exercises for other formed units (medical field demonstrations should be prescriptive, and include examples of casualty evacuations and first aid skills demonstrations).¹⁹
4. **Document review and personnel interaction:** With the support of the TCC/PCC, assessment shall include a review of the (a) pre-deployment medical examination and vaccination records; (b) professional credentials and qualifications; and (c) pre-deployment training programme and materials of proposed medical personnel. The medical representative shall wherever possible meet with deploying contingent medical personnel to review their professional experiences and expertise, as well as language skills.
5. **Visit report:** A medical assessment summary, including identified shortfalls, shall be drafted and consulted with the entire PDV team prior to completion of the PDV. The final medical portion of the PDV report, presenting any unresolved issues and key requirements based on the assessment of contributing capabilities shall be submitted for inclusion in the overall PDV report.

¹⁹ For additional information, see Chapter 16 Annex A.

Chapter 4

Levels of medical support in the field and eligibility criteria for reimbursement of troop/police contributing countries

A. Introduction

This chapter provides an overview of the multi-level support concept for providing medical care in United Nations field missions. It should always be read in conjunction with the most current edition of the COE Manual. In the event of any conflict with the contents of the COE Manual, COE Manual provisions should take precedence over this medical support manual.

B. Concept of medical support

The medical system in United Nations field missions comprises a multi-level framework, which describes multiple levels of care, from first responder care at the incident site to definitive medical care at a hospital. Medical care is intended to ensure that routine clinical care, and (advanced) limb and life-saving treatment is available in the mission area, while complex and definitive care is provided outside of the mission area. Medical support is configurable in modules to ensure that it meets the specific requirements of the mission. Finally, CASEVAC/MEDEVAC capabilities are a key component for ensuring that seriously ill or injured patients are able to receive the necessary care in the required time.



Figure 4. Levels of care with corresponding capabilities and maximum treatment times

The medical care model is intended to meet the requirements of military/police and civilian peacekeepers in remote locations without easy access to other medical care providers. Following the golden hour principle,²⁰ this model aims to provide skilled first aid²¹ by trained non-medical staff, paramedics, medics or nursing assistants within 10 minutes of a trauma injury or the onset of symptoms, and advanced life support as soon as possible, but not exceeding one hour. A more practical way to achieve satisfactory results within the golden hour is to follow the procedures of the Chain of Survival²² and patient assessment aide memoire.²³ For additional detail, see Chapter 4 Annex A: Chain of Survival; Annex B: Patient assessment triangle; and Annex C: Patient assessment aid memoire.

As discussed in Chapter 10, while every effort should be made to treat trauma victims within the first hour, treatment priority is determined in accordance with the United Nations medical triage practice. In an emergency situation, patients should be sent to the nearest medical facility regardless of level, for stabilization. When the patient has been stabilized, in consultation with the CMO, the patient should be referred or evacuated to the appropriate medical facility, even if such facility is a Level 3 or 4 hospital. Usually, medical emergencies (acute myocardial infarction, cerebrovascular accidents, etc.) will be referred to a Level 3/4 facility after stabilization in a Level 1/2 facility, while surgical emergencies (injuries with or without severe bleeding) will end up in a Level 2 facility for damage control surgery after stabilization at the incident site. All mission medical personnel should have a clear understanding of where severely injured yet stable patients should be sent to from any area in the mission in a timely manner. In this regard, the role of a qualified medical dispatcher, who should normally sit in the Joint Operations Centre, cannot be overemphasized.

C. Levels of care

Medical care in peacekeeping missions is organized according to four levels of medical care facilities, as well as individual level first aid capabilities.²⁴ A detailed benchmark staffing requirement for the various categories of medical capabilities is provided in Chapter 4 Annex D. Medical facilities are broadly defined as follows:²⁵

1. Basic level medical care (buddy support)

All uniformed personnel, as well as civilians operating in remote locations away from medical care, are required to have first aid training in accordance with the standards described in Chapter 16 (see Annexes 16-A and 16-B), and must carry personal and

²⁰ First described by Dr. R. Adams Cowley (father of trauma medicine), the golden hour concept demonstrates that patient survival rates increase significantly when advanced life support is provided within one hour after a trauma, or when symptoms first occur.

²¹ Intended to be the equivalent of advanced trauma life support/pre-hospital trauma life support.

²² The Chain of Survival summarizes the vital steps needed for a successful Resuscitation. For additional detail, see Chapter 4 Annex 1.

²³ The patient assessment aide memoire provides guidance in the primary and secondary assessment of casualties/patients. For additional detail, see Chapter 4 Annex 3.

²⁴ For additional details, see Annexes A and B of the current edition of United Nations Manual on Policies and Procedures Concerning the Reimbursement and Control of Contingent-Owned Equipment of Troop/Police Contributors Participating in Peacekeeping Missions (COE Manual).

²⁵ A more precise definition appears in the COE Manual, Chapter 3, Annex B, paragraph 60.

vehicular first aid kits. Due to the extreme conditions and remote locations under which peacekeepers operate, this may be the only care available during the golden hour after injury or accident, and is the most important factor in the survival of injured personnel.

2. Level 1 medical facility²⁶

This could be either COE or UNOE and serves as a primary care facility providing immediate life-saving and resuscitation capabilities along with routine clinical care. In the case of serious injury, a Level 1 facility is expected to stabilize patients and prepare them for transport to higher level facilities. A Level 1 facility is also mobile, and must be deployable to remote field locations, in whole or split into two forward medical teams. A Level 1 facility can be strengthened to a Level 1+ facility through the addition of one or more modular capabilities, including primary dental care, basic laboratory, preventive medicine, forward surgical team and AMET. Level 1 facilities normally have two medical officers, six paramedics or nurses, and three support staff, including an ambulance driver.²⁷ The medical officers shall have Advanced Trauma Life Support (ATLS)²⁸ or equivalent training, and two of the paramedics or nurses shall also have similar training.²⁹ These positions are further described in Chapter 8. Level 1 facilities are expected to be able to treat up to 20 ambulatory patients per day, have temporary holding capacity of five patients for up to two days, and hold medical supplies and consumables for 60 days.

3. Level 2 medical facility:

This is the next level of medical care, providing surgical and life-saving capabilities, as well as common hospital services. It could be UNOE or COE. A Level 2 medical facility provides all Level 1 services and, in addition, provides damage control surgery; post-operative services and high-dependency care; an AMET capability; intensive care-resuscitation; in-patient services; basic imaging services; laboratory, pharmaceutical, preventive medicine and dental services; as well as record maintenance and administrative support. A Level 2 facility can be strengthened to a Level 2+ facility through the addition of one or more modules providing orthopaedic surgery, gynaecological capabilities, internal medicine and diagnostic imaging. Level 2 facilities normally have 57 personnel, including both medical, administrative and logistics staff, or 63 personnel if deployed with an AMET.³⁰ Level 2 facilities are expected to be able to perform three to four surgical operations per day, and provide hospitalization for 10 to 20 casualties for up to seven days. This level facility should treat up to 40 outpatients per day, conduct 5 to 10 dental consultations per day, and

²⁶ Reference Medical Support Manual Chapter 3, Para 5 (e/i) clarifies the composition and strength of a medical unit in relation to its operational requirements.

²⁷ For detailed composition information, see the COE Manual, Chapter 3, Annex B, paragraph 60.

²⁸ Also known as Early Management of Severe Trauma.

²⁹ Advance Trauma Life Support is a training programme for medical doctors in the management of acute trauma cases. Similar programmes exist for nurses (advanced trauma care for nurses) and paramedics (pre-trauma life support). The course programmes are designed by American College of Surgeons.

³⁰ For detailed composition information, see the COE Manual, Chapter 3, Annex B, paragraph 60.

hold all necessary medical supplies, fluids and consumables for 60 days.

4. Level 3 medical facility

This is the third and highest level of medical care deployed within a mission area. It is usually a COE but could be commercially contracted. Level 3 facilities include all the capabilities of lower level facilities. Additional capabilities include multidisciplinary surgical services, specialist services and specialist diagnostic services, increased high-dependency care capacity, extended intensive care services and specialist outpatient services. Level 3 medical facilities may average 90 personnel, depending on the capabilities provided.³¹ Level 3 facilities are expected to be able to perform 10 surgical operations per day; provide hospitalization of 50 patients for up to 30 days; hold 60 outpatient consultations, 20 dental consultations, 20 X-rays and 40 laboratory tests per day; and hold all necessary medical supplies and consumables for 60 days.

5. Level 4 medical facilities

Level 4 medical facilities are definitive care facilities provided outside of the mission area to provide all levels of care, including specialist services not otherwise available, rehabilitation and convalescence. Level 4 facilities are often commercially contracted or contracted under a LOA with a national government.

D. Integrated modular services

United Nations medical services are characterized by their integrated and modular nature. Each peacekeeping or political mission faces different operational challenges and receives different degrees of support from TCCs/PCCs or the United Nations. In some peacekeeping missions, TCCs/PCCs are able to provide complete medical support, bringing their own accommodations, facilities, equipment and personnel. In other missions, the United Nations provides accommodations, facilities and equipment, while TCCs/PCCs provide only the medical staff. Similarly, in mission areas where risks are high, medical facilities may need to be strengthened to meet operational requirements, particularly when a larger hospital cannot be justified. Medical equipment, personnel and facilities in peacekeeping missions may be provided by TCCs/PCCs, the United Nations, commercially contracted, or any combination thereof. Finally, medical care must be provided to military, police and civilian staff members at a uniform level, as all medical facilities are required to provide service to all peacekeeping personnel.

1. Integrated medical composition

There are four levels of integration to consider in the United Nations medical context:

- (a) Integration of United Nations and TCC/PCC medical facilities: Medical facilities may be United Nations-owned, TCC/PCC-owned, or a combination of the two. In some cases, UNOE and TCC/PCC facilities may be co-located; in others, the facilities may be UNOE, while the personnel may be TCC/PCC,

³¹ For detailed composition information, see the COE Manual, Chapter 3, Annex B, paragraph 60.

and may be from different TCCs/PCCs during each rotation. Such deployments must take due care to ensure that medical personnel are familiar with equipment provided in the mission, and that where possible, at least a two week overlap is provided during rotations to ensure that the new rotation receives sufficient induction training, and that patient care is not impaired.

- (b) Integration of medical personnel from different TCCs/PCCs: Medical professionals, particularly specialists, are scarce resources for all military and police forces worldwide. At times, it may be necessary to deploy personnel from different countries at a time. In such cases, due care must be taken to ensure that all personnel have sufficient language skills, and that adequate pre-deployment training is conducted to ensure medical practices are harmonized.
- (c) Military medical facilities: These are increasingly responsible for an integrated patient population. In missions where host country facilities are unable to provide adequate care, civilian United Nations personnel, including those from agencies, funds and programmes, may receive routine medical care in addition to emergency care in peacekeeping medical facilities. In such cases, the specific requirements shall be negotiated during the MOU negotiations to ensure that adequate equipment, personnel and supplies are available.
- (d) Jointly managed medical facilities: In this case, medical facilities are jointly owned and managed by the peacekeeping or political mission and United Nations agencies, funds and programmes for efficiency under a cost/resource sharing arrangement when it is perceived that establishment of individual medical facilities is not cost effective.

2. Modularity

As noted above, Level 1 and Level 2 medical facilities can be improved through the addition of specific modules to provide additional capabilities. The modular medical concept allows each mission to design the medical facilities that best fit its environment, circumstances and the number of personnel in each sector. The COE Manual has been updated to allow for the deployment of specific capabilities in a modular format, without requiring a higher-level hospital. Specific medical requirements identified for mission locations may then be provided through the MOU negotiation.

E. Description of modules

The COE Manual, which is reviewed and updated every three years, describes all modular capabilities in detail and provides the lists of equipment to guide member states³² who wish to deploy their medical facilities in United Nations field missions. The following definitions are extracts from the COE manual. It should be noted that the aero-medical evacuation module is described in detail to underscore its importance as an evacuation asset and also its independent deployment.

³² For detailed composition information, see the COE Manual, Chapter 3, Annex B, paragraph 60.

1. Aero Medical Evacuation Team module

The AMET is a small, highly mobile medical unit comprised of six medical personnel, including two medical officers and four specialist nurses/paramedics. The team is configured and equipped to provide enroute medical support during air evacuation, both within the mission and out of the mission. The AMET may be required to support CASEVAC/MEDEVAC from remote locations and to participate in search and rescue activities. The AMET must be able to treat casualties suffering serious trauma injuries and carry out the evacuation of stabilized trauma patients as well as patients suffering from acute life threatening medical conditions between medical facilities. The AMET may be deployed in support of a Level 1 clinic, but is usually generated as a standalone capability or along with Level 2 and 3 hospitals. Though the primary task of the AMET in the mission is to conduct CASEVAC/MEDEVAC so that it therefore comes under the command and control of the designated CASEVAC/MEDEVAC authorising officer, the AMET can be deployed to support a hospital in its routine clinical work when there is low demand for its service. The AMET must be trained and equipped to function on both rotary and fixed winged aircraft, and shall have its own equipment, qualified personnel for the task and supplies (including oxygen) for use in supporting patients during evacuation. All AMET-designated equipment must be compact and applicable for use in confined ambulatory or aviation environments. The medical officers on the team must be certified in emergency medicine with ATLS or equivalent training. The specialist nurses/paramedics must also be trained in aviation nursing, emergency response and pre-hospital trauma life support.

2. Laboratory module

The laboratory should be capable of conducting basic haematology, biochemistry and urinalysis; diagnosing and monitoring the management of diabetic patients; testing for HIV and conducting other relevant tests; and conducting microscopic examinations (e.g. blood films for parasites).

3. Dental module

The dental module should be capable of maintaining the dental health of mission personnel; providing basic or emergency dental procedures; maintaining a sterilization capability; conducting minor prophylactic procedures; and providing oral hygiene education to mission personnel.

4. Forward Surgical Team module

The capabilities of the Forward Surgical Team include but are not limited to: emergency surgery, damage control surgery, post-operative services, high-dependency care, intensive care, resuscitation and in-patient services.

5. Orthopaedic module

The orthopaedic module must be capable of reduction and immobilization of closed fractures with a plaster or fibre glass cast or splint. Surgical reduction and immobilization of fractures by open reduction or internal fixation under fluoroscopic guidance is mandatory. In cases where the injury is an open (compound) fracture or complex fracture associated with vascular or neurological damage, with the aim to save life and limb, the ideal treatment should be stop or control the bleeding, stabilize the fracture and evacuate to a higher level hospital.

6. Gynaecological module

The gynaecological module should be capable of examining, diagnosing and treating common diseases and injuries of the female reproductive system by surgical and conservative means. In addition, the module should be capable of performing common gynaecological emergency operations only.

7. Additional internal medicine module

This module should diagnose and treat common internal diseases, including cardiac, respiratory, nervous, digestive and other internal and infectious diseases. Treatment should be available for the care of complex cases and critical medical conditions such as septicaemia, meningitis, cerebro-vascular disease and cardiac emergencies supported by the assistance of advanced clinical laboratory tests. Expertise is further required to prescribe care for complex dermatological cases together with surgical specialties and to coordinate internal medicine services with other medical activities.

F. Medical standard of care

To achieve the United Nations medical support mission, which is to secure the health and well-being of members of United Nations PKOs in a timely and efficient manner, all medical facilities shall fully meet the specified standards described in this manual and in the COE Manual, in accordance with the terms and conditions of the respective MOU for treatment, staffing and equipping. In PKOs, medical support and security are essential at all times. Therefore, a TCC/PCC cannot be partially self-sustaining, and cannot deploy with partial capabilities. Should a facility not meet the specified standard, it may be declared non-operational, and the TCC/PCC shall not be reimbursed for it.³³ Should identified gaps not be cured within a reasonable time, the facility shall be replaced.

G. Eligibility for reimbursement

TCCs/PCCs are reimbursed for their medical facilities according to the terms negotiated in the MOU and in accordance with the rates provided in the COE Manual. To be eligible for reimbursement, the TCC/PCC must meet the following criteria:

³³ See the COE Manual, Chapter 3, Annex B, paragraphs 46, 48 and 49.

1. Medical facility must provide medical self-sustainment, including all related personnel, equipment, drugs and supplies (including those for epidemiological high-risk areas).
2. The level of equipment must meet United Nations standards, as specified in the COE Manual under “United Nations levels of medical support”.³⁴
3. The quality, capability and capacity of the deployed medical facility must meet the full operational capability of the facility as described in the MOU.
4. Medical equipment must be provided and maintained in a fully operational condition, maintaining an aseptic and sterile environment in accordance with WHO requirements. This is to ensure uninterrupted medical support and an adequate standard of medical services, including evacuation capabilities.³⁵

Should any of these criteria not be met, the TCC/PCC shall have a reasonable amount of time, not to exceed 45 days, to remedy the gaps. Until such time as all criteria are met, the medical facility will not be declared operational, and the TCC/PCC shall not receive reimbursement for the facility.

Level 1 or 1+ medical facilities are considered force assets and are thus available to all members of the United Nations mission for emergency care. Level 1 or 1+ medical equipment is therefore eligible for reimbursement at the major equipment rate for Level 1 or Level 1+ medical facilities. Where Level 1 facilities are required to provide routine care to United Nations civilian staff, services shall be provided on a pay-for-service basis unless otherwise indicated in the MOU.

A TCC/PCC that cannot provide all medical capabilities according to the standards listed in the COE Manual Chapter 3 Annex B must advise the Secretariat during the MOU negotiations, and in all cases prior to deployment.

H. Blood and blood products

The United Nations will provide blood and blood products according to United Nations standards, including those related to transport, testing, handling and administration, unless otherwise indicated in the MOU. The United Nations is responsible for cold-chain transport to any medical facility and will ensure the blood is tested, grouped and labelled according to blood type and Rhesus factor.

I. Epidemiological self-sustainment

Epidemiologically high-risk areas require prophylaxis and preventative health measures to counter the risk of endemic diseases such as malaria. Prophylactic treatment of malaria is a national responsibility for TCCs/PCCs. The United Nations will provide reimbursements for preventive health equipment and consumables (mosquito nets and insect repellent), as well as man-portable pesticide equipment (foggers). Medical professionals shall encourage patients in high-risk areas to take personal care to wear body-covering clothing and to use nets and repellents.

³⁴ See the COE Manual, Chapter 3, Annex A and B, appendix 2 (A/C.5/63/18).

³⁵ See the COE Manual, Chapter 3, Annex A, paragraph 19.

The administration of vaccinations, as recommended by the United Nations, is a national responsibility. Where required by the United Nations, yellow fever and Japanese encephalitis vaccines are subject to reimbursement, whereas all other vaccines are provided at national expense. An exception is for new or emerging infections encountered in a mission area (e.g. the antiviral drug Ribavirin for Lassa fever, and Oseltamivir or Tamiflu for avian influenza), which is normally provided by the United Nations. If any United Nations personnel deploy without proper vaccinations and prophylaxes, the United Nations will provide the necessary booster shots and prophylaxes. However, the cost of these will be deducted from the self-sustainment payment to the TCC/PCC.

J. Entitlement to and provision of medical services³⁶

1. Integrated patient population

Mission medical facilities are also serving an integrated population. All levels of medical facilities, including Level 1 units, are required to treat all peacekeeping personnel, including military and police formed units and individual officers, United Nations international and local civilian staff, and UNVs. Police and military units from other member states will at times rely on Level 1 care from co-located TCCs/PCCs or UNOE facilities, whereas all mission personnel attend Level 2 and 3 facilities. In some instances, United Nations civilian staff from the agencies, funds and programmes will receive treatment in mission medical facilities as well. As a result, medical care must be provided uniformly to a very high standard.

2. Gender and socio-cultural considerations

All levels of medical facilities must be equipped and staffed to receive and treat all personnel regardless of gender, religion or culture, preserving the dignity and individuality of all patients. With more female peacekeepers and civilian staff participating in field missions, there is an increasing demand for corresponding medical services for female personnel in the missions. Member states planning deployment of medical facilities are therefore required to deploy equipment and female medical staff to cater to such needs.

3. Reimbursement for medical services

Reimbursement for services provided by TCC/PCC facilities shall be determined in accordance with the COE Manual, or as negotiated in the MOU. To ensure that all personnel receive the medical care they are entitled to, and to ensure that there is an effective and equitable system for reimbursement for medical self-sustainment, all uniformed personnel, police and military shall be assigned to the medical facilities responsible for their medical treatment. It is the responsibility of the CMO to ensure

³⁶ See Chapter 6 of this Medical Support Manual for details.

that all personnel are informed upon entry into the mission of the medical facilities responsible for their care and to ensure that the medical facilities are notified.³⁷

Annexes:

Chapter 4 Annex A: Chain of Survival

Chapter 4 Annex B: Patient assessment triangle

Chapter 4 Annex C: Patient assessment aide-memoire

Chapter 4 Annex D: Benchmark staffing requirement

³⁷ See COE Manual, Chapter 3, Annex B, paragraphs 50, 51 and 53.

Chapter 4 Annex A

Chain of Survival

The Chain of Survival is a five-step intervention process, which, if followed quickly and efficiently, can help save the lives of victims of sudden cardiac arrest. The Chain of Survival summarizes the vital steps needed for successful resuscitation:

Step 1: Early recognition of the emergency and calling for help: activate local emergency response procedures. An early, effective response may prevent cardiac arrest.

Step 2: Early bystander CPR: immediate CPR can double or triple the odds of survival.

Step 3: Early defibrillation: CPR plus defibrillation within three to five minutes of collapse can produce survival rates as high as 49 to 75 per cent. Each minute of delay in defibrillation reduces the probability of survival by 10 to 15 per cent.

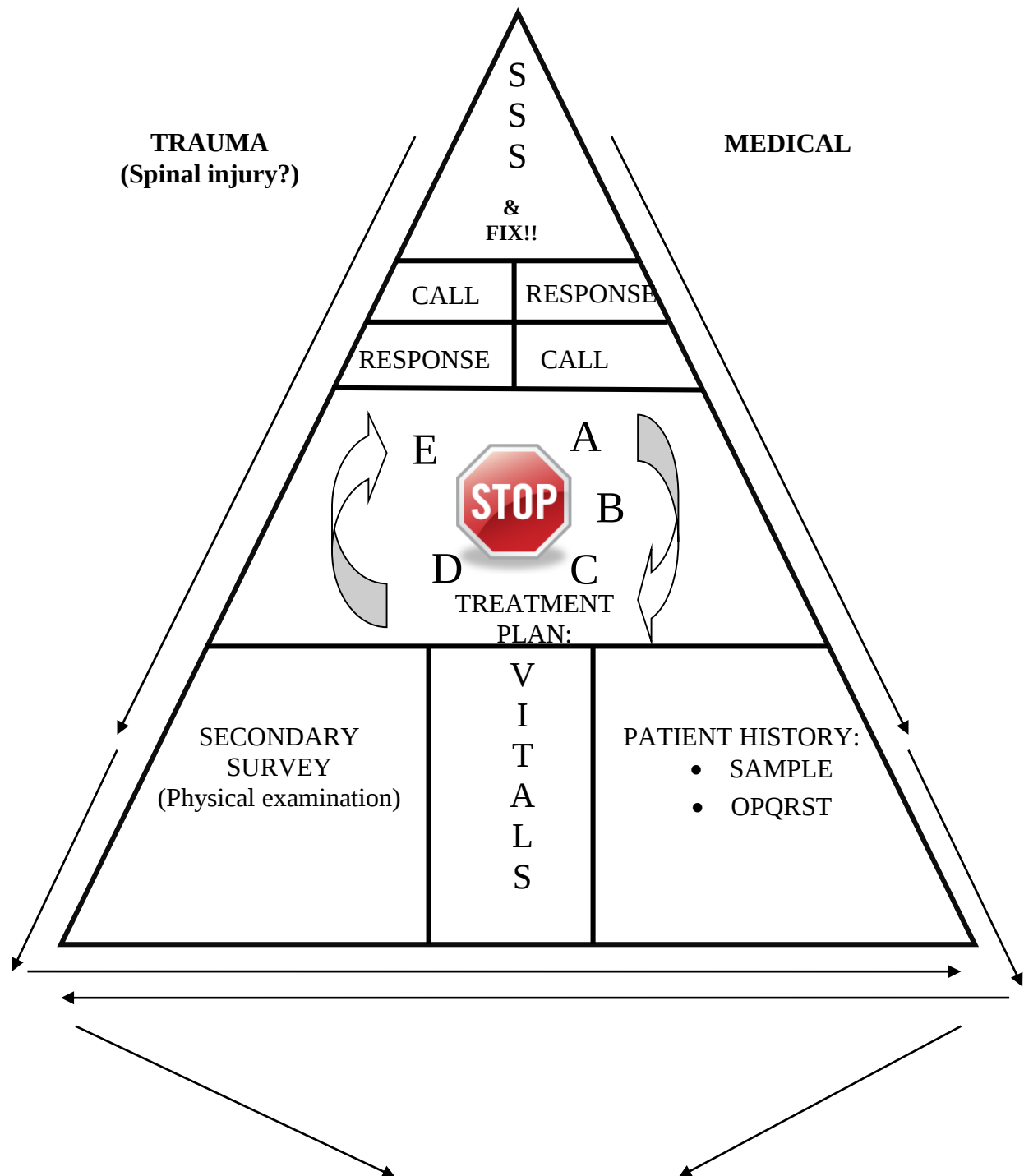
Step 4: Early advanced life support and post-resuscitation care. The quality of treatment during the post-resuscitation phase is crucial. Victims of cardiac arrest need immediate CPR. This provides a small, but immediate flow of oxygen-rich blood to the heart and brain.

Step 5: Immediate transportation to a hospital's emergency department by an ambulance with trained personnel, equipped with an automated external defibrillator and oxygen may save the person's life.



Chapter 4 Annex B

Patient assessment triangle



Chapter 4 Annex C

Patient assessment aide-memoire

A. Safety

The question to ask is: is the scene safe?

1. Take appropriate measures to ensure your safety and the safety of the patient.
2. Body substance isolation: gloves, prepare pocket mask (if applicable).

B. Scene

It will be important to determine the nature of the injury.

1. Is this a trauma or a medical incident?
2. If trauma, is there a likelihood of spinal injury? Does the mechanism of injury involve speed and impact, falls from greater than body height, diving from height, penetration of spinal column and hanging?

C. Situation

It will be important to know how many casualties there are.

D. Call

When calling for support, use the METHANE concept for major incidents:

1. **Major** incident.
2. **Exact** location.
3. **Type** and time of incident.
4. **Hazards** (fire, hazardous materials, unstable building, violent crowd, etc.).
5. **Access** (best access route for emergency services).
6. **Number** and nature of casualties.
7. **Emergency** services present and required

E. Response

Take the following actions to elicit response:

1. Shout, shake or pinch.
2. If mass casualty incident, call out and ask all who can walk to move to a designated area.

F. Primary Survey - ABCDE

Primary survey should follow the ABCDE concept:

A-AIRWAY

1. Check for foreign body obstruction. If unconscious, open with jaw thrust for trauma victims or head tilt/chin lift for medical victims. Use head tilt/chin lift also for mass casualty situations.
2. For unconscious patients, insert an oropharyngeal airway where possible, i.e. if the patient has no gag reflex.

B-BREATHING

1. Look, listen and feel for 10 seconds if unconscious.
2. Briefly assess rate (excessively fast or slow?), depth and sounds.
3. Do both sides of the chest move equally?

C-CIRCULATION

1. Look for bleeding. Identify and stop bleeding: direct pressure and elevation. Indirect pressure if required. Tourniquet above elbow or knee as a last resort.
2. Check general circulation by noting skin colour, temperature, moisture and checking capillary refill or presence of radial pulse.
3. Cool burns and remove jewellery at this stage.

D-DISABILITY

1. Assess level of responsiveness with AVPU
 - (a) Alert and orientated: to person, place, time, and event (A+Ox4)
 - (b) Verbal: responds to verbal stimulus (open your eyes, squeeze my hand)
 - (c) Pain: responds to earlobe pinch/sternum rub.
 - (d) Unresponsiveness: Does not respond to verbal or pain stimuli.
2. Re-assess likelihood of spinal injury. Ask patient: What happened? Where does it hurt? Does your neck or back hurt? Can you move your hands and feet?
3. Where spinal injury is suspected, stabilize the cervical spine as soon as possible by holding the head in a neutral in-line position.
4. If alone, apply cervical collar after checking neck.

E-EXPOSURE

1. Protect patient from exposure. Cover with emergency blanket if cold or in shock, position patient as appropriate (e.g. shock position, half-seated), make comfortable and loosen clothing.
2. Expose injuries. Use trauma shears (in instrumentation kit).

Following the above assessment, the examiner should consider transport priority and means.

G. Secondary survey

The secondary survey should include:

1. Head to toe physical examination checking for:
 - (a) Deformities
 - (b) Contusions
 - (c) Abrasions
 - (d) Punctures
 - (e) Bleeding/burns (any other bleeding missed during primary survey)
 - (f) Tenderness
 - (g) Lacerations
 - (h) Swelling
2. Check gloves often for blood.
3. Particular signs of serious injury include:
 - (a) Pupils not equal, round or reactive to light
 - (b) Cerebral spinal fluid leaking from ears or nose
 - (c) Raccoon eyes (bruising under both eyes)
 - (d) Battle's sign (bruising behind ears)
 - (e) Distended jugular veins
 - (f) Deviated trachea
 - (g) Sub-cutaneous emphysema ('snap, crackle, pop')
4. Apply cervical collar after assessing head and neck if not already applied at D-Disability.
5. Assess circulation sensation and motor function in extremities, especially where fractures are found.
6. Realign fractures where required with gentle traction. Do not splint at this stage. Complete examination.
7. Expose and palpate abdomen
8. Gently apply pressure to hips to ascertain whether fractured.

- For unconscious medical patients look for clues as to nature of illness such as medic-alert bracelet, epinephrine/atropine (epi-pen), metered dose inhaler, prescription medicines.

H. Vitals

Time	HR	RR	BP	SCTM	Cap refill/ Radial pulse	Level of Responsiveness
09:10	76	16	130/70	PWD	<2s	A+Ox4

- Heart rate (HR): normal adult 60-100
- Respiration rate (RR): normal adult 12-20
- Blood pressure (BP): normal in vicinity of 130/70. When measured by palpation, BP is recorded as systolic/p, e.g. 130/p (reported as one thirty over palp).
- Skin colour, temperature, moisture (SCTM): for example, pink, warm, and dry
- Alert and orientated to person, place, time, and event (A+Ox4): level of responsiveness noted according to AVPU assessment (see D-Disability).

I. Patient history

The patient's history should be taken using the SAMPLE concept:

- Symptoms** (Where does it hurt? Can you describe the pain? Use OPQRST (below) for more detail)
- Allergies** (Do you have any allergies? Have you been exposed to the allergen?)
- Medications** (Have you been taking any drugs or medications? Are there any medications that you should be taking but haven't?)
- Pertinent medical history** (Have you experienced anything like this before?)
- Last intake/output** (When was the last time you have something to eat and drink? What did you have? When was the last time you went to the toilet? Was it normal? Was urine clear?)
- Events leading to episode** (How did the accident happen? What were you doing before you felt ill?)

J. OPQRST

- Onset** (How did the pain start?)
- Provokes/palliates** (What makes it better? What makes it worse?)
- Quality** (Can you describe the pain? Is it throbbing, aching, dull, sharp?)
- Radiates/refers** (Is the pain spreading? Can you feel pain anywhere else?)
- Severity** (On a scale of 1-10, with 10 being the worst pain you have ever experienced, how would you rate this pain?)

6. **Time** (Is it getting better or worse with time?)

K. Next steps

1. Call mission pre-identified emergency crisis centre and provide summary of assessment and treatment provided.
2. Insert intravenous therapy and splint, as applicable, after the patient assessment is completed and a baseline set of vitals and patient history have been obtained.
3. Package patient for transport.
4. Continue to monitor vital signs and check circulation, sensation, and motor function regularly where splints have been applied.

Chapter 4 Annex D

Benchmark staffing requirement

Large mission: >1,000 staff								
Start up			On-going					
Title	Grade	Number	Title	Grade	Number	Title	Grade	Number
Chief Medical Officer	P5	1	Chief Medical Officer	P5	1	Chief Medical Officer	P5	1
Administrative Assistant	FS4	1	Medical Officer	P4	1	Administrative Assistant	FS4	1
Medical Officer	P4	1	Pharmacist	P3	1	Medical Officer	NO-C	1
Pharmacist	P3	1	Medical Officer	NO-C	2	Head Nurse	P3	1
			Medical Officer	UNV	2	Pharmacist	P3	1
			Nurse	FS5	2			
			Registry Assistant	FS4	1			
			Nurse	GS5	3			
			Health and Safety Assistant	GS5	1			
			Dentist	P3	1			
			Driver	GS3	2			
			Head Nurse	P3	1			
			Medical Officer	P3	1			
			Laboratory Officer	P3	1			
			Pharmacy Technician	FS6	1			
			Health and Safety Assistant	FS5	1			
			Administrative Assistant	FS4	1			
			Pharmacy Technician	GS5	1			
			Laboratory Technician	GS5	1			
			Dental Assistant	GS5	2			

Medium mission: 500-1,000 staff								
Start up			On-going			Liquidation		
Title	Grade	Number	Title	Grade	Number	Title	Grade	Number
Chief Medical Officer	P4	1	Chief Medical Officer	P4	1	Chief Medical Officer	P4	1
Administrative Assistant	GS5	1	Medical Officer	P3	1	Pharmacist	P3	1
Medical Officer	NO-C	1	Pharmacist	P3	1	Administrative Assistant	GS5	1
Pharmacist	P3	1	Laboratory Officer	P3	1	Medical Officer	NO-C	1
Head Nurse	FS6	1	Health and Safety Officer	P3	1	Head Nurse	FS6	1
			Administrative Assistant	GS5	1			
			Nurse	GS5	3			
			Dentist	P3	1			
			Dental Assistants	GS5	2			
			Medical Officer	NO-C	2			
			Head Nurse	FS6	1			
			Medical Officer	UNV	2			
			Nurse	FS4	2			
			Registry Assistant	GS4	1			
			Pharmacy Technician	GS5	1			
			Driver	GS3	2			

Small mission: Less than 500 staff								
Start up			On-going			Liquidation		
Title	Grade	Number	Title	Grade	Number	Title	Grade	Number
Chief Medical Officer	P4	1	Chief Medical Officer	P4	1	Chief Medical Officer	P4	1
Administrative Assistant	GS5	1	Laboratory Technician	FS4	1	Administrative Assistant	GS5	1
Medical Officer	NO-C	1	Health and Safety Assistant	FS4	1	Medical Officer	NO-C	1
Pharmacist	FS6	1	Medical Officer	UNV	2	Pharmacist	FS6	1
Head Nurse	FS6	1	Nurses	GS5	3	Head Nurse	FS6	1
			Administrative Assistant	GS5	1			
			Medical Officer	NO-C	2			
			Pharmacist	FS5	1			
			Head Nurse	FS5	1			
			Registry Assistant	GS4	1			
			Driver	GS3	2			

Medical services: Level 2 hospital module		
Title	Grade	Number
Chief Medical Officer	P4	1
Medical Officer	P4	1
Medical Officer	NO-C	4
Dentist	UNV	1
Pharmacist	P3	1
Health and Safety Officer	P3	1
Laboratory Technician	GS6	2
Nurse	GS5	2
Registry Assistant	GS5	1
Administrative Assistant	GS5	2
Medical Officer	P3	1
Dentist	P3	1
Head Nurse	P3	1
Laboratory Officer	NO-C	1
Nurse	FS4	10
Radiology Technician	GS6	2
Pharmacy Technician	GS5	1
Medical Officer	UNV	2
Dental Assistant	GS5	2

Surgery module		
Medical services: Surgery module (optional)		
Title	Grade	Number
Medical Officer	P4	1
Medical Officer	P3	2
Nurse	FS5	2
Nurse	GS5	2

Radiology module		
Medical services: Radiology module (optional)		
Title	Grade	Number
Medical Officer	P3	1
Radiology Technician	GS5	2

Dentistry module		
Medical services: Dentistry module (optional)		
Title	Grade	Number
Dentist	P3	1
Dental Assistant	GS5	2

Laboratory module		
Medical services: Laboratory module (optional)		
Title	Grade	Number
Laboratory Officer	P3	1
Laboratory Technician	GS5	2

Chapter 5

Health care policies and procedures - 1 (medical screening/fitness to work)

A. Introduction

Health care policies define the decisions, plans and actions that should be undertaken to achieve specific health care goals within the mission area. This chapter therefore describes health care policies with the view of establishing United Nations medical standards for field operations by defining the standards and procedures for medical examinations. It also aims to determine a minimum set of medical conditions that preclude deployment to PKOs.

B. United Nations medical standards

United Nations medical standards ensure, as far as possible, that staff members and peacekeepers are physically and mentally fit to perform the duties for which they have been selected without risk to their own health and safety or the health and safety of others.³⁸

1. United Nations procedures for medical examination and medical clearance³⁹

Peacekeeping environments are hazardous, high-risk work environments. Harsh environmental conditions, combined with a risk of accident or injuries due to hostile actions, mean that peacekeepers must be in very good medical condition. The purpose of medical examination and clearance is to ensure that peacekeepers meet all the United Nations-mandated pre-deployment standards, failing which they shall not deploy.⁴⁰ The examining physician must therefore determine the fitness of an individual with a thorough medical examination, and take into consideration that he or she may be deployed in a potentially hostile environment. It is noted that fitness must not simply imply absence of disease, but also the ability to work effectively under such circumstances. Pre-deployment clearance is valid for six months before deployment date, unless there is a medical incident following the clearance. The medical clearance procedures for the various categories of personnel and peacekeepers are as explained below:

- (a) Formed military and police units: Medical examination and clearance of personnel remain the responsibility of the TCC/PCC. Though the TCC/PCC could employ national medical standards to determine the fitness of an individual for deployment, any national standard must meet the mandatory United Nations medical standards, which shall be taken as the minimum acceptable standard for deployment to United Nations PKOs. The pre-deployment comprehensive health assessment shall at a minimum include:

³⁸ Takes reference from STA/AI/2011/3, dated 14 April 2011, which is subject to periodic review by MSD.

³⁹ See details in Medical Guidelines for Peacekeeping Operations-Pre-deployment medical examinations of Uniformed Peacekeepers.

⁴⁰ Compliance with United Nations medical standards requirements is mandatory. Uniformed peacekeepers who deploy with pre-existing medical conditions will be repatriated at cost to the contributing country.

- A medical history;
- A complete physical examination; findings must be recorded in the United Nations MS-2 or Entry Medical Examination Form (see Chapter 5 Enclosure 1);
- A chest X-ray, the findings of which must be recorded in the United Nations MS-2 form;
- Laboratory investigations, including haematology, erythrocyte sedimentation rate, blood chemistry, urinalysis, Venereal Disease Research Laboratory test and voluntary confidential counselling and testing for HIV;
- An electrocardiogram (ECG/EKG), to be done for all candidates above 40 years of age and those with a clinical indication despite their age;
- Pre-deployment mental health assessment by a clinical psychologist, including the history of substance abuse, if any;
- If any specific health risk factors are detected, a complete investigation should be conducted and results attached to the MS-2 form; and
- All vaccinations as required and recommended by MSD.

Copies of the certified MS-2 Form of the examined peacekeepers shall be submitted by the Unit Medical Officers to the Office of the CMO/FMO on arrival to the mission area. They should also be returned to the Unit on repatriation.

(b) UNMEM, SOs and United Nations IPOs: UNMEM, SOs and UN IPOs will be examined by a duly qualified physician in accordance with United Nations medical standards to determine fitness for duty. The United Nations MS-2 or Entry Medical Examination Form (see Chapter 5 Enclosure 1) should be used. The following additional information is also required:

- A medical history;
- A complete physical examination; findings must be recorded in the United Nations MS-2 or Entry Medical Examination Form (see Chapter 5 Enclosure 1);
- A chest X-ray, the findings of which must be recorded in the United Nations MS-2 form;
- Laboratory investigations, including haematology, erythrocyte sedimentation rate, blood chemistry, urinalysis, Venereal Disease Research Laboratory test and voluntary confidential counselling and testing for HIV;
- An electrocardiogram (ECG/EKG), to be done for all candidates above 40 years of age and those with a clinical indication despite their age;

- Pre-deployment mental health assessment by a clinical psychologist, including the history of substance abuse, if any;
- If any specific health risk factors are detected, a complete investigation should be conducted and results attached to the MS-2 form; and
- All vaccinations as required and recommended by MSD.

After the United Nations has officially notified the TCC/PCC permanent mission that a candidate has been selected, the permanent mission is requested to promptly submit the medical forms to the appropriate United Nations office (normally the FGS/OMA/DPKO or Police Division, DPKO). The recruitment offices will log in the medical records and submit them in a sealed envelope to MSD/DM for their processing and clearance. After receiving confirmation from MSD/DM that the candidate is medically cleared, the recruiting office will continue the recruitment process. It is important to note that only medical examinations and investigations conducted within six months of the proposed deployment date are considered valid.

2. Medical clearance classification

Individuals evaluated under the medical fitness standards contained in this manual will be reported as indicated below with the maximum medical confidentiality:

- (a) Fit: individuals who are fit to perform the functions for which they have been selected;
- (b) Not fit: individuals who are not fit to perform the functions for which they have been selected.

3. Disqualifying medical conditions that preclude participation in peacekeeping operations

Chapter 5 Annex A provides a non-exhaustive list of medical conditions that preclude service in PKOs. Conditions must, however, be carefully assessed on a case-by-case basis, taking into account the severity of the condition and the particular area for which the peacekeeper is being examined.

4. Medical examination during tour of duty and upon departure

UNMEM and United Nations IPOs are required to undergo a full medical examination while in the mission area, under the following circumstances:

- (a) Following a service-related accident or serious injury that did not result in the repatriation of the UNMEM and United Nations IPO.
- (b) When his or her tour of duty is extended for three months or more.
- (c) An exit medical evaluation is not normally required unless specific circumstances indicate that the health of a departing peacekeeper may have been affected by injury or illness attributable to the performance of official

duties on behalf of the United Nations. The CMO or FMO is to ensure that medical examinations of military/police personnel comply with United Nations requirements.

C. HIV testing policy for United Nations field missions

1. Background

The transmission of HIV among field mission personnel and host communities is a concern for the United Nations. The United Nations has developed pre-deployment Standardized Generic Training Modules, as well as in-mission HIV and AIDS awareness training and prevention programmes. Abstinence in the field is encouraged; however, male and female condoms are made available for distribution to contingents and United Nations civilian personnel. Treatment for common sexually transmitted infections (STI) is also available. This document outlines the United Nations policy with regard to HIV testing of uniformed peacekeepers.

The United Nations HIV testing policy conforms to international human rights norms. The United Nations therefore supports the right of the individual to know his or her HIV status without fear of personal or professional discrimination. An HIV test should be accompanied by the provision of pre-test information and individual post-test counselling. Providing the scope for individuals to make informed and independent decisions to find out their HIV status is a critical approach to influencing behaviour and preventing further transmission.

In line with United Nations Security Council Resolutions 1308 (2000) and 1983 (2011), DPKO strongly supports a policy of voluntary confidential counselling and testing. The United Nations is cognizant of the fact that some TCCs/PCCs have a mandatory testing policy as a part of comprehensive health assessments and do not deploy HIV positive personnel. The United Nations respects this national requirement.

2. HIV testing

HIV testing includes:

- (a) Pre-deployment HIV Testing: The sole medical criterion for deployment is fitness to work. HIV status does not, in itself, constitute a lack of fitness for deployment in a peacekeeping mission.
- (b) In-mission: The mission must ensure that all United Nations personnel in the mission area, including uniformed personnel, have access to HIV induction training and HIV testing and counselling, including pre-test information and individual post-test counselling, at no cost to the individual. Within the health facilities setting, prior to HIV testing, the individual should review relevant pre-test information, and be informed that HIV testing will be performed unless they decline. With such notification, consent for HIV testing is

assumed to have been incorporated into the patient's general informed consent for medical care, as is the case with other tests. A separate consent form for HIV testing is not recommended. Verbal communication is normally adequate for the purpose of obtaining informed consent. A verbal consent should always be given by the individual prior to HIV testing.³⁷ Where the knowledge of HIV status is important in the choice of medical treatment and the patient is unable to give informed consent (verbal or written), a written consent may be obtained from the unit commanding officer as part of the patient's medical records. In mission areas, confidentiality regarding both the request for a test and the test result must be maintained. Results are medical-in-confidence, and may only be shared with the consent of the individual, with the following exceptions:

- The medical service provider (Level 1-4 medical facility or MEDEVAC team) shall be informed in order to ensure the patient receives appropriate treatment and that appropriate safeguards are taken during treatment;
- The CMO/FMO and MSD shall be informed to ensure the appropriate handling of the patient's case;
- The battalion medical commander shall be informed to ensure the patient receives appropriate on-going medical care; and
- Requests for medical records received by MSD from the permanent mission of the patient's country shall normally be granted.

Should a known HIV-positive individual be deployed in a United Nations mission, his/her status shall be made known to the CMO/FMO or their designate and attending doctor at the time of deployment. Any individual with clinical symptoms or signs of AIDS must be repatriated to his home country once the diagnosis has been made. The United Nations strongly encourages HIV testing and counselling to be made available to all peacekeepers upon their return home.

3. HIV and AIDS focal points

It is strongly recommended that the contingent medical officers function as HIV and AIDS focal points in the contingent, and are certified to provide pre-test information and conduct individual post-test counselling.⁴¹

4. Exposure to blood

Universal/standard precautions (i.e. treating all blood and body fluids as potentially infectious) must be adopted in all health facilities. Health care workers should be trained in such routine precautions. All personnel deployed in United Nations field missions must be provided with and required to use rubber gloves in emergency and humanitarian response work. It is the responsibility of the CMO or the FMO in the

⁴¹ For information on the requisite training programme required prior to deployment to the field, see Chapter 16 Annex.

mission to liaise with HIV units to ensure the availability and use of post-exposure prophylaxis kits in cases of occupational exposure or sexual assault. These kits should be distributed to United Nations clinics and all levels of contingent medical facilities. The kits are to be funded through the mission budget.

5. Review of the HIV/AIDS policy

This policy is based on currently available qualitative and empirical data. DPKO/DFS shall review it regularly with MSD, in consultation with the Joint United Nations Programme on HIV/AIDS (UNAIDS) and WHO, to take into account any developments in medical treatment and recommendations with regard to HIV and AIDS.

Annex:

Chapter 5 Annex A: Medical conditions precluding participation in peacekeeping operations

Enclosure:

Chapter 5 Enclosure 1: MS-2 or Entry Medical Examination Form

Chapter 5 Annex A

Medical conditions precluding participation in peacekeeping operations

Immunisation • Failure to provide proof of having received all United Nations-mandated immunisations	Skin problems • An active skin disease such as eczema or widespread psoriasis
Chest • Asthma, strong asthma-like symptoms or treatment for related illnesses within the last four years • Chronic lung diseases such as emphysema, bronchiectasis or cystic fibrosis • Active tuberculosis	Any known heart disease • Hypertension not controlled with medication • Recent episodes necessitating emergency room visits or closely monitored follow-up care • Pacemakers • Conditions requiring anticoagulants • Coronary heart diseases
Back problems • Spinal surgery (including internal fixation or fusion) • Recurrent lower back pain	History of cancer Soldiers with a history of cancer who have been on palliative treatment, but have a requirement for periodic monitoring every six months or less, should not deploy.
Bone and joint problems • Meniscectomy (knee cartilage operation) within the last year • Lower limb fractures with internal fixation (metalwork) still in place • Loss of a limb • Complete loss of a thumb or big toe • Clubfoot (including past surgery) • Chronic joint diseases such as ankylosing spondylitis, psoriatic arthritis, rheumatoid arthritis or gout • Reiter's disease within the last five years • Osteochondritis dissecans	Other conditions • Loss of spleen (splenectomy) • Having received transplanted organs • Severe allergic reactions or anaphylaxis • Severe nut allergy • Circulation problems such as Raynaud's phenomenon • Insulin dependent diabetes • Diseases requiring long-term medication, continuous monitoring or replacement therapy such as endocrine diseases • Known allergy to or intolerance of anti-malarial medication; • Any immunocompromised condition, including AIDS • History of being hepatitis B or C carrier • Cholera

Eye disorders • Chronic eye diseases such as glaucoma, keratoconus and retinitis pigmentosa • Surgery for a squint within the last six months • Corneal problems such as a corneal graft or recurrent corneal ulcers • Loss or dislocation of an eye lens • Cataract or cataract surgery • Detached retina	Chronic medical conditions Any chronic illness requiring: • Regular medication(s) and where maintenance medication is of such toxicity as to require frequent clinical and laboratory follow up; or • Where the chronic medical condition requires frequent follow up that cannot be delayed for the duration of the tour, e.g. malignant tumours.
Ear disorders • Current perforation of ear drum • Chronic ear diseases such as cholesteatoma • Presence of eardrum 'grommets'	Kidney diseases • Chronic nephritis and urolithiasis • Polycystic kidney disease or kidney stones • Donation of a kidney within the last two years • Kidney disease within the last two years
Abdominal Disorders • Chronic abdominal diseases such as Crohn's Disease or ulcerative colitis	Pregnancy • Pregnant peacekeepers will be repatriated at the end the fifth month of gestation, to ensure that the health and wellbeing of the peacekeeper and her child is not put at risk.
Neurological disorders • Epilepsy or more than one seizure or fit after the age of five • Any seizure or fit within the last 10 years • Multiple sclerosis	Psychiatric conditions • Schizophrenia • Obsessive-compulsive disorder • Alcohol or drug dependence • Post-traumatic stress disorder
Blood diseases • Sickle cell anaemia • Congenital spherocytosis • Thalassemia • AIDS • Being a carrier of hepatitis B or C • Past history of leukaemia or malignant lymphoma. Must be disease, treatment and review free for five years.	

Chapter 5 Enclosure 1

MS2 or Entry Medical Examination Form

FAO	IAEA	ILO	ITC	ITU	UN	UNDP	UNESCO	UNICEF	UNIDO	WHO	WIPO	WMO	WTO	
CONFIDENTIAL		ENTRY MEDICAL EXAMINATION							UNITED NATIONS AND SPECIALIZED AGENCIES					
I hereby authorize any of the doctors, hospitals or clinics mentioned in this form to provide the United Nations Medical Service with copies of all my medical records so that the Organization can take action upon my application for employment. I certify that the statements made by me in answer to the questions below are, to the best of my knowledge, true, complete and correct. I realize that any incorrect statement or material omission in the medical information form or in any other document required by the Organization renders a staff member liable to termination or dismissal. Date:(dd/mm/yy)d _____ Signature: _____														
Pages 1 and 2 are to be completed by the candidate														
FAMILY NAME (IN BLOCK CAPITALS)						MAIDEN NAME (FOR WOMEN ONLY)				SEX ☐ M ☐ F				
ADDRESS (STREET, TOWN, DISTRICT OR PROVINCE, COUNTRY)								DATE OF BIRTH						
								NATIONALITY						
POSITION APPLIED FOR (DESCRIBE NATURE OF WORK)						TELEPHONE				BIRTHPLACE				
						PRESENT MARITAL STATUS Single ☐ Married ☐ DATE: (d/m/y) _____ Divorced ☐ DATE: (d/m/y) _____ Separated ☐ DATE: (d/m/y) _____ Widowed ☐ DATE: (d/m/y) _____								
DUTY STATION														
Have you ever undergone a medical examination for the United Nations or one of its agencies? _____ Have you ever been employed by the United Nations or one of its agencies? _____ If so, please state when, where and for which Organization: _____														
FAMILY HISTORY														
Relative	Age (if still alive)	State of Health (If still alive, present state; if deceased, cause of death)		Age At death	Have members of your family had the following illnesses or disorders?		Yes	No	Who?					
Father					High Blood Pressure		☐	☐						
Mother					Heart Disease		☐	☐						
Brothers					Diabetes		☐	☐						
Sisters					Tuberculosis		☐	☐						
Spouse					Asthma		☐	☐						
Children					Cancer		☐	☐						
					Epilepsy		☐	☐						
					Mental Disorders		☐	☐						
					Paralysis		☐	☐						
TO BE COMPLETED BY THE OFFICIAL REQUESTING THE MEDICAL EXAMINATION							TO BE COMPLETED BY THE DIRECTOR OF THE MEDICAL SERVICE							
Name of Official: _____ Department or Unit: _____ Date: _____							Medical Classification: ☐ 1a ☐ 1b ☐ 2a ☐ 2b Comments: _____ DATE: (d/m/y) _____ Signature: _____							

Chapter 5 Enclosure 1

VERY IMPORTANT: Please indicate the recruiting Agency or Organization:

Each question requires a specific answer (yes, no, date, etc.); to leave a blank or draw a line is not sufficient. If the questionnaire is not fully completed and enquiries are therefore needed, time may be lost.

1. Have you suffered from any of the following diseases or disorders? Check yes or no. If yes, **state the year.**

	YES Date	NO		YES Date	NO		YES Date	NO		YES Date	NO
Frequent sore throats		☐	Heart and blood vessel disease		☐	Urinary disorder		☐	Fainting spells		☐
Hay fever		☐	Pains in the heart region		☐	Kidney trouble		☐	Epilepsy		☐
Asthma		☐	Varicose veins		☐	Kidney stones		☐	Diabetes		☐
Tuberculosis		☐	Frequent indigestion		☐	Back pain		☐	Gonorrhoea		☐
Pneumonia		☐	Ulcer of stomach or duodenum		☐	Joint problems		☐	Any other sexually transmitted disease		☐
Pleurisy		☐	Jaundice		☐	Skin disease		☐	Tropical diseases		☐
Repeated bronchitis		☐	Gall stones		☐	Sleeplessness		☐	Amoebic dysentery		☐
Rheumatic fever		☐	Hernia		☐	Any nervous or mental disorder		☐	Malaria		☐
High blood pressure		☐	Haemorrhoids		☐	Frequent headaches		☐			☐

2. Are you being treated for any condition now? _____ Describe: _____

3. Have you ever coughed up blood? _____

4. Have you ever noticed blood in your stools? _____ In your urine? _____ Give details: _____

5. Have you ever been hospitalized (hospital, clinic, etc.)? _____

Why, where and when? _____

6. Have you ever been absent from work for longer than one month through illness? _____ If so, when? _____

And for what illness? _____

7. Have you had any accidents as a result of which you are partially disabled? _____ If so, what and when? _____

Do you have any other disability? _____

8. Have you ever consulted a neurologist, a psychiatrist or a psychoanalyst? _____

If so, please give his/her name and address: _____

For what reason? _____ Date of consultation:(d/m/y) _____

9. Are you taking any medicine regularly? _____ If so, which? _____

10. Have you gained or lost weight during the last three years? _____ If so, how much? _____

11. Have you ever been refused life insurance? _____ If so, state reason: _____

12. Have you ever been refused employment on health grounds? _____ If so, state reason: _____

13. Have you ever received or applied for a pension or compensation for any permanent disability? _____ Degree? _____

Please give details: _____

14. Have you ever stayed in a tropical country? _____ If so, for how long? _____

15. Have you in the past suffered from any condition which prevented travel by air? _____

16. Do you consider yourself to be in good health? _____ Do you have full work capacity? _____

17. Do you smoke regularly? ☐ Yes ☐ No If so, what do you smoke? ☐ Cigarettes ☐ Pipe ☐ Cigars

For how many years have you smoked? _____ How much per day? _____

18. Daily consumption of alcoholic beverages: _____

19. Has any doctor or dentist advised you to undergo medical or surgical treatment in the foreseeable future? _____

Give details: _____

20. Give any other significant information concerning your health: _____

21. What is your occupation? _____ Indicate at least three posts you have occupied: _____

22. List any occupational or other hazards to which you have been exposed: _____

23. Have you been rejected for military service for medical reasons? _____

24. **FOR WOMEN** Are your periods regular? ☐ Yes ☐ No | Do you take contraceptive pills? ☐ Yes ☐ No If so, for
Are they painful? ☐ Yes ☐ No | how many years have you been doing so? _____ Have you ever
Do you have to stay in bed when they come? ☐ Yes ☐ No | been treated for a gynaecological complaint? ☐ Yes ☐ No

If so, for how long? _____ Date of your last period: _____ If so, which? _____

TO BE COMPLETED BY THE EXAMINING PHYSICIAN					
<u>GENERAL APPEARANCE</u>			Height: _____ Weight: _____		
Skin: _____			Scalp: _____		
<u>SIGHT, MEASURED VISUAL ACUITY</u>					
Gross vision	_____	Left	_____	Pupils: Equal?	_____ Regular? _____
Vision with spectacles	_____	Left	_____	Fundi (if necessary): _____	
Near vision	_____	Left	_____	Colour vision: _____	
With correction	_____	Left	_____		
HEARING	Right	_____	Sufficient:	_____	Insufficient: _____
(test by	Left	_____	Sufficient:	_____	Insufficient: _____
whispering)	Ear drum	_____	Left:	_____	
<u>NOSE-MOUTH-NECK</u>					
	Nose	_____	Pharynx	_____	Teeth _____
	Tongue	_____	Tonsils	_____	Thyroid _____
<u>CARDIOVASCULAR SYSTEM</u>					
Pulse rate :	_____	Auscultation :	_____	<u>Peripheral arteries</u>	
Rhythm :	_____	Blood pressure :	_____	-carotid :	_____
Apex beat :	_____	Varicose veins :	_____	-posterior tibial :	_____
Electrocardiogram	_____			-dorsalis pedes :	_____
				Please attach tracing	
<u>RESPIRATORY SYSTEM</u>					
Thorax: _____			Breasts _____		
<u>DIGESTIVE SYSTEM</u>					
Abdomen _____			Spleen: _____		
Liver _____			Hernia: _____		
			Rectal examination: _____		
<u>NERVOUS SYSTEM</u>					
			Plantar reflexes _____		
Papillary reflexes:	{	- To light: _____	Motor functions _____		
		- On accommodation: _____	Sensory functions _____		
Patellar reflexes :	_____		Muscular tonus _____		
Achilles reflexes:	_____		Romberg's sign _____		
<u>MENTAL STATE</u>					
Appearance: _____			Behaviour: _____		
<u>GENITO-URINARY SYSTEM</u>					
Kidneys: _____			Genitals: _____		
<u>SKELETAL SYSTEM</u>					
Skull : _____			Upper extremities: _____		
Spine: _____			Lower extremities: _____		
<u>LYMPHATIC SYSTEM</u>					
<u>CHEST X-RAY</u> (Please send only the radiologist's report based on a "full-size" X-ray film).					

LABORATORY

The results of all the following investigations must be included except where marked "if indicated".

Except by prior agreement, only the investigations mentioned are done at the Organization's expense.

<u>Urine</u> :	_____	Sugar	_____	Microscopic	_____
<u>Blood</u> :	_____	%	_____	Leucocytes :	_____
	_____	%	_____	Differential count (if indicated):	_____
	_____			Blood sedimentation rate:	_____
<u>Blood chemistry</u> :					
	_____			Urea or creatinine:	_____
	_____			Uric acid	_____
<u>Serological test</u>	Please attach laboratory report				
<u>Stool examination</u> (if					

COMMENTS (Please comment on all the positive answers given by the candidate and summarize the abnormal findings)

CONCLUSIONS (Please state your opinion on the physical and mental health of the candidate and fitness for the proposed post)

The examining doctor is requested before sending this report to verify that the questionnaire, pages 1 and 2 of this form, has been fully completed by the candidate and that all the results of the investigations required are given on the report. Incomplete reports are a major source of delay in recruitment.

Name of the examining physician (in block capitals):	_____
Address:	Signature: _____
	DATE: (d/m/y) _____

Chapter 6

Health care policies and procedures - 2 (entitlement to and provision of medical services)

A. Introduction

Mission medical facilities serve an integrated, uniformed and civilian population. All levels of medical facilities, including Level 1 units and contingent medical facilities, are required to treat all peacekeeping personnel, including military and police formed units and individual officers, international and local civilian staff, and UNVs, within the parameters of the guidelines indicated below. In some missions, United Nations civilian staff from agencies, funds and programmes will receive treatment as well. As a result, medical care must be provided uniformly at a very high standard. United Nations medical facilities are governed by the ethical requirement to provide emergency medical care to all, where possible.

B. Guidelines

1. Members of military/police contingents (contingent and mission staff officers)

The FMO is responsible for ensuring that medical support is available to every contingent serving in the mission. Formed military/police contingent members are required to seek medical treatment at the TCC/PCC medical facility of their unit, except in emergencies, when they can seek treatment in the nearest available medical facility (United Nations or local). Members of uniformed units that do not deploy with their own medical support shall be assigned medical facilities by the FMO, which shall be used except in case of emergencies, when the nearest facility may also be used. In all emergency cases, the CMO must be informed as soon as possible, as there may be cost implications when non-United Nations and non-assigned facilities are used. SOs at mission HQ are also assigned to a UNOE or TCC clinic by the FMO.

2. United Nations Military Experts on Mission and United Nations individual police officers

UMNEMs and United Nations IPOs are assigned to either UNOE or COE medical facilities. In case of an emergency, however, these groups can seek treatment at local medical facilities at United Nations cost. All medical claims, including hospitalisation, are to be settled directly by the CMS/DMS, or reimbursed to the individual upon presentation of bills and supporting documentation. In all cases, and when possible, the CMO must be informed beforehand. All United Nations-mandated medical examinations must be carried out by a United Nations-designated physician, normally specified by MSD.

3. United Nations international staff member and United Nations Volunteers

All international civilian peacekeeping staff and UNVs shall be assigned to medical facilities in the same manner as uniformed personnel. When assigned to TCC/PCC medical facilities, reimbursement shall be in accordance with the TCC/PCC MOU. Where the MOU does not indicate coverage of non-contingent staff, the COE fee-for-service rates will apply.

4. United Nations locally recruited staff member

As a rule, locally recruited peacekeeping staff members are expected to receive medical care from host country providers with reimbursement from United Nations-funded insurance coverage. However, should they have no immediate access to medical care, or where medical care within the host country medical facilities is inadequate, health care may be sought in UNOE medical facilities. In the absence of UNOE medical facilities, these staff members are assigned to COE primary and emergency care facilities, as provided in the COE Manual.⁴²

5. Contractors

Neither international nor local contractors are entitled to medical services at cost to the United Nations. They shall, however, be offered services free of charge from a United Nations primary care facility in cases of emergency and work related injuries. The CMS/DMS may grant contractors the same status as United Nations locally recruited staff members as part of their contract. In these cases, treatment in United Nations primary care facilities (Level 1 clinic) will be free of charge. Fee-for-service rates will apply to treatment in contingent-owned facilities.

6. Other United Nations agencies and locally recruited staff

Staff members of other United Nations agencies, funds and programmes and their locally recruited staff are eligible for medical care in mission medical facilities in accordance with the arrangements agreed upon during the integrated mission planning and the MOU negotiations. During the planning and deployment stages, extensive consultation will be held to optimize the use of resources on the ground without duplicating efforts or competing for resources. In the absence of such an MOU, United Nations Country Team (UNCT) staff will have access to mission medical facilities, including contingent facilities, on a fee-for-service basis.

Contingent medical facilities shall not enter directly into any form whatsoever of agreement or contract for the provision of medical services with any other party, including other United Nations agencies, funds and programmes.

⁴² See COE Manual, Chapter 3 Annex B, paragraph 46.

7. All other organisations and people

No other people, including those from other organisations (including NGOs) are entitled to medical services at a cost to the United Nations, except in emergencies. Occasionally, at the discretion of the CMS/DMS or head of mission, medical support could be provided to such entities on a fee-for-service basis with the consent of the TCC/PCC. In the event that such services were to be provided, a waiver of liability would need to be signed prior to the services being rendered.

8. Local population (under United Nations humanitarian mandate)

The primary responsibility of United Nations medical units in field operations remains the provision of medical support to the field mission. However, if the mandate provides for such support to the local population, this is carefully planned for during the integrated assessment process and coordinated between the United Nations, the host country's health services, other United Nations agencies and NGOs in the mission area.

9. Local population (in the absence of a United Nations humanitarian mandate)

The provision of medical care to the other groups of personnel, including the local population, is a sensitive matter, and must be weighed against humanitarian principles and the ethical code of medical practice. There is no obligation for the United Nations medical facility to provide or take responsibility for medical services to the local population, except where it is explicitly stated in the United Nations organization's mandate to do so. However, emergency medical care shall always be provided regardless of the individual person or party's affiliation and within existing capabilities and resources. The case shall be transferred as soon as possible thereafter to a local medical facility.

10. Detainees, prisoners of war, refugees and internally displaced persons

Medical support to this group of people is usually limited to emergency medical care in accordance with international law. The services should be provided as a last resort in collaboration with other interested parties i.e. United Nations agencies, such as the Office for the Coordination of Humanitarian Affairs (OCHA) Liaison Office, the Office of the High Commission for Human Rights (OHCHR) Liaison Office, international organizations, NGOs, belligerent parties, etc., and in cooperation with relevant peacekeeping mission sections such as the Humanitarian Liaison Section, Legal and Civil Affairs, etc.

11. Waiver of liability

United Nations staff not covered by the Staff Rules Appendix D who want to access TCC/PCC and/or UNOE medical facilities, are required to sign waivers of liability.

Chapter 7

Health care policies and procedures - 3 (compensation for injury, illness or death attributable to service for uniformed personnel)

A. Introduction

The United Nations makes provisions for covering the costs incurred for treatment and hospitalisation and making financial awards for disability or death for members of a peacekeeping mission. The Secretary-General's comprehensive review of death and disability benefits to military contingents, Formed Police Units (FPUs), UNMEM and United Nations IPOs (A/63/550) and the subsequent Advisory Committee on Administrative and Budgetary Questions report (A/63/746) and General Assembly Resolution (A/RES/64/269) established the implementation of new procedures intended to simplify, streamline and harmonize the processing of all types of claims for uniformed personnel.

Previously, the Field Personnel Division of the DFS processed death and disability claims for UNMEM and United Nations IPOs, and the FBFD processed these claims for military contingents and FPUs. The above cited Secretary-General's review recommended that the methodology for settling uniformed personnel claims be consolidated under the responsibility of the FBFD of the DFS to expedite and simplify the process. This review also recommended that the ABCC no longer be involved in reviewing claims for UNMEM and United Nations IPOs. As a result, FBFD will no longer refer claims for UNMEM and United Nations IPOs to ABCC.

The above cited General Assembly Resolution/64/269 also increased the level of death compensation for all categories of uniformed personnel to US\$ 70,000. These new procedures came into effect for claims related to incidents that occurred on or after 1 July 2010. Claims received prior to this date will continue to be processed by Field Personnel Division.

B. Criteria to qualify for compensation

The general criteria used to determine eligibility for compensation in case of death or disability of a military or police contingent member, UNMEM and United Nations IPOs are described below:

1. The death, injury or illness must be considered mission-related. Upon receipt of a claim from the TCC/PCC, the FBFD/DFS requests a Notification of Casualty, or "NOTICAS confirmation," from the mission's FC or Police Commissioner, ascertaining whether the death was mission-related;
2. The death, injury or illness must not be the result of gross negligence or wilful misconduct on the part of the uniformed personnel;
3. The death, injury must not be due to a pre-existing medical condition.

C. Disallowed items/claims

All doubtful cases will be given sympathetic consideration of all relevant factors to determine whether such death, injury or illness can be considered mission-related.⁴³

In accordance with the foregoing principles, the United Nations will not normally pay compensation for death or disability to a military or police contingent member, UNMEN and United Nations IPO when such death or disability results from pre-existing medical conditions, suicide or wilful intent to bring about death, injury or illness to himself/herself or another. Where the circumstances of a death, injury or illness are not clearly determined or where there may be other questions, claims may be referred to the Office of Legal Affairs for advice⁴⁴.

D. Submission procedure for Notification of Casualty⁴⁵

Each case of injury or death is to be reported immediately to the DPKO Situation Centre in the form of a Notification of Casualty (NOTICAS). This information will be used for consideration of any subsequent claims.

E. Responsibilities of member states in submission of documentation in support of death and disability claims⁴⁶

The claim should be submitted in the format enumerated in Document A/52/369 Annex IV, along with a copy of the NOTICAS form (see Chapter 7 Enclosures 1).

1. For death claims, attach a copy of the death certificate. In cases of death due to illness, provide a copy of medical reports. The following list indicates, in detail, the necessary supporting documentation:
 - (a) A copy of the death certificate;
 - (b) A copy of the autopsy report, if available;
 - (c) A copy of the pre-deployment medical examination (MS-2 form);
 - (d) A copy of the medical records to determine if there were any pre-existing medical conditions;
 - (e) Medical reports from treating facility/physician;
 - (f) Supporting documents for medical expenses claimed, if any; and
 - (g) A copy of invoices for funeral expenses.

⁴³ See A/RES/61/276, Section X, paragraph 9(f).

⁴⁴ See the Guidelines for Troop-contributing Countries for Submission of Death and Disability Claims under the New Methodology for Incidents Occurring on or after 1 July 1997, paragraph 7.

⁴⁵ See Standard Operating Procedure on Notification of Casualties in Peacekeeping Operations, Situation Centre/DPKO, 3 January 2006. General Assembly Resolutions on death and disability benefits (A/52/369; A/63/550) established the procedure to be followed for processing death and disability claims.

⁴⁶ See General Assembly Resolution A/63/550 on the “Comprehensive Review of the Compensation of Death and Disability Benefits to Military Contingents, FPU, UNMEM and United Nations IPOs.

2. For disability claims, provide the appropriate medical treatment history and final assessment of the extent of disability, as well as any specific medical reports related to the illness/injury. The following list indicates, in detail, the necessary supporting documentation:
 - (a) Recent medical reports from the treating doctors indicating the diagnosis, treatment provided and the determination of disability or permanent loss of function after maximum recovery has been achieved;⁴⁷
 - (b) Any medical reports associated with the injury/illness, not limited to X-ray, CT scans, pathology reports, MRI, etc.;
 - (c) A copy of the pre-deployment medical examination;
 - (d) A copy of the medical records to determine if there were any pre-existing medical conditions; and
 - (e) Supporting documentation for medical expenses claimed, if any.

The list of medical records/report enumerated above is not exhaustive and depends on the nature of injury/illness sustained. The Secretariat considers the claim to be complete when all medical information is submitted by the member state. The settlement is finalized within 90 days of the date when the last relevant document is received.

F. Timeframe for submission of claims⁴⁸

In accordance with the United Nations Financial Regulations, financial obligations may normally be retained in the accounts for 12 months after the end of an accounting period. However, based on special arrangements approved by the General Assembly, other unliquidated obligations for which claims have not yet been received or processed during the relevant financial period are retained and remain valid for an additional period of four years following the end of the 12-month period. Subsequently, all such remaining unliquidated obligations are cancelled and the liquidated amount is returned as credit to member states. For liquidated/closed missions, it is especially important to file claims or issue a statement of intent to file claims (including an estimated amount) no later than 12 months after the completion of the political mandate of the peacekeeping mission. This allows the Secretariat to ensure adequate budgeting provision for settlement of death and disability claims. Accordingly, death and disability claims should be submitted in a timely manner.

However, although the above does not preclude the submission of death and disability claims at a later date, it is important to note that as time elapses, it may become more difficult to substantiate or investigate the underlying incident, verify the facts, obtain additional documentation or seek clarifications. This is particularly the case if the personnel that have pertinent information have departed the mission area or the mission has closed.

⁴⁷ The percentage of impairment will be assessed by the appropriate senior medical authority of the member state on the basis of the latest edition of the American Medical Association Guide.

⁴⁸ See the Guidelines for Troop-contributing Countries for Submission of Death and Disability Claims under the New Methodology for Incidents Occurring on or after 1 July 1997, paragraph 8.

G. Medical confidentiality

Medical information is to be treated as confidential and privileged. This confidentiality must be maintained at all times. Neither medical records nor information shall be released without proper authorization. Under no circumstances should information be provided to anyone not directly involved in the patient's care. An exception would be in the event of a formal investigation or board of inquiry, where there is direction from a relevant authority to release such information. In this regard, in the preparation of NOTICAS, it is important to ensure that every individual's right to medical confidentiality is balanced with the organization's needs and purposes. To achieve this, the NOTICAS shall not include specific details pertaining to an individual's medical diagnosis, underlying medical condition(s) or any medical records.

Care must be taken to ensure confidentiality in the transfer of patient medical records, the submission of reports and other routine administrative processes (e.g. compiling and submitting disbursement vouchers for medical expenses). Reports sent via United Nations pouch or the postal services should be properly sealed and marked with the instruction, "to be opened by addressee only".

Enclosures:

Chapter 7 Enclosure 1: Notification of Casualty form

NOTICAS Form

United Nations		Nations Unies
----------------	---	---------------

NOTICAS

Reference:	Mission:	Date Sent:
A	DATA ON INDIVIDUAL	
1.	Last name	
2.	First name and middle names	
3.	Country of nationality	
4.	Gender	[Please choose]
5.	Military rank / civilian equivalent	
6.	Service no. / ID card no.	
7.	Passport number	
8.	Date of birth	
9.	Type of casualty	[Please choose]
10.	Place where victim is located	
B	UNITED NATIONS DATA	
1.	Name of mission	
2.	UN ID card number	
3.	Appointment type	[Please choose]
4.	On duty at time of incident	☐
5.	Date of arrival in the mission	
6.	Overview of function in the mission	
C	NEXT OF KIN DATA	
1.	Name	
2.	Address	
3.	Telephone	
4.	Relationship	
D	DATA ON INCIDENT	
1.	Date/time of incident	
2.	Incident location	
3.	Type of incident/circumstances	[Please choose]
4.	Description of incident	
5.	Additional comments	

Authorized by:

Title:	[Please choose]	Signature
Name:		

Chapter 8

Minimum professional qualification requirements and technical clearance procedures for deployment of medical personnel in field missions

A. Introduction

This chapter establishes professional medical standards under the following considerations as well as technical clearance procedures for deploying medical personnel in field missions:

1. Qualifications and experience of medical care providers
2. Minimum medical care standards
3. Ethical code for medical practitioners
4. Continuing professional development and skills maintenance

B. Qualification and experience of medical care providers

Field medical support capability is closely related to the qualification and capability of medical professionals deployed by member states. The manual on policies and procedures for the reimbursement and control of COE of TCCs/PCCs participating in peacekeeping missions (COE Manual), as well as the general guidelines for TCC deploying military units to United Nations peacekeeping missions (TCC Guidelines), stipulate staffing requirement for all levels of medical facilities in United Nations PKOs. However, these guidelines do not indicate the academic and other professional medical requirements that must be met by the various categories of medical personnel deploying in the field. This manual bridges this gap by:

- Harmonizing the difference in national education and medical practice system among TCCs/PCCs.
- Providing detailed requirements, such as the number of years of practice, national accreditation for unsupervised practice, and the full spectrum of required capabilities within the specialty, to support the deployment of qualified medical personnel that meet operational requirements.

This manual also introduces a United Nations professional technical clearance mechanism based on United Nations medical policies, as defined by MSD and to be implemented by MSS in conjunction with FGS for the deployment of TCC/PCC Level 1, 2 and Level 3 medical facilities.

1. Minimum qualification requirements

(a) Physician/Medical Doctor: For a position in TCC/PCC Level 1, 2 and 3 medical facilities, medical officers with the functional title Medical Doctor or Physician must meet the following professional requirements:

- A university degree in medicine
- A minimum of three years of progressively responsible clinical experience in general medical practice

- Must have acute trauma care and life support certification within 12 months prior to deployment⁴⁹
- Must be currently registered by a national medical board or council to practise medicine in their country or in another United Nations member state.

(b) Specialist Physician/Doctor: For a position in a TCC/PCC Level 2 or 3 hospital with the job title Specialist (e.g. surgeon, anaesthetist, orthopaedic surgeon, gynaecologist, etc.), the following professional requirements must be met:

- A first level university degree in combination with qualifying experience
- Board certified/post-graduate certified by an appropriate body in his/her country following the successful completion of specialist training in the field of specialty, followed by at least two years of practice
- Currently registered to practise medicine and licensed to apply specialty without supervision in own country or another United Nations member state

(c) Clinical Psychologist: For a position in a United Nations mission with the functional title Clinical Psychologist; the following conditions must be met:

- A university degree in clinical psychology
- No less than two years practice as a clinical psychologist after licence
- Must be certified and registered to practice clinical psychology without supervision in his or her own country or another United Nations member state

(d) Dentist: For a position in a TCC/PCC Level 1, 2 or 3 hospital with the functional title Dentist, the following conditions must be met:

- A university degree in dentistry in combination with qualifying experience
- A minimum of two years of progressively responsible clinical experience following certification as a dentist
- Currently registered to practise dentistry in own country or another United Nations member state

(e) Pharmacist: For a position in a TCC/PCC Level 1, 2 or 3 hospital with the functional title Pharmacist, the following conditions must be met:

- A university degree in pharmacy and in combination with qualifying experience

⁴⁹ Training should be equivalent to advanced trauma life support, early management of severe trauma, or similar.

- A minimum of two years of experience after certification as a pharmacist
- Currently registered and licensed to practise as a pharmacist in own country or another United Nations member state

(f) Registered Nurse/Nurse: For a position in a TCC/PCC Level 1, 2 and 3 medical facilities with the functional title Registered Nurse or Nurse, the following conditions must be met:

- Registered professional nurse that has completed an accredited baccalaureate nursing programme (university)⁵⁰ or accredited diploma programme (four years) after high school graduation
- A minimum of two years of progressively responsible clinical experience in general nursing, intensive care, emergency medicine and health administration
- Must have acute trauma care and life support certification within 12 months prior to deployment, and preferably pre-hospital trauma life support or equivalent
- Must be certified and registered to practice in own country or another United Nations member state⁵¹

(g) Specialist Nurse: For a position in a TCC/PCC Level 2 or 3 hospital with the functional title Specialist Nurse (e.g. intensive care unit nurse, operation theatre nurse, nurse anaesthetist, etc.) the following conditions must be met:

- Must have qualified as a registered professional nurse with an accredited baccalaureate nursing programme (university) or accredited diploma programme (four years) after high school graduation.
- Post-basic training in specialised nursing (e.g. intensive care unit, operation theatre, etc.), certified by an appropriate body in his/her country
- No less than two years practice after specialist licence
- Must be certified and registered to practice in own country or another United Nations member state

(h) Medical technician: For a position in a TCC/PCC Level 2 or 3 hospital with the functional title Medical Technician or equivalent (e.g. lab, X-ray, radiographer, operation theatre, anaesthesia, emergency medical, hygiene, pharmacy, etc.), the following conditions must be met:

- High school graduate with certification in area of specialization
- No less than two years of theoretical and practical education relating to the specialist field

⁵⁰ This can be a three- or four-year course in some countries.

⁵¹ Nurses shall have, at a minimum, advanced trauma care for nurses-equivalent training. For additional detail, see Chapter 3.

- Relevant practice and a licence to practice all elements of specialty
- No less than two years practice after licence

(i) Paramedic: Paramedics are pre-hospital care providers who practice with emergency protocols. The base professional requirements are either:

For Paramedics:

- No less than three months paramedic training
- Must have acute trauma care and life support certification within 12 months prior to deployment, and preferably pre-hospital trauma life support or equivalent certification within 12 months prior to deployment
- A minimum of two years of progressively responsible practical experience in CPR or basic life support is required. Experience working with medical emergencies in conflict areas would be an asset

Alternatively for the military (nursing assistant):

- At least one year of specialist military medical training with diploma and no less than two years of relevant post-qualification medical experience

(j) Ambulance Medic: Ambulance medics shall have all of the qualifications of a paramedic (as described above), as well as:

- Ambulance driving skills (including appropriate license)
- Skills in map navigation
- Knowledge of operation of very high frequency (VHF) and high frequency (HF) communication

C. Technical clearance procedure for uniformed medical professionals

The standards described above shall be provided to TCC/PCC during the force generation process and shall be applied to all TCC/PCC medical service providers⁵² deployed in the field. In the case of any new deployments of Level 1, 2 or 3 medical service providers, copies of all government-certified credentials shall be provided to United Nations HQ for technical clearance, three months prior to any deployment and signature of the MOU. The outcome of the technical clearance exercise of medical staff, which shall be jointly undertaken by DM/MSD, DFS/MSS and the mission, shall be a core requirement for the deployment of any TCC/PCC medical facility in the field. For subsequent rotation of the TCC/PCC medical personnel, copies of their government certified credentials shall also be provided to United Nations HQ for the same technical clearance exercise, at least three months before their deployment in the field. Chapter 8 Annex A provides the template that should be completed when the TCC/PCC submits the medical staff credentials to United Nations HQ. The documents that United Nations HQ requires for this technical clearance exercise are:

⁵² This includes Level 1 personnel.

1. University certificate/diploma
2. Specialisation certificate (if applicable)
3. Any relevant certificates for trainings or workshops attended
4. A valid registration or licence to practice
5. A curriculum vitae or a personal history profile clearly mentioning, with dates, the work experience of the candidate

D. United Nations minimum medical care standards⁵³

In all field missions, medical support must meet standards acceptable to the United Nations and all participating member states. Though this may pose challenges due to the differences between member states' medical standards and legal constraints, medical care must be provided to all mission personnel at a uniformly high level and in accordance with prescribed standards pertaining to quality, capacity and capability. Any shortfall or discrepancy in these standards with an operational impact renders the medical support sub-standard and therefore not eligible for deployment.

E. Ethical code for medical practitioners

Medical ethics is a system of moral principles that apply values and judgments to the practice of medicine. The medical profession has subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must first and foremost recognize his/her responsibility to patients, as well as to society, to other health professionals and to self. The following principles, detailed in Paragraph F below, form a minimum standard of conduct required of medical practitioners in the service of the United Nations. In view of the increased recognition of the complex and sometimes competing responsibilities of occupational health and safety professionals towards the workers, the employers, the public, public health and labour authorities and other bodies, such as social security and judicial authorities, the United Nations Medical Directors' Working Group advises that any United Nations organizational statements of ethics in occupational health matters or group-specific professional ethical codes (e.g. for physicians, nurses, hygienists, psychologists, etc.), should be guided by and consistent with the International Code of Ethics for Occupational Health Professionals.⁵⁴

F. Principles of medical ethics

For the duration of their service to the United Nations, in addition to any national code of ethics, all physicians, including TCC/PCC-provided physicians and United Nations staff or volunteer physicians serving in TCC/PCC or UNOE Levels 1, 2 and 3 facilities, shall adhere to the International Code of Medical Ethics adopted by the World Medical Association, noted in the sections below.⁵⁵

⁵³ For additional information, see Chapter 5 on health care policies and procedures.

⁵⁴ International Code of Ethics for Occupational Health Professional, updated in 2002.

⁵⁵ Adopted by the 3rd General Assembly of the World Medical Association, London, England, October 1949, and amended by the 22nd World Medical Assembly, Sydney, Australia, August 1968, and the 35th World Medical Assembly, Venice, Italy, October 1983, and the 57th World Medical General Assembly, Pilanesberg, South Africa, October 2006.

G. Duties of physicians in general

A physician shall:

1. Always exercise his/her independent professional judgment and maintain the highest standards of professional conduct.
2. Respect a competent patient's right to accept or refuse treatment.
3. Not allow his/her judgment to be influenced by personal profit or unfair discrimination.
4. Be dedicated to providing competent medical service in full professional and moral independence, with compassion and respect for human dignity.
5. Deal honestly with patients and colleagues and report to the appropriate authorities those physicians who practice unethically or incompetently or who engage in fraud or deception.
6. Not receive any financial benefits or other incentives solely for referring patients or prescribing specific products.
7. Respect the rights and preferences of patients, colleagues, and other health professionals.
8. Recognize his/her important role in educating the public but should use due caution in divulging discoveries or new techniques or treatment through non-professional channels.
9. Certify only that which he/she has personally verified.
10. Strive to use health care resources in the best way to benefit patients and their community.
11. Seek appropriate care and attention if he/she suffers from mental or physical illness.
12. Respect the local and national codes of ethics.

H. Duties of physicians to patients

A physician shall:

1. Always bear in mind the obligation to respect human life.
2. Act in the patient's best interest when providing medical care.
3. Owe his/her patients complete loyalty and all the scientific resources available to him/her. Whenever an examination or treatment is beyond the physician's capacity, he/she should consult with or refer to another physician who has the necessary ability.
4. Respect a patient's right to confidentiality. It is ethical to disclose confidential information when the patient consents to it or when there is a real and imminent threat of harm to the patient or to others and this threat can be only removed by a breach of confidentiality.
5. Give emergency care as a humanitarian duty unless he/she is assured that others are willing and able to give such care.
6. In situations when he/she is acting for a third party, ensure that the patient has full knowledge of that situation.

7. Not enter into a sexual relationship with his/her current patient or into any other abusive or exploitative relationship.

I. Duties of physicians to colleagues

A physician shall:

1. Behave towards colleagues as he/she would have them behave towards him/her.
2. Not undermine the patient-physician relationship of colleagues in order to attract patients.
3. When medically necessary, communicate with colleagues who are involved in the care of the same patient. This communication should respect patient confidentiality and be confined to necessary information.

J. Gender perspective in medicine

With more female peacekeepers and civilian staff participating in PKOs, there is an increasing demand for corresponding medical services for female personnel in missions. Member states planning deployment of medical facilities should therefore ensure the deployment of adequately trained and qualified female medical staff along with their male counterparts. A gynaecology module has been introduced in the COE Manual that can be deployed along with TCC/PCC medical facilities, if required. UNOE clinics/hospitals are also encouraged to recruit female obstetrics and gynaecology officers or deploy female medical officers with such bias.

The medical representative on the PDV team visiting TCCs/PCCs deploying to the field also provides briefings that emphasize the need to deploy with a broad spectrum of drugs and pharmaceuticals for female reproductive health and hygiene as part of their self-sustainment. Attention is also given to female-friendly bathrooms when installing ablution units.

Raising awareness of various female reproductive health-related medical conditions and possible screening for breast cancer are encouraged.

K. Use of chaperones during physical exams

From the standpoint of ethics and prudence, the protocol of having chaperones available on a consistent basis for patient examinations is recommended. Physicians aim to respect the patient's dignity and make every effort to secure a comfortable and considerate atmosphere for the patient. A policy supporting patients to request a chaperone should be established in each health care setting. This policy should be communicated to patients, either through a well-displayed notice or, preferably, through a conversation initiated by the intake nurse or the physician. The policy should be guided by the following considerations:

1. The request by a patient to have a chaperone should be honoured.
2. An authorized health professional should serve as a chaperone whenever possible.
3. In their practices, physicians should establish clear expectations about respecting patient privacy and confidentiality, to which chaperones must adhere.

4. If a chaperone is to be provided, a separate opportunity for a private conversation between the patient and the physician should be allowed.
5. The physician should keep inquiries and history-taking, especially those of a sensitive nature, to a minimum during the course of the chaperoned examination.
6. A female patient should always be offered a chaperone in all circumstances when her examination involves exposure of the breasts and/or genitals.
7. The use of a chaperone is mandatory if male medical staff examines a female patient.
8. Children under 16 years are to be chaperoned.

L. HIV-positive patients and physicians

A physician may not ethically refuse to treat a patient whose condition is within the physician's current realm of competence solely because the patient is seropositive for HIV. Persons who are HIV-seropositive should not be subjected to discrimination based on fear or prejudice. This is clearly articulated in the COE Manual:⁵⁶

Medical staff must be at the forefront in promoting HIV awareness, its method of infection and the prevention of spread. No medical staff or patient will be discriminated against due to verified or suspected HIV. Testing in a UN facility must be voluntary and confidential, and no HIV test will be performed without there being a system of counselling.

When physicians are unable to provide the services required by an HIV-positive patient, they should make appropriate referrals to those physicians or facilities equipped to provide such services. A physician who knows that he or she is HIV-seropositive should not engage in any activity that creates a risk of transmission of the disease to others.

Annex:

Chapter 8 Annex A: Technical review of troop/police contributing countries medical personnel professional qualifications and experience

⁵⁶ See the COE Manual, Chapter 3 Annex B, paragraph 55.

Chapter 8 Annex A: Technical review of troop/police contributing countries medical personnel professional qualifications and experience

Name of TCC/PCC:

Category of medical facility to be deployed:

Serial	Name of TCC/PCC	Title/ appointment	Name	Date of birth	Qualifications	Schools attended	Year of qualification	Year of specialization (if any)	Validity of the license to practice	Remarks

Chapter 9

Public health issues

Note: This chapter and its annexes represent a living document. When used, all references should be checked to ensure that the information is still current and reflects the latest advice from WHO.

A. Introduction

Conflicts or natural disasters often have devastating effects on a country or community's regular health system. Post-conflict zones, where peacekeeping missions are deployed, are often characterized by degraded public health infrastructure or completely collapsed health care delivery systems. Field missions face two major challenges: maintaining the good health of personnel deployed on the ground and preventing further degradation of public health systems.

Therefore, public health issues in field missions may cover a wide range of topics that this manual may not be able to address exhaustively. However, drawing on experience from the field and current best practices, the following areas will be discussed, albeit briefly, in this chapter. More details are provided in the chapter annexes:

1) Preventive medicine

- a) Immunization policies in United Nations PKOs based on WHO policy.
- b) Vector borne diseases and their control (i.e. malaria, haemorrhagic fevers, etc.).
- c) Food and water borne diseases.
- d) Control of communicable disease: Disease outbreaks, new and emerging infections (including STIs, HIV and AIDS and pandemic influenza).
- e) Field hygiene and sanitation.
- f) Planning health education programmes for peacekeepers.

2) Environmental safety and occupational health

- a) Organizational goals in achieving environmental and occupational health safety in United Nations systems.
- b) Peacekeeping operation-related health hazards.
- c) Road traffic accidents.

3) Mental health and psychological well-being

- a) Basic facts on mental health and psychological well-being.
- b) Major mental and substance use disorders.
- c) Mental health and psychological support resources in United Nations systems.

B. Preventive medicine

Preventive medicine is one of the most important aspects of medical support in the field. Through effective measures, significant results can be achieved in terms of fewer workdays lost, lower morbidity rates and lower treatment costs. Preventive medicine incorporates immunization, disease prophylaxis, vector control, hygiene and sanitation. Health hazards and occupational threats must be fully evaluated prior to and as a continuous process during deployment. It must be stressed that preventive health measures involve every individual in the mission area, and that proper health education and training is the key to successful implementation of these measures.

The roles of CMO, FMO, SMOs and medical officers of the contingent in preventive health are as follows. Within the mission's medical cell, the FMO assists the CMO to oversee the operation and maintenance of health services for the entire force, including all aspects of preventive medicine and health education. On behalf of the CMO, the FMO collaborates with local health authorities and other international agencies (e.g. WHO and the International Committee of the Red Cross) in the mission area to implement the mission's public health directives.⁵⁷

Under the direction of the FMO, the contingent SMO and medical officers are responsible for implementing preventive medicine practices for the military contingents and personnel under their charge. It is their task to monitor the immunization status of troops under their care, as well as to directly manage any required vaccination or disease prevention programme. This includes the distribution of anti-malarial tablets and condoms, as well as health inspections of food, water and sanitation. In addition, they are responsible for health education and medical training, which is generally conducted by medical personnel under their charge.

C. Immunization policy⁵⁸

The MSD sets the policy on the vaccination and chemo prophylaxis requirements within a mission area, in line with WHO regulations. This is considered the minimum standard that should be observed by all TCCs/PCCs. These requirements are divided into the following categories:

⁵⁷ For the terms of reference, see Chapter 2.

⁵⁸ See the COE Manual, 2012 edition, Chapter 3, annexes A and B, appendix 12.

1. Mandatory

These are vaccinations required to meet international health regulations or national requirements stipulated by the host country for travel into the mission area. Uniformed personnel deployed without such vaccinations may be repatriated at the port of entry at national expense, as their health will be at risk in the mission area. Should such personnel be required to stay, the mission must take appropriate steps to vaccinate the person and ensure that the cost of vaccination is deducted from the TCC/PCC reimbursement at source.

In the case of yellow fever, vaccination is required for people travelling from countries with risk of yellow fever transmission and for people travelling to mission areas with risk of yellow fever transmission. In view of its high cost, reimbursement for yellow fever vaccination could be sought through submission of claims before the vaccinated contingent members depart from the mission areas. Since the mission will verify all claims submitted to United Nations HQ before reimbursement is made, it is important that the WHO International Certificate of Vaccination or equivalent document containing the immunization details for each peacekeeper is made available to the MMS upon arrival in the mission.

In addition, cholera vaccination is now mandatory for all peacekeepers deploying to PKOs. Mandatory cholera vaccination aims to reduce disease transmission by protecting peacekeepers from contracting cholera, and thereby also preventing them from being part of the transmission chain. Vaccination should be implemented in conjunction with other public health and cholera preventive activities, including health education, ensuring safe water supply and sanitation, as outlined in Chapter 16 Annex D: Training proposal on cholera prevention and hygiene awareness for United Nations peacekeeping and civilian personnel in the field.

2. Recommended

These are vaccinations recommended for travel to a region with certain diseases (e.g., hepatitis A, Japanese encephalitis, meningitis, cholera etc.). While most recommended vaccines are covered under reimbursement for troop/police cost, given its high cost, reimbursement for Japanese encephalitis may be sought through submission of claims before the vaccinated contingent members depart from the mission areas. Since the mission will verify all claims submitted to United Nations HQ before reimbursement is made, it is important that the WHO International Certificate of Vaccination or equivalent document containing the immunization details for each peacekeeper is made available to the MMS on arrival in the mission.

3. Standard/childhood

Standard childhood vaccinations including boosters are provided routinely to the general population and to military/police personnel and are not specifically required

for peacekeeping (e.g., diphtheria, pertussis, tetanus, and poliomyelitis). This type of vaccination is a national responsibility.

4. Optional

These are additional vaccinations that are administered as a national requirement of a troop/police contributor, but that are not mandatory for entry into the mission area under international or host country health regulations. These vaccinations have not been specifically recommended by the DPKO/DFS (e.g., rabies, anthrax and seasonal human influenza). Such vaccines will not be reimbursed by the United Nations.

5. Special case vaccination

These are additional vaccinations or drugs that are required against new or emerging infections encountered in the mission area and are not reimbursed under previous categories (e.g., the antiviral drug Ribavirin for Lassa fever and Oseltamivir or Tamiflu for avian influenza). These will be provided by the United Nations, or reimbursed through the submission of claims for actual costs.

It is a national responsibility (at national expense) to ensure that all personnel have received the mandatory vaccinations before deployment to the mission area. The immunization status of each individual is to be properly documented for monitoring by the respective contingent Medical Officer. Each member of the contingent must be provided with or have in their medical record the WHO international certificate of vaccination, or its national equivalent. Should a multiple dose immunization regimen not be completed prior to deployment, and should the TCC/PCC facility be unable to provide subsequent doses, the United Nations will do so through a UNOE facility. The mission headquarters will procure the required vaccines in this instance, with the assistance of the MSS. The United Nations will recover the cost of the above vaccines from the troop/police contributors.

Should troops deploy into a mission area without the required vaccinations, the supporting medical unit will provide the vaccinations. However, all costs incurred will be deducted from the reimbursement to the TCC/PCC. The FMO is required to submit a record of all vaccinations administered in the field, indicating the names, United Nations identification numbers and nationalities, as well as the types and doses of vaccinations given.

Failure to follow United Nations recommended immunization and chemo prophylaxis policies may result in the denial of entry into the host country, as well as the rejection of any resulting medical claims and compensation.

D. Vector-borne diseases

From the perspective of infectious diseases, vectors are the transmitters of disease-causing organisms that carry the pathogens from one host to another. By common usage, vectors are considered to be invertebrate animals, usually arthropods. Technically, however, vertebrates can

also act as vectors, including foxes, cats and dogs, which can all transmit the rabies virus to humans via a bite. Although several genera of arthropods play a role in human disease, mosquitoes and ticks are the most notable disease vectors. The most significant mode of vector-borne disease transmission is through biological transmission by blood-feeding arthropods. The transmission of vector-borne diseases to humans depends on three different factors: the pathologic agent, the arthropod vector and the human host. For additional detail, see Chapter 9 Annex A.

The Anopheles mosquito, a vector for malaria, filariasis and various arthropod-borne viruses (arboviruses), inserts its delicate mouthpart under the skin and feeds on its host's blood. The parasites that the mosquito carries are usually located in its salivary glands (used by mosquitoes to anaesthetise the host). Therefore, the parasites are transmitted directly into the host's blood stream. Pool feeders such as the sand fly and black fly, vectors for Leishmaniasis and Onchocerciasis, respectively, will chew a well in the host's skin, forming a small pool of blood from which they feed. Leishmaniasis parasites then infect the host through the saliva of the sand fly. In a United Nations peacekeeping environment, vector-borne diseases, including malaria (Chapter 9 Annex B), dengue fever (Annex C), Lassa fever (Annex D), Leishmaniasis (Annex E) and Japanese encephalitis (Annex F), are of great significance and have been described in detail in the Annexes referenced. Closely related to this is the menace of domesticated animals in the mission area. Details are contained in Animals in mission environments: health and hygiene benefits and hazards (Annex G1), and rabies (Annex G2).

E. Prevention and control of vector-borne diseases

New strategies for the prevention and control of vector-borne diseases emphasize integrated vector management, an approach that reinforces linkages between health and the environment, optimizing the benefits to both. For additional detail, see Chapter 9 Annex H.

F. Control of communicable disease

Communicable disease is usually defined as any disease that can be transmitted from one individual directly to another individual through body excretions as the mode of transmission. An example of a communicable disease that has had a severe impact on a peacekeeping area of operation is the Ebola Virus Disease (EVD). Refer to Chapter 9 Annex I for details on mode of transmission and prevention of the disease. Some communicable diseases can be spread through casual contact, for example colds, flu and tuberculosis from respiratory droplets, such as from coughing, sneezing or runny noses. Other communicable diseases, such as hepatitis B and HIV, require contact with blood from an infected individual, while others, such as chlamydia, herpes and syphilis, require intimate contact with an infected individual's body fluids or genitalia. HIV, AIDS and STIs are described in detail in Chapter 9 Annex J.

G. United Nations Headquarters action in response to Ebola Virus Disease

1. Establishment of a system-wide response to Ebola Virus Disease

The Ebola crisis in West Africa was an unprecedented outbreak that was recognized by the United Nations Security Council as constituting a threat to international peace and security. The crisis became a complex emergency with significant political, social, economic, humanitarian and security dimensions that the Governments of affected states worked tirelessly to address from the outset. Enormous efforts were made, initially by a small, later a larger, number of non-governmental and civil society organizations, along with other partners, who operated on the front lines of the response, often in extremely difficult and complex environments. On 12 August 2014, the Secretary-General appointed Dr. David Nabarro as the United Nations System Senior Coordinator for EVD to provide overall strategic direction and assist governments in the region to address the crisis. Subsequently, on 8 September 2014, Dr. Nabarro activated the organization's emergency response mechanism and named Anthony Banbury as Deputy Ebola Coordinator and Emergency Crisis Manager. On 19 September 2014, following the General Assembly's unanimous adoption of resolution 69/1, the Secretary-General appointed Dr. Nabarro as Special Envoy on Ebola to provide strategic and policy direction for a greatly enhanced international response and to galvanize essential support for affected communities and countries.

The Secretary-General also established the United Nations Mission for Ebola Emergency Response (UNMEER), led by Special Representative to the Secretary-General Banbury, to harness the capabilities and competencies of all relevant United Nations actors under a unified operational structure; to reinforce unity of purpose, effective ground-level leadership and operational direction; and to ensure a rapid, effective, efficient and coherent response to the Ebola crisis. These efforts were supported by a Crisis Centre made up of personnel drawn from a range of Departments and Offices of the Secretariat, including DFS, DM, DSS, DPKO, along with representatives of United Nations agencies, funds and programmes, including WHO, the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the World Food Programme (WFP), the United Nations Population Fund (UNFPA) and the World Bank. Other stakeholders, including key member states and supporting entities also participated. The Centre coordinated the support of the assembled United Nations system for the establishment of the mission and the work of the Special Envoy. Upon its establishment, these efforts came under the oversight of the United Nations Ebola Response Liaison Office.

In addition, MSD/DM liaised with global and regional health organizations such as WHO and the Centers for Disease Control and Prevention in the United States to promulgate and disseminate clinical and administrative guidelines. These guidelines form the basis of planning to protect and manage United Nations system personnel deployed in or returning from the outbreak area. MSD's Ebola resources are currently available on ISeek's Ebola Alert website (see <https://hr.un.org/page/alerte-ebola>) as well as on the Emergency Preparedness and Support Team's open Ebola website (see

www.un-epst.org/ebola-alert).⁵⁹ Based on this guidance, LSD/DFS drew up and executed its logistics and operational plans to ensure the identification and deployment of appropriate medical supplies and capacities for the use of the United Nations system, including personal protective equipment (PPE), medical and isolation facilities with the required medical personnel and equipment, and patient transportation and evacuation facilities for road and aeromedical evacuation. Through the FGS and Office of Rule of Law, DPKO disseminated all information regarding protocols and procedures based on MSD/DM and WHO guidelines to TCCs/PCCs for deployment and rotation of troops to and from countries affected by the Ebola Virus Disease (Annex J).

2. United Nations travel advisory/screening procedures

The websites below provide access to the most current information on United Nations activities around the Ebola outbreak. They include frequently asked questions and travel advisory information for all United Nations staff travelling into or exiting out of regions/countries designated as Ebola-infected areas. MSD advises that pre-departure, United Nations personnel travelling to or from Ebola-infected countries must be thoroughly screened and assessed for fitness for travel by the United Nations resident medical officers in the departure duty station. For this purpose, specific clinical assessment forms to be completed by medical personnel can be obtained from the website above.

- (a) United Nations Medical Services Division Ebola website (<https://hr.un.org/page/alerte-ebola>)
- (b) United Nations Emergency Preparedness and Support Team Ebola Website (un-epst.org/ebola-alert)

3. Protective measures against Ebola Virus Disease

Important Ebola-related information regarding protective measures for medical staff can be found on the WHO website (see www.who.int/csr/disease/ebola/protective-measures-staff/en/). For a current and more detailed and comprehensive document containing WHO recommended guidelines for epidemic preparedness and response, see “Ebola and Marburg virus disease epidemic: Preparedness, alert, control and evaluation” (available from www.who.int/csr/resources/publications/ebola/manual_EVD/en/). This document provides background information on the disease and describes methods for case detection and control, approaches to management of an epidemic and planning and resource allocation. Chapter 9 Annex I provides a United Nations MSD checklist for Ebola preparedness and response activities for United Nations health facilities.

⁵⁹ An Ebola webpage on the soon-to-be-launched human resources portal website for staff, will also soon be available, and will similarly host MSD Ebola contents.

4. Procurement of personal protective equipment, hospitals, Ebola Virus Disease treatment and isolation facilities

Personal protective equipment is one of the control measures established by WHO for the prevention and transmission of EVD. Although this approach is the most visible, for it to be effective, it must be used in conjunction with the administrative and engineering controls, including facilities for barrier nursing and work organization, water and sanitation, hand hygiene infrastructure, waste management and ventilation. According to WHO, PPE must be correctly selected and used in a safe manner, which is especially important when putting on and removing the PPE, as well as during the process of decontaminating the various PPE components after use. For a summary of the WHO recommendations on PPE in the context of rapid response to Filovirus Disease, see (www.who.int/csr/resources/publications/ebola/ppe-guideline/en/) and for proper steps for putting on and removing PPE, see (www.who.int/csr/disease/ebola/put_on_ppequipment.pdf?ua=1 and www.who.int/csr/disease/ebola/remove_ppequipment.pdf?ua=1).

Considering the high virulence of EVD, DFS made a decision to undertake a centralized procurement exercise for PPE for all peacekeeping and political missions. In planning the procurement exercise, the missions were categorized as high, medium and low risk. The distribution is based on 100 per cent coverage for high-risk missions such as those located in West Africa, including the United Nations Mission in Liberia, the United Nations Operation in Côte d'Ivoire, the United Nations Multidimensional Integrated Stabilization Mission in Mali, the United Nations Integrated Peace-Building Office in Guinea; 50 per cent coverage for medium-risk missions, including the United Nations Mission in Darfur, the United Nations Mission in South Sudan, the United Nations Interim Security Force for Abyei, the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo, the United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic and the United Nations Support Office for AMISOM; and 25 per cent coverage for low-risk missions, including the United Nations Interim Force in Lebanon, the United Nations Peacekeeping Force in Cyprus (UNFICYP), the United Nations Stabilization Mission in Haiti, the United Nations Disengagement Observer Force, etc. In addition, all items of the PPE were included in the catalogue of the United Nations medical equipment and medical consumables systems contract, which can be accessed by all field missions if required. The contract is also accessible to United Nations agencies in the field with prior notification and permission of the United Nations Procurement Division. The catalogue will be reviewed and updated from time to time, in line with any review by WHO.

H. Influenza pandemic

A pandemic is an epidemic that spreads rapidly around the world with high rates of illness. Although people are exposed to different strains of the influenza virus every year, history has shown that entirely new influenza strains develop several times each century. Because no one has had a chance to develop immunity to the new strain, it can spread rapidly and widely. If the

changed virus spreads easily from person to person, an influenza pandemic can occur again, as it did with the H1N1 virus in 2009.

Pandemics are different from seasonal flu outbreaks. Seasonal flu is caused by small changes in influenza viruses that people have already been exposed to, and a new flu vaccine is developed each year to protect people against the expected changes in existing viruses. However, since an influenza pandemic is caused by an entirely new strain of flu virus, preparing a vaccine in advance is not as simple as it is for seasonal flu.

The United Nations Medical Directors have developed a document to provide guidance to United Nations organizations to prepare and respond to an influenza pandemic. For the latest guidance, see (www.un-influenza.org/sites/default/files/RevisedPandemicGuidelinesOct2011_0.pdf).

This updated version replaces previous influenza pandemic guidelines of the United Nations Medical Directors. As this guideline focuses on the medical aspects of planning and coordination, it should be seen in the context of organization-wide plans. Differences between organizations, and from location to location, will require local adaptation or modification of the guideline. DPKO/DFS peacekeeping/political missions should develop their own plans within their customary emergency management structures and functional groups.

I. Foodborne and waterborne diseases

There are more than 250 known foodborne diseases. These can be caused by bacteria, viruses or parasites. Natural and manufactured chemicals in food products can also make people sick. Some diseases are caused by toxins (poisons) from the disease-causing microbe (germ), others by the human body's reactions to the microbe itself. Waterborne diseases are caused by pathogenic microorganisms that are most commonly transmitted in contaminated fresh water. Infection commonly occurs during bathing, washing, drinking, in the preparation of food, or the consumption of food thus infected. The term "waterborne disease" is reserved largely for infections that are predominantly transmitted through contact with or consumption of infected water. Most waterborne diseases cause diarrheal illness.

Prevention of foodborne diseases presents public health challenges mainly related to poor food handling practices. Waterborne diseases usually arise from challenges related to the provision of safe drinking water in the field. The outcome of both conditions can be fatal and prevention through adequate sanitation facilities and better hygiene practices is critical. It is a combined United Nations and national responsibility to ensure quality control for procurement, storage and preparation of food, as well as for the supply of potable water. For additional detail, see Chapter 9 Annex K1 and K2.

J. Field hygiene and sanitation

When peacekeepers deploy in a location, they must develop a schedule for keeping their environment as clean as possible to limit the possibility of diseases. There are several differences between the civilian world and the deployed military environment. Peacekeepers deployed in remote sites may not enjoy the luxury of having their garbage collected centrally and may have

to establish various detailed methods for disposing of their garbage and waste. This has to be done without degrading the environment, particularly if they wish to win the hearts and minds of the local populace. The security of peacekeepers may require that they be deployed in a densely packed, fenced and encircled location, which might compromise the maintenance of good hygiene and sanitation. In collaboration with CMO, FMO will design regular health education programmes for peacekeepers. For additional detail, see Chapter 9 Annex L.

Adequate provisions must also be made to ensure high standards of sanitation and proper disposal of wastes. Although not directly responsible, the FMO and contingent medical personnel are to assist logistics, engineering and hygiene inspection personnel in maintaining these standards. This is best achieved through the establishment of a hygiene and sanitation task force with clear terms of reference, as described in Chapter 9 Annex M.

K. Medical waste management⁶⁰

The Environmental Policy for Field Missions⁶¹ requires missions to properly manage hazardous substances, including medical material and equipment. The Policy also requires missions to properly manage mission waste, including clinical medical waste. Medical waste includes all bio-medical wastes, such as limbs, organs, blood and blood-stained materials, and any other medical associated wastes, such as needles, syringes, pharmaceuticals and X-ray fluids. Medical waste in the mission area is disposed of either through incineration or other suitable methods, such as sterilization, microwave methods and electro-thermal deactivation or by local contracts with medical agencies of the host nations. Regardless of the chosen mode of disposal, it is pertinent that medical authorities ensure the disposal method does not present any immediate or future danger to personnel or the local population.

L. Environmental safety and occupational health

Environmental safety and occupational health is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. The goal of all occupational health and safety programmes is to foster a safe work environment. The Environmental Policy provides guidance on mission conduct related to environmental issues in the field. Peacekeeping-related environmental and occupational health hazards are described further in Chapter 9 Annex N.

M. The goal of environmental safety and occupational health in the United Nations

In accordance with the General Assembly directive, occupational health within United Nations systems should promote and maintain the highest level of physical, mental and social well-being of peacekeepers in all occupations; prevent health problems among peacekeepers caused by their deployment conditions; protect peacekeepers in their deployment from risks resulting from

⁶⁰ Reference is made to the Medical Guidelines for Peacekeeping Operations-Waste Management.

⁶¹ The Environmental Policy for Field Missions, 1 June 2009, DPKO/DFS 2009.6.

factors adverse to health; and place and maintain peacekeepers in an operational environment adapted to their psychological capabilities.⁶² For additional detail, see Chapter 9 Annex O.

N. Road traffic accidents

It is important to note that road traffic accidents are the main cause of serious injuries and fatalities in peacekeeping missions. In a study conducted in 1997, it was shown that out of a total of 876 accidents reviewed, 64 per cent were road traffic accidents. Between 2007 and 2011, 254 fatalities were recorded in peacekeeping missions out of 606 cases of road traffic accidents, representing 41.2 per cent of all road traffic accidents. Causes and preventive measures are described further in Chapter 9 Annex P.

O. Medical-related Minimum Operating Security Standards⁶³

The medical-related Minimum Operating Security Standard (MOSS) is a fundamental policy document for all United Nations field operations. The purpose of MOSS is to establish a standard field-based criteria for minimum security arrangements to enhance staff security, reduce risk and support field operations. MOSS has medical support requirements that are described in detail in Annex Q.

P. Mental health and psychological well-being

Health is defined in the WHO Constitution as “a complete state of physical, mental and social well-being and not merely the absence of disease or infirmity” (United Nations, 1946). The right to health, as stated in the International Covenant on Economic, Social and Cultural Rights is “the right of everyone to the enjoyment of the highest attainable standard of physical and mental health” (United Nations, 1966).

Mental health and psychological well-being are key and integral parts of not only individual health, well-being and quality of life, but also of organizational resilience and productivity. Mental, neurological, and substance use disorders are highly prevalent and burdensome worldwide. Human rights violations directed towards persons with these disorders compound the problem. On the other hand, positive mental health is linked to a range of positive outcomes, including better physical health status, higher productivity/achievement and improved quality of life. In particular, in the peacekeeping missions that tend to have fewer psychiatric resources and more risk factors for mental health problems, systematic measures to ensure mental health and psychological well-being of deployed staff are crucial. This includes pre-deployment mental health assessment and preparation based on the outcome, pre-deployment planning for mental health support during deployment, during-mission follow-up, and post-mission support. CMO and/or TCC/PCC need to make all possible efforts to ensure good mental health and psychological well-being for all staff in the pre-deployment, deployment and post-deployment

⁶² The Joint Inspection Unit Report on Review of the Medical Services states: “The legislative bodies of UN system organizations should adopt appropriate standards with regard to Occupational Safety and Health issues, taking into account and ensuring compatibility with emerging modifications to the Minimum Operating Safety and Security Standards.”

⁶³ MOSS Instruction for Implementation, 1 March 2004; and DPKO MOSS Policy.

phases. Throughout the process, it is paramount to promote and protect the rights of persons with mental and intellectual disabilities.⁶⁴

Q. Stress factors in peacekeeping operations

The need for a thorough pre-deployment mental health assessment cannot be over emphasized, considering the various stress factors that exist in peacekeeping environments. Stress can be defined as the physical and psychological process of reacting to and coping with events or situations that place extraordinary pressure upon a human being. It is a normal reaction to an abnormal situation, but can lead to a breakdown in coping mechanisms if allowed to build up after prolonged or repeated exposure. Many peacekeepers are confronted with intense, traumatic and even life-threatening situations, which place serious and often prolonged levels of stress on them. It is important for the medical doctor in the field to be able to recognize different types of stress reactions, the factors that contribute to them and to be familiar with measures that can be taken to deal with them. This topic shall be discussed as follows:

1. Factors contributing to stress among peacekeepers

The following are the common factors contributing to stress disorders in a peacekeeping environment, among others:

- (a) Difficult or unclear mission, giving rise to frustration and or feeling of helplessness in carrying out the mission, as well as loss of confidence in leadership.
- (b) Not professionally trained for the task at hand, for example, UNMEM or United Nations IPOs, who can only monitor and report and cannot directly intervene in the situations they are observing.
- (c) Need to show impartiality to different parties in a conflict, despite personal beliefs and convictions.
- (d) Lack of appreciation by the victims and, occasionally, hostility and lack of co-operation from the local authorities.
- (e) Lack of security and concern about personal safety.
- (f) Stress-related to use of weapons.
- (g) Need to suppress emotions.
- (h) Uncomfortable living conditions.
- (i) Separation from home, family and friends.
- (j) Cultural differences, language difficulties and dietary changes.
- (k) Lack of recreation.
- (l) Traumatic stress (e.g. witnessing violence or death, experiencing intimidation or threat, serious accident or life threatening illness).
- (m) Stress related to exposure to human rights violations and victims.
- (n) Lack of understanding, empathy or disregard by colleagues towards stress exposure.

⁶⁴ See the Convention on the Rights of Persons with Disabilities (UN, 2006). Reasonable accommodation is required for persons with mental and intellectual disabilities. Available from: www.un.org/disabilities/default.asp?navid=14&pid=150.

2. Types of stress reactions

Some common reactions exhibited by peacekeepers due to exposure to stress factors in a peacekeeping environment include the following:

- (a) Basic stress: Minor stress encountered in daily situations that produces tension, frustration, anger and irritation. This is largely determined by an individual's physical and psychological attributes, and can generally be overcome. However, if allowed to accumulate, it can escalate beyond the point where it can be controlled, affecting the individual's disposition and work.
- (b) Cumulative stress: This results from the accumulation of stress that occurs too often, lasts too long or becomes too severe, with the end result that the individual is no longer able to cope with it. This leads to depression, work-related problems and relationship problems with colleagues.
- (c) Traumatic stress: This is a traumatic experience in which an individual is exposed to a single, sudden and violent physical or psychological assault, in which there is threat or harm to himself/ herself or to another individual.
- (d) Post-traumatic stress disorder: This refers to the persistence of symptoms arising from an episode of traumatic stress (analogy of a wound that does not heal), which continues to disturb the individual and prevents him from returning to a normal lifestyle.

3. Managing stress

It is important to recognize the emotional, functional and physical changes accompanying stress-related reactions. While these cannot be totally prevented, awareness of such problems by an individual or his colleagues, openness in discussing such problems, and the availability of professional help should this be required, are key factors to successfully managing stress. Components of a stress prevention programme include:

- (a) Pre-deployment screening of the psychological and physical profile of key appointment holders, UNMEM and United Nations IPOs.
- (b) Pre-deployment training on what to expect and how to cope with stress.
- (c) On-going health education on work-related stress, particularly how to identify sources of stress, recognize stress and take basic steps to relieve it.
- (d) Planned programme for social activities, sports and recreation at the HQ or unit level.
- (e) Group sessions for feedback and peer-sharing.
- (f) Debriefing of personnel following exposure to traumatic events, to be conducted in group sessions, and preferably with the participation of trained counsellors.
- (g) Training of medical personnel to recognize signs and symptoms of stress and to manage such conditions.
- (h) Access to professional counselling should this be required. This is generally available at Level 2 or Level 3 medical support.

Additional details on how to manage stress can be found in the United Nations Stress Management Booklet printed by DPKO, which is distributed to peacekeepers prior to deployment.

R. Basic facts on mental health and psychological well-being

Basic facts on mental and psychological wellbeing include:

- (a) An estimated one in four people globally will experience a mental health condition in their lifetime.
- (b) Almost 1 million people die due to suicide every year, higher than the number of deaths related to war or murder.
- (c) Suicide is the third leading cause of death among young people.
- (d) Depression is the leading cause of years lost due to disability worldwide.
- (e) Depression is ranked third in the global burden of disease, and is projected to rank first in 2030. Even now, depression is the leading cause of disease burden for women in low, middle and high-income countries.

S. Mental and substance use disorders

Many mental disorder cases could be treated on site utilizing rest and relaxation and other forms of leave as opportunities for regular follow-up by a psychiatrist, if needed. However, for some acute cases, sick leave could be helpful. MEDEVAC may be required in United Nations field missions where mental health diagnostic and treatment options are not available and the symptoms are dangerous to a peacekeeper or others. See the WHO mhGAP Intervention Guide (WHO, 2010) for symptoms and treatment.

T. Mental health and psychological support after crises⁶⁵

Most individuals experiencing acute mental distress following exposure to extremely stressful events are best supported without medication. In most cases, acute psychological distress will decrease naturally over time, without outside intervention. All aid workers, and especially health workers, should be able to provide psychological first aid. Psychological first aid is a humane, supportive response to a fellow human being who is suffering and who may need support that can be delivered by anyone who is trained. WHO does not recommend psychological debriefing or any group psychological intervention that promotes ventilation by asking a person to briefly but systematically recount their perceptions, thoughts and emotional reactions during a recent stressful event. For additional details, see Chapter 9 Annex R1.

However, in a minority of cases, a chronic mood or anxiety disorder will develop. If the disorder is not severe (e.g. the person is able to function and tolerate the suffering), then the person should

⁶⁵ Amended from IASC, "IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings," 2007. Available from: www.who.int/mental_health/emergencies/guidelines_iasc_mental_health_psychosocial_june_2007.pdf; and WHO, "Psychological First Aid: Guid for Field Workers, 2011. Available from: whqlibdoc.who.int/publications/2011/9789241548205_eng.pdf.

receive appropriate care as part of a more comprehensive aid response. In a minority of cases, when severe acute distress limits basic functioning, clinical treatment will probably be needed. With regards to clinical treatment of acute distress, benzodiazepines are greatly over-prescribed in most emergencies. However, this medication may be appropriately prescribed for a very short time for certain specific clinical problems (e.g. severe insomnia). Nevertheless, caution is required in the use of benzodiazepines, which may in some cases quickly lead to dependence, especially among very distressed persons. In addition, various experts have argued that benzodiazepines may slow down the recovery process after exposure to extreme stressors. For additional details, see Chapter 9 Annex R2 and the listed resources.

U. Mental health and psychological support resources in the United Nations system

In collaboration with the Medical Services Cell, staff/stress counsellors provide mental health and psychological support to those in need.

1. United Nations system staff counsellors

In most missions, there are staff/stress counsellors available to promote the psychological and social well-being and welfare of the staff and the organizations. These counsellors respond to day-to-day counselling needs and support medical services when it comes to mental health cases, as needed. When this is not available, the Staff Counsellor's Office in MSD may be consulted as needed.⁶⁶ For full details on mental health and psychological well-being, including psychological first aid and stress management, it is recommended to read through the whole of Chapter 9 Annexes R (1, 2 and 3).

2. Critical Incident Stress Management Unit

The United Nations Department of Safety and Security (UNDSS), Critical Incident Stress Management Unit responds to psychosocial needs in emergency settings. There are regional stress counsellors in New York to coordinate and respond to emergencies.

3. Uniformed clinical psychologist/psychiatrist and/or psychiatrist nurse

Some troops bring their own clinical psychologist/psychiatrist/psychiatric nurses, and provide mental health and psychosocial support on the ground.

Annexes:

Chapter 9 Annex A: Vector-borne diseases
Chapter 9 Annex B: Malaria
Chapter 9 Annex C: Dengue fever
Chapter 9 Annex D: Lassa fever

⁶⁶ Further information/support can be obtained through the MSD/United Nations HQ Staff Counsellor's Office (email: mrwp@un.org (mark urgent) and tel: +1 (212) 963-7044).

Chapter 9 Annex E: Leishmaniasis
 Chapter 9 Annex F: Japanese encephalitis
 Chapter 9 Annex G1: Animals in mission environments: Health and hygiene benefits and hazards
 Chapter 9 Annex G2: Rabies
 Chapter 9 Annex H: Integrated vector management
 Chapter 9 Annex I-1: Ebola Virus Disease
 Chapter 9 Annex I-2: United Nations Medical Services Division: Checklist of Ebola preparedness and response activities for United Nations health facilities
 Chapter 9 Annex J: HIV, AIDS and sexually transmitted infections
 Chapter 9 Annex K1: Water-related diseases
 Chapter 9 Annex K2: Foodborne diseases
 Chapter 9 Annex L: Planning health education programmes for peacekeepers
 Chapter 9 Annex M: Hygiene and sanitation task force
 Chapter 9 Annex N: Environmental policy for field mission
 Chapter 9 Annex O: Peacekeeping operation-related health hazards
 Chapter 9 Annex P: Road safety
 Chapter 9 Annex Q: Medical-related Minimum Operating Security Standards
 Chapter 9 Annex R1: Mental health and psychological well-being: major mental and substance use disorders
 Chapter 9 Annex R2: Psychological first aid
 Chapter 9 Annex R3: Stress management

Chapter 9 Annex A

Vector-borne diseases

A. Overview

Vectors⁶⁷ are living organisms that can transmit infectious diseases between humans or from animals to humans. Many of these vectors are bloodsucking insects that ingest disease-producing microorganisms during a blood meal from an infected host (human or animal) and later inject these microorganisms into a new host during their subsequent blood meal.

Mosquitoes are the best-known disease vector. Others include ticks, flies, sand flies, fleas, triatomine bugs and some freshwater aquatic snails.

Vectors and the diseases they cause	
Mosquitoes Aedes • Dengue fever • Rift Valley fever • Yellow fever • Chikungunya Anopheles • Malaria Culex • Japanese encephalitis • Lymphatic filariasis • West Nile fever Sandflies • Leishmaniasis • Sandfly fever (phlebotomus fever) Fleas • Plague (transmitted by fleas from rats to humans) • Rickettsiosis	Ticks • Crimean-Congo haemorrhagic fever • Lyme disease • Relapsing fever (borreliosis) • Rickettsial diseases (spotted fever and Q fever) • Tick-borne encephalitis • Tularaemia Triatomine bugs • Chagas disease (American trypanosomiasis) Tsetse flies • Sleeping sickness (African trypanosomiasis) Black flies • Onchocerciasis (river blindness) Aquatic snails • Schistosomiasis (bilharziasis)

Vector-borne diseases are illnesses caused by pathogens and parasites in human populations. Every year there are more than 1 billion cases and over 1 million deaths from vector-borne

⁶⁷ For resources on vector-borne diseases, see: WHO, “Vector-borne diseases,” March 2014. Available from <http://www.who.int/mediacentre/factsheets/fs387/en/>; WHO, “A global brief on vector-borne diseases,” 2014. Available from http://apps.who.int/iris/bitstream/10665/111008/1/WHO_DCO_WHD_2014.1_eng.pdf; WHO, “International travel and health,” 2015. Available from <http://www.who.int/ith/en/>.

diseases globally, including malaria, dengue, schistosomiasis, human African trypanosomiasis, leishmaniasis, Chagas disease, yellow fever, Japanese encephalitis and onchocerciasis.

Vector-borne diseases account for over 17 per cent of all infectious diseases. Distribution of these diseases is determined by a complex dynamic of environmental and social factors. Globalization of travel and trade, unplanned urbanization and environmental challenges such as climate change are having a significant impact on disease transmission in recent years. Some diseases, such as dengue, chikungunya and West Nile virus, are emerging in countries where they were previously unknown.

Changes in agricultural practices due to variation in temperature and rainfall can affect the transmission of vector-borne diseases. Climate information can be used to monitor and predict distribution and longer-term trends in malaria and other climate-sensitive diseases.

For the latest disease distribution map of vector-borne diseases, please refer to the WHO website, on international travel and health (available at: <http://www.who.int/ith/en/>).

Chapter 9 Annex B

Malaria

A. Overview

According to the latest estimates released in December 2013, there were about 207 million cases of malaria⁶⁸ in 2012 (with an uncertainty range of 135 million to 287 million) and an estimated 627,000 deaths (with an uncertainty range of 473,000 to 789,000). Malaria mortality rates have fallen by 42 per cent globally since 2000, and by 49 per cent in the WHO African Region.

Most deaths occur among children living in Africa, where a child dies every minute from malaria. Malaria mortality rates among children in Africa have been reduced by an estimated 54 per cent since 2000.

Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected Anopheles mosquitoes, called malaria vectors, which bite mainly between dusk and dawn.

There are four parasite species that cause malaria in humans:

- Plasmodium falciparum
- Plasmodium vivax
- Plasmodium malariae
- Plasmodium ovale

Plasmodium falciparum and Plasmodium vivax are the most common and Plasmodium falciparum is the most deadly. In recent years, some human cases of malaria have also occurred with Plasmodium knowlesi, a species that causes malaria among monkeys and occurs in certain forested areas of Southeast Asia.

B. Transmission

Malaria is transmitted exclusively through the bites of Anopheles mosquitoes. The intensity of transmission depends on factors related to the parasite, the vector, the human host and the environment. About 20 different Anopheles species are locally important around the world. All of the important vector species bite at night. Anopheles mosquitoes breed in water and each species has its own breeding preference. For example, some prefer shallow collections of

⁶⁸For additional resources on malaria, see WHO, “Malaria,” 2015. Available from: <http://www.who.int/topics/malaria/en/>; WHO, “Media centre: Malaria,” April 2015. Available from <http://www.who.int/mediacentre/factsheets/fs094/en/>; WHO, “A global brief on vector-borne diseases,” 2015. Available from http://apps.who.int/iris/bitstream/10665/111008/1/WHO_DCO_WHD_2014.1_eng.pdf; WHO, “Guidelines for the treatment of malaria,” April 2015. Available from <http://www.who.int/malaria/publications/atoz/9789241549127/en/>; WHO, “Malaria: Information for travellers,” February 2015. Available from <http://www.who.int/malaria/travellers/en/>; WHO, “International travel and health,” 2015. Available from <http://www.who.int/ith/en/>; WHO, “International travel and health: Chapter 7 Malaria,” 2015. Available from http://www.who.int/ith/ITH_chapter_7.pdf?ua=1.

fresh water such as puddles, rice fields and hoof prints. Transmission is more intense in places where the mosquito lifespan is longer (so that the parasite has time to complete its development inside the mosquito) and where it prefers to bite humans rather than other animals. For example, the long lifespan and strong human-biting habit of the African vector species is the main reason why about 90 per cent of the world's malaria deaths are in Africa.

Transmission also depends on climatic conditions that may affect the number and survival of mosquitoes, such as rainfall patterns, temperature and humidity. In many places, transmission is seasonal, with the peak during and just after the rainy season. Malaria epidemics can occur when climate and other conditions suddenly favour transmission in areas where people have little or no immunity to malaria. They can also occur when people with low immunity move into areas with intense malaria transmission, for instance to find work or as refugees.

Human immunity is another important factor, especially among adults in areas of moderate or intense transmission conditions. Partial immunity is developed over years of exposure, and while it never provides complete protection, it does reduce the risk that malaria infection will cause severe disease. For this reason, most malaria deaths in Africa occur in young children, whereas in areas with less transmission and low immunity, all age groups are at risk.

C. Symptoms

Malaria is an acute febrile illness. In a non-immune individual, symptoms appear seven days or more (usually 10 to 15 days) after the infective mosquito bite. The first symptoms are fever, headache, chills and vomiting, which may be mild and difficult to recognize as malaria. If not treated within 24 hours, *Plasmodium falciparum* malaria can progress to severe illness often leading to death. Children with severe malaria frequently develop one or more of the following symptoms: severe anaemia, respiratory distress in relation to metabolic acidosis, or cerebral malaria. In adults, multi-organ involvement is also frequent. In malaria endemic areas, persons may develop partial immunity, allowing asymptomatic infections to occur.

For both *Plasmodium vivax* and *Plasmodium ovale*, clinical relapses may occur weeks to months after the first infection, even if the patient has left the malarious area. These new episodes arise from dormant liver forms known as hypnozoites (absent in *Plasmodium falciparum* and *Plasmodium malariae*). Special treatment targeted at these liver stages is required for a complete cure.

D. Who is at risk?

Approximately half of the world's population is at risk of malaria. Most malaria cases and deaths occur in sub-Saharan Africa. However, Asia, Latin America, and to a lesser extent the Middle East and parts of Europe are also affected. In 2013, 97 countries and territories had on-going malaria transmission.

Specific population risk groups include:

1. Young children in stable transmission areas who have not yet developed protective immunity against the most severe forms of the disease.
2. Non-immune pregnant women, as malaria causes high rates of miscarriage and can lead to maternal death.
3. Semi-immune pregnant women in areas of high transmission. Malaria can result in miscarriage and low birth weight, especially during first and second pregnancies.
4. Semi-immune HIV-infected pregnant women in stable transmission areas, during all pregnancies. Women with malaria infection of the placenta also have a higher risk of passing HIV infection to their newborns.
5. People with HIV and AIDS.
6. International travellers from non-endemic areas because they lack immunity.
7. Immigrants from endemic areas and their children living in non-endemic areas and returning to their home countries to visit friends and relatives are similarly at risk because of waning or absent immunity.

E. Diagnosis and treatment

Early diagnosis and treatment of malaria reduces disease and prevents deaths. It also contributes to reducing malaria transmission. The best available treatment, particularly for *Plasmodium falciparum* malaria, is Artemisinin-based Combination Therapy. WHO recommends that all cases of suspected malaria be confirmed using parasite-based diagnostic testing (either microscopy or rapid diagnostic test) before administering treatment. Results of parasitological confirmation can be available in 15 minutes or less. Treatment solely on the basis of symptoms should only be considered when a parasitological diagnosis is not possible. More detailed recommendations are available in the WHO *Guidelines for the treatment of malaria*, second edition, (available at: <http://www.who.int/malaria/publications/atoz/9789241547925/en/>).

F. Antimalarial drug resistance

Resistance to antimalarial medicines is a recurring problem. Resistance of *Plasmodium falciparum* to previous generations of medicines, such as chloroquine and sulfadoxine-pyrimethamine, became widespread in the 1970s and 1980s, undermining malaria control efforts and reversing gains in child survival. In recent years, parasite resistance to artemisinins has been detected in four countries of the Greater Mekong sub-region: Cambodia, Myanmar, Thailand and Viet Nam. While there are likely many factors that contribute to the emergence and spread of resistance, the use of oral artemisinins alone, as monotherapy, is thought to be an important driver. When treated with an oral artemisinin-based monotherapy, patients may discontinue treatment prematurely following the rapid disappearance of malaria symptoms. This results in incomplete treatment, and such patients still have persistent parasites in their

blood. Without a second drug given as part of a combination (as is provided with an Artemisinin-based Combination Therapy), these resistant parasites survive and can be passed on to a mosquito and then to another person.

If resistance to artemisinins develops and spreads to other large geographical areas, the public health consequences could be dire, as no alternative antimalarial medicines will be available for at least five years.

G. Prevention

Vector control is the main way to reduce malaria transmission at the community level. It is the only intervention that can reduce malaria transmission from very high levels to close to zero. For individuals, personal protection against mosquito bites represents the first line of defence for malaria prevention.

Two forms of vector control are effective in a wide range of circumstances:

1. Insecticide-treated mosquito nets

Long-lasting insecticidal nets are the preferred form of insecticide-treated mosquito nets for public health distribution programmes. WHO recommends coverage of all at-risk persons and in most settings. The most cost-effective way to achieve this is through the provision of free long-lasting insecticidal nets, so that everyone sleeps under a one of these nets every night.

2. Indoor spraying with residual insecticides

Indoor residual spraying with insecticides is a powerful way to rapidly reduce malaria transmission. Its full potential is realized when at least 80 per cent of houses in targeted areas are sprayed. Indoor spraying is effective for three to six months, depending on the insecticide used and the type of surface on which it is sprayed. DDT can be effective for 9 to 12 months in some cases. Longer-lasting forms of existing indoor residual spraying with insecticides, as well as new classes of insecticides for use in indoor residual spraying programmes, are under development.

Antimalarial medicines can also be used to prevent malaria. Malaria can be prevented through chemoprophylaxis, which suppresses the blood stage of malaria infections, thereby preventing malaria disease. For the latest information on malaria chemoprophylaxis, see the Chapter on malaria in the WHO *International Travel and Health Handbook*, (available at: www.who.int/ith/en/).

H. Insecticide resistance

To date, much of the success in controlling malaria is due to vector control. Vector control is highly dependent on the use of pyrethroids, which are the only class of insecticides currently

recommended for insecticide-treated nets or long-lasting insecticidal nets. In recent years, mosquito resistance to pyrethroids has emerged in many countries. In some areas, resistance to all four classes of insecticides used for public health has been detected. Fortunately, this resistance has only rarely been associated with decreased efficacy, and long-lasting insecticidal nets and indoor residual spraying remain highly effective tools in almost all settings.

However, countries in sub-Saharan Africa and India are of significant concern. These countries are characterized by high levels of malaria transmission and widespread reports of insecticide resistance. The development of new, alternative insecticides is a high priority and several promising products are in the pipeline. Development of new insecticides for use on bed nets is a particular priority.

Detection of insecticide resistance should be an essential component of all national malaria control efforts to ensure that the most effective vector control methods are being used. The choice of insecticide for indoor residual spraying should always be informed by recent, local data on the susceptibility target vectors.

I. Vaccines against malaria

There are currently no licensed vaccines against malaria or any other human parasite.

Chapter 9 Annex C

Dengue fever

A. Overview

Dengue⁶⁹ is a mosquito-borne infection found in tropical and sub-tropical regions around the world. In recent years, transmission has increased predominantly in urban and semi-urban areas and has become a major international public health concern. Severe dengue, also known as dengue haemorrhagic fever, was first recognized in the 1950s during dengue epidemics in the Philippines and Thailand. Today, severe dengue affects most Asian and Latin American countries and has become a leading cause of hospitalization and death among children in these regions.

There are four distinct, but closely related, serotypes of the virus that causes dengue (DEN-1, DEN-2, DEN-3 and DEN-4). Recovery from infection by one provides lifelong immunity against that particular serotype. However, cross-immunity to the other serotypes after recovery is only partial and temporary. Subsequent infections by other serotypes increase the risk of developing severe dengue.

B. Global burden of dengue

The incidence of dengue has grown dramatically around the world in recent decades. Over 2.5 billion people – more than 40 per cent of the world's population – are now at risk from dengue. WHO currently estimates that there may be between 50 million and 100 million dengue infections worldwide every year. An estimated 500,000 people with severe dengue require hospitalization each year, a large proportion of whom are children. About 2.5 per cent of those affected die.

C. Transmission

The *Aedes aegypti* mosquito is the primary vector of dengue. The virus is transmitted to humans through the bites of infected female mosquitoes. After virus incubation for 4 to 10 days, an infected mosquito is capable of transmitting the virus for the rest of its life. Infected humans are the main carriers and multipliers of the virus, serving as a source of the virus for uninfected mosquitoes. Patients who are already infected with the dengue virus can transmit the infection (for four to five days; maximum 12 days) via *Aedes* mosquitoes, after their first symptoms appear.

⁶⁹ For additional resources on dengue fever, see: WHO, “Health topics: Dengue,” 2015. Available from <http://www.who.int/topics/dengue/en/>; WHO, “Media centre: Dengue and severe dengue,” May 2015. Available from <http://www.who.int/mediacentre/factsheets/fs117/en/>; WHO, *Dengue: Guidelines for diagnosis, treatment, prevention and control*, 2009. Available from <http://www.who.int/tdr/publications/documents/dengue-diagnosis.pdf>; WHO, “A global brief on vector-Borne diseases,” 2015. Available from http://apps.who.int/iris/bitstream/10665/111008/1/WHO_DCO_WHD_2014.1_eng.pdf; WHO, “International travel and health,” 2015. Available from <http://www.who.int/ith/en/>.

The *Aedes aegypti* mosquito lives in urban habitats and breeds mostly in man-made containers. Unlike other mosquitoes, *Aedes aegypti* is a daytime feeder; its peak biting periods are early in the morning and in the evening before dusk. The female *Aedes aegypti* bites multiple people during each feeding period. *Aedes albopictus*, a secondary dengue vector in Asia, has spread to North America and Europe, largely due to the international trade in used tires (a breeding habitat) and other goods (e.g. lucky bamboo). *Aedes albopictus* is highly adaptive and therefore can survive in cooler temperate regions in Europe. Its spread is due to its tolerance to temperatures below freezing, hibernation, and ability to shelter in microhabitats.

D. Characteristics

Dengue fever is a severe, flu-like illness that affects infants, young children and adults, but seldom causes death. Dengue should be suspected when a high fever (40°C/104°F) is accompanied by two of the following symptoms: severe headache, pain behind the eyes, muscle and joint pains, nausea, vomiting, swollen glands or rash. Symptoms usually last for two to seven days, after an incubation period of 4 to 10 days after a bite from an infected mosquito.

Severe dengue is a potentially deadly complication due to plasma leaking, fluid accumulation, respiratory distress, severe bleeding or organ impairment. Warning signs occur three to seven days after the first symptoms, in conjunction with a decrease in temperature (below 38°C/100°F) and include: severe abdominal pain, persistent vomiting, rapid breathing, bleeding gums, fatigue, restlessness and blood in vomit. The next 24 to 48 hours of the critical stage can be lethal. Proper medical care is needed to avoid complications and risk of death.

E. Treatment

There is no specific treatment for dengue fever. For severe dengue, medical care by physicians and nurses experienced in the management of the effects and progression of the disease can save lives, decreasing mortality rates from more than 20 per cent to less than 1 per cent. Maintenance of the patient's body fluid volume is critical to severe dengue care.

F. Immunization

There is no vaccine to protect against dengue. Although developing a vaccine against dengue/severe dengue has been challenging, there has been recent progress in vaccine development. WHO provides technical advice and guidance to countries and private partners to support vaccine research and evaluation. Several candidate vaccines are in various phases of trials.

G. Prevention and control

At present, the only method for controlling or preventing the transmission of dengue virus is to combat vector mosquitoes through:

1. Preventing mosquitoes from accessing egg-laying habitats through environmental management and modification.
2. Properly disposing of solid waste and removing artificial man-made habitats.
3. Covering, emptying and cleaning domestic water storage containers on a weekly basis.
4. Applying appropriate insecticides to outdoor water storage containers.
5. Using personal household protection such as window screens, long-sleeved clothes, insecticide treated materials, coils and vaporizers.
6. Improving community participation and mobilization for sustained vector control.
7. Applying insecticides through space spraying during outbreaks as one of the emergency vector control measures.
8. Carrying out active monitoring and surveillance of vectors to determine effectiveness of control interventions.

Chapter 9 Annex D

Lassa fever

A. Overview

Lassa fever⁷⁰ was first described in the 1950s, although the virus was not isolated until 1969. The disease occurs in West Africa, and is transmitted to humans from wild rodents, through direct or indirect contact with the excreta of infected animals. Person-to-person and laboratory infections occur, particularly in the hospital environment, through direct contact with blood or other body fluids of patients.

The onset of disease is gradual, with fever, vomiting and retrosternal pain. Signs may include conjunctival injection, periorbital oedema and swelling of the neck. Deafness occurs in 25 per cent of all patients. In severe cases, patients suffer shock, fluid in the lung cavity, haemorrhage and cerebral oedema. Approximately 15 per cent of hospitalized patients die, but the outcome can be improved by simple supportive care if provided early in the course of the disease. Specific treatment with the antiviral drug ribavirin may also be effective.

The signs and symptoms of Lassa fever may be difficult to distinguish from severe malaria, typhoid fever, yellow fever and other viral haemorrhagic fevers, but diagnosis can be assisted with simple laboratory support. Definitive diagnosis requires testing that is available only in highly specialized laboratories. Health education strategies for preventing infections in people living in endemic areas focus on rodent control and minimizing contact with rodent excreta.

Measures to control virus transmission from cases include routine use of standard precautions, isolation of suspected cases and surveillance of contacts.

⁷⁰ For additional resources on Lassa fever, see: WHO, “Weekly epidemiological record, 11 March 2005. Available from <http://www.who.int/wer/2005/wer8010.pdf?ua=1>; CDC, “Lassa fever.” Available from <http://www.cdc.gov/vhf/lassa/>.

Chapter 9 Annex E

Leishmaniasis

A. Overview

Leishmaniasis⁷¹ is caused by a protozoa parasite from over 20 *Leishmania* species and is transmitted to humans by the bite of infected female phlebotomine sandflies. There are three main forms of the disease:

1. Visceral leishmaniasis

Visceral leishmaniasis, also known as kala-azar, is fatal if left untreated. It is characterized by irregular bouts of fever, weight loss, enlargement of the spleen and liver, and anaemia. It is highly endemic in the Indian subcontinent and in East Africa. An estimated 200,000 to 400,000 new cases of visceral leishmaniasis occur worldwide each year. Over 90 per cent of new cases occur in six countries: Bangladesh, Brazil, Ethiopia, India, South Sudan and Sudan.

2. Cutaneous leishmaniasis

Cutaneous leishmaniasis is the most common form of leishmaniasis and causes ulcers on exposed parts of the body, leaving life-long scars and causing serious disability. About 95 per cent of cutaneous leishmaniasis cases occur in the Americas, the Mediterranean Basin, and the Middle East and Central Asia. Over two thirds of new cases occur in six countries: Afghanistan, Algeria, Brazil, Colombia, the Islamic Republic of Iran and the Syrian Arab Republic. An estimated 0.7 million to 1.3 million new cases occur annually, worldwide.

3. Mucocutaneous leishmaniasis

Mucocutaneous leishmaniasis leads to partial or total destruction of the mucous membranes of the nose, mouth and throat. Almost 90 per cent of mucocutaneous leishmaniasis cases occur in the Plurinational State of Bolivia, Brazil and Peru.

B. Transmission

The epidemiology of leishmaniasis depends on the characteristics of the parasite species, the local ecological characteristics of the transmission sites, current and past exposure of the human population to the parasite and human behaviour.

⁷¹ WHO, "Health topics: Leishmaniasis," 2015. Available from <http://www.who.int/topics/leishmaniasis/en/>; WHO, "Media centre: Leishmaniasis," February 2015. Available from <http://www.who.int/mediacentre/factsheets/fs375/en/>; WHO, "A global brief on vector-borne diseases," 2015. Available from http://apps.who.int/iris/bitstream/10665/111008/1/WHO_DCO_WHD_2014.1_eng.pdf; WHO, "International travel and health," 2015. Available from <http://www.who.int/ith/en/>.

1. Mediterranean Basin

In the Mediterranean Basin, visceral leishmaniasis is the main form of the disease. It occurs in rural areas, in villages, in mountainous regions and also in some peri-urban areas, where *Leishmania* parasites live on dogs and other animals.

2. Southeast Asia

In Southeast Asia, visceral leishmaniasis is the main form of the disease. Transmission generally occurs in rural areas below 600 meters above sea level, with a heavy annual rainfall, a mean humidity above 70 per cent, a temperature range of 15-38°C, abundant vegetation, subsoil water and alluvial soil. The disease is most common in agricultural villages where houses are frequently constructed with mud walls and earthen floors, and cattle and other livestock live close to humans.

3. East Africa

In East Africa, there are frequent outbreaks of visceral leishmaniasis in the northern Acacia-Balanite savannah and the southern savannah and forest areas where sandflies live around termite mounds. Cutaneous leishmaniasis occurs in the highlands of Ethiopia and other places in East Africa, where increased human-fly contact occurs in villages built on rock hills or river banks, which are the natural habitat of hyraxes.

4. Afro-Eurasia

In Afro-Eurasia, cutaneous leishmaniasis is the main form of the disease. Agricultural projects and irrigation schemes can increase the prevalence of cutaneous leishmaniasis as people who have no immunity to the disease move in to work on the projects. Large outbreaks in densely populated cities also occur, especially during war and large-scale population migration. The parasites causing cutaneous leishmaniasis live mainly on humans or rodents.

5. Americas

Kala-azar in the Americas is very similar to that found in the Mediterranean Basin. The habit of keeping dogs and other domestic animals inside the house is thought to promote human infection. The epidemiology of cutaneous leishmaniasis in the Americas is complex, with variations in transmission cycles, reservoir hosts, sandfly vectors, clinical manifestations and response to therapy, and multiple circulating *Leishmania* species in the same geographical area.

C. Post-kala-azar dermal leishmaniasis

Post-kala-azar dermal leishmaniasis is a sequel of visceral leishmaniasis that appears as a macular, papular or nodular rash usually on the face, upper arms, trunks and other parts of the body. It occurs mainly in East Africa and on the Indian subcontinent, where up to 50 per cent and 5 to 10 per cent of patients with kala-azar, respectively, develop the condition. It usually appears six months to one or more years after kala-azar has apparently been cured, but can also occur earlier. People with post-kala-azar dermal leishmaniasis are considered to be a potential source of kala-azar infection.

D. Leishmania-HIV co-infection

Leishmania-HIV co-infected people have a high chance of developing the full-blown clinical leishmaniasis, and suffer high relapse and mortality rates. Antiretroviral treatment reduces the development of the disease, delays relapses and increases the survival of co-infected patients.

E. Major risk factors

1. Socioeconomic conditions

Poverty increases the risk for leishmaniasis. Poor housing and domestic sanitary conditions (e.g. lack of waste management, open sewerage) may increase sandfly breeding and resting sites, as well as their access to humans. Sandflies are attracted to crowded housing, which provide a good source of blood meals. Human behaviour, such as sleeping outside or on the ground, may increase risk. The use of insecticide-treated bed nets reduces risk.

2. Malnutrition

Diets lacking protein-energy, iron, vitamin A and zinc increase the risk that an infection will progress to kala-azar.

3. Population mobility

Epidemics of both main forms of leishmaniasis are often associated with migration and the movement of non-immune people into areas with existing transmission cycles. Occupational exposure and widespread deforestation also remain important factors. For example, people settling in areas that used to be forests may be moving near sandfly habitats. This can lead to a rapid increase in cases.

4. Environmental changes

Environmental changes that can affect the incidence of leishmaniasis include urbanization, domestication of the transmission cycle and the incursion of agricultural farms and settlements into forested areas.

5. Climate change

Leishmaniasis is climate-sensitive and strongly affected by changes in rainfall, temperature and humidity. Global warming and land degradation together affect the epidemiology of leishmaniasis in a number of ways:

- (a) Changes in temperature, rainfall and humidity can have strong effects on vectors and reservoir hosts by altering their distribution and influencing their survival and population sizes.
- (b) Small fluctuations in temperature can have a profound effect on the developmental cycle of *Leishmania* promastigotes in sandflies, allowing transmission of the parasite in areas not previously endemic for the disease.
- (c) Drought, famine and flood resulting from climate change can lead to massive displacement and migration of people to areas with transmission of leishmaniasis, and poor nutrition could compromise their immunity.

F. Diagnosis and treatment

In visceral leishmaniasis, diagnosis is made by combining clinical signs with parasitological or serological tests (rapid diagnostic tests and others). In cutaneous and mucocutaneous leishmaniasis, serological tests have limited value. In cutaneous leishmaniasis, clinical manifestation with parasitological tests confirms the diagnosis.

The treatment of leishmaniasis depends on several factors, including type of disease, parasite species and geographic location. Leishmaniasis is a treatable and curable disease. All patients diagnosed as visceral leishmaniasis require prompt and complete treatment. Detailed information on treatment of the various forms of the disease by geographic location is available in the WHO technical report series 949 on the control of leishmaniasis (available at: http://whqlibdoc.who.int/trs/WHO_TRS_949_eng.pdf).

G. Prevention and control

Prevention and control of leishmaniasis require a combination of intervention strategies because transmission occurs in a complex biological system involving the human host, parasite, sandfly vector and, in some cases, an animal reservoir. Key strategies include:

1. Early diagnosis and effective case management reduces the prevalence of the disease and prevents disabilities and death. Currently there are highly effective and safe anti-leishmanial medicines, particularly for visceral leishmaniasis, and access to these medicines is improving.

2. Vector control helps to reduce or interrupt disease transmission by controlling sandflies, especially in domestic conditions. Control methods include insecticide spray, use of insecticide-treated nets, environmental management and personal protection.
3. Effective disease surveillance is important. Early detection and treatment of cases helps reduce transmission and helps monitor the spread and burden of disease.
4. Control of reservoir hosts is complex and should be tailored to the local situation.
5. Mobilization and education of the community with effective behavioural change interventions with locally tailored communication strategies is key to the prevention and control of leishmaniasis. Partnership and collaboration with various stakeholders and other vector-borne disease control programmes is critical at all levels.

Chapter 9 Annex F

Japanese encephalitis

A. Overview

Japanese encephalitis (JE)⁷² is the most important cause of viral encephalitis in Asia. It is a mosquito-borne flavivirus, meaning it is related to dengue, yellow fever and West Nile viruses. The first case of JE was documented in 1871 in Japan.

The annual incidence of clinical disease varies both across and within countries, ranging from less than 10 to more than 100 per 100,000 population. A recent literature review estimates nearly 68,000 clinical cases of JE globally, each year, with up to 20,400 deaths due to JE (WHO Bulletin, October 2011). JE primarily affects children. Most adults in endemic countries have natural immunity after childhood infection, but individuals of any age may be affected.

B. Signs and symptoms

Most JE virus infections are mild (fever and headache) or without apparent symptoms, but approximately 1 in 250 infections results in severe symptoms characterized by rapid onset of high fever, headache, neck stiffness, disorientation, coma, seizures, spastic paralysis and death. The case-fatality rate can be as high as 30 per cent among those with disease symptoms.

Of those who survive, between 20 and 30 per cent suffer permanent intellectual, behavioural or neurological problems, such as paralysis, recurrent seizures or the inability to speak.

C. Transmission

Twenty-four countries in the WHO Southeast Asia and Western Pacific regions have JE transmission risk, impacting more than 3 billion people. JE is transmitted to humans through bites from infected mosquitoes of the *Culex* species (mainly *Culex tritaeniorhynchus*). Humans, once infected, do not develop sufficient viraemia to infect feeding mosquitoes. The virus exists in a transmission cycle between mosquitoes, pigs and/or water birds (enzootic cycle). The disease is predominantly found in rural and peri-urban settings, where humans live in closer proximity to these vertebrate hosts.

In most temperate areas of Asia, the Japanese encephalitis virus is transmitted mainly during the warm season, when large epidemics can occur. In the tropics and subtropics, transmission

⁷²For additional resources, see WHO, “Immunization, vaccines and biological: Japanese encephalitis,” 9 April 2015. Available from http://www.who.int/immunization/diseases/japanese_encephalitis/en/; WHO, “Media centre: Japanese encephalitis,” March 2014. Available from <http://www.who.int/mediacentre/factsheets/fs386/en/>; WHO, “A global brief on vector-borne diseases,” 2015. Available from http://apps.who.int/iris/bitstream/10665/111008/1/WHO_DCO_WHD_2014.1_eng.pdf; WHO, “International travel and health,” 2015. Available from <http://www.who.int/ith/en/>.

can occur year-round but often intensifies during the rainy season and pre-harvest period in rice-cultivating regions.

D. Diagnosis

Individuals who live in or have travelled to a JE-endemic area and experience encephalitis are considered a suspected JE case. To confirm JE infection and to rule out other causes of encephalitis requires a laboratory testing of serum or, preferably, cerebrospinal fluid. Surveillance of the disease is mostly syndromic for acute encephalitis. Confirmatory laboratory testing is often conducted in dedicated sentinel sites, and efforts are undertaken to expand laboratory-based surveillance. Case-based surveillance is established in countries that effectively control JE through vaccination.

E. Treatment

There is no antiviral treatment for patients with JE. Treatment is supportive to relieve symptoms and stabilize the patient. Clinical care guidelines have been developed by PATH.

F. Prevention and control

Safe and effective JE vaccines are available to prevent disease. WHO recommends having strong prevention and control activities, including JE immunization, in all regions where the disease is a recognized public health problem, and strengthening surveillance and reporting mechanisms. Other control measures such as mosquito control or amplifying pig control have shown to be less reliable.

All who are travelling to Japanese encephalitis-endemic areas should take precautions to avoid mosquito bites to reduce the risk for JE. Personal preventive measures include the use of repellents, long-sleeved clothes, coils and vaporizers.

G. Disease outbreaks

Major outbreaks of JE occur every 2 to 15 years. JE transmission intensifies during the rainy season, during which vector populations increase. However, there has not yet been evidence of increased JE transmission following major floods or tsunamis. The spread of JE in new areas has been correlated with agricultural development and intensive rice cultivation supported by irrigation programmes.

Chapter 9 Annex G1

Animals in mission environments: Health and hygiene benefits and hazards⁷³

A. Overview

Animals in mission environments,⁷⁴ especially cats and dogs that live closest to peacekeepers, have positive and negative impacts on health. In controlled numbers, they benefit staff welfare, hygiene and health. They contribute to the biological diversity required for the equilibrium of nature and are the most cost-efficient and environmentally-friendly eradicators of vermin (rodents, snakes, insects and dangerous wild fauna). They may, however, become a health and hygiene threat if their populations and health status are not professionally and sustainably controlled.

Previously applied control methods in missions, such as the shooting, poisoning and deportation of wild, feral, stray and owned animals, are strictly forbidden. Those methods were aimed at totally emptying United Nations bases of animals, thus creating a vacuum that was rapidly refilled. They infringe on the standards of conduct for peacekeeping personnel that stipulate respect for and preservation of local flora and fauna and counteract DFS/DPKO and mission internal environmental guidelines.

Poisoning, shooting and deporting have demonstrated adverse effects on biodiversity, human and animal health. Poisons enter the food chain. Shooting campaigns may result in fatal human injuries from stray bullets. These approaches also lead to the survival of the fittest, with the fittest reproducing at an even more rapid pace. Deporting animals in local towns or nature causes animals to grow wild and form packs. Packs of dogs may attack local villagers and cause traffic accidents and substantial damage to crops, property and wild flora.

While those methods are harmful to humans and to the environment, trapping, neutering and releasing (TNR) promotes human and animal health and welfare and has been scientifically proven to be the most successful strategy for reducing and even eradicating rabies. Furthermore, TNR is known worldwide as the most cost-effective, sustainable and environmentally-friendly method for dealing with animal populations. It results in a permanent decrease and control of the

⁷³ For more information on UN norms and protocols on animals in mission environments, see: Convention on International Trade in Endangered Species of Wild Flora and Fauna, 3 March 1973; General Assembly resolutions A/RES/49/117; A/RES/49/119; A/RES/55/201; DPKO/FGS, “Guidelines for troop contributing countries deploying military units to the United Nations peacekeeping missions,” 2008. Available from http://www.puolustusvoimat.fi/wcm/d212c8004a2f14d7a312ebdd4b5e74eb/TCC+Generic+Guidelines+Approved+signed+7+March+2008.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=d212c8004a2f14d7a312ebdd4b5e74eb; Medical Guidelines for Peacekeeping Operations, Pest Control in Peacekeeping Missions, 14 May 2003; UN, “UN Standards of Conduct: Ten Rules: Code of personal conduct for blue helmets,” 2010. Available from <https://cdu.unlb.org/UNStandardsOfConduct/TenRulesCodeOfPersonalConductForBlueHelmets.aspx>; UN, “United Nations decade on biodiversity.” Available from <https://www.cbd.int/2011-2020/>; DPKO/DFS, “Environmental Policy for UN Field Missions,” June 2009.

⁷⁴ For additional resources, see WHO, “Media centre: Rabies,” September 2014. Available from <http://www.who.int/mediacentre/factsheets/fs099/en/>; WHO, “Immunization, vaccines and biological: Rabies,” February 2014. Available from <http://www.who.int/immunization/diseases/rabies/en/>; WHO, “WHO expert consultation on rabies,” 2013. Available from http://apps.who.int/iris/bitstream/10665/85346/1/9789240690943_eng.pdf?ua=1.

animal population when applied in combination with other measures, such as repair of fences and food source control, and helps preserve the diversity of species. Only a diversified and balanced nature provides the crucial food and water supplies necessary for the survival of people in hardship, thus enhancing peace and stability, the main goal of peacekeeping. TNR is also the only strategy compatible with all United Nations behavioural, ethical, and environmental regulations and norms, such as the DPKO/DFS Environmental Policy for United Nations Field Missions (June 2009), the United Nations Convention on Biological Diversity (1992) and General Assembly Resolutions 49/117 49/119 and 55/201.

Missions are therefore to promote and build capacity for conducting regular TNR campaigns until local veterinary capacities are built and animal populations are set at a natural balance. TNR comprises the neutering of all female and male animals, including mission pets and guard dogs, anti-rabies vaccination and deworming, advice for proper waste disposal, wildlife-adequate fencing and responsible animal care/ownership, as well as fostering and sheltering unwanted animals. Surgical sterilization shall be the primary neutering method used. Euthanasia is indicated only in case of contagiously or incurably sick or aggressive animals. Only specialized veterinary teams shall conduct TNR campaigns.

When necessary, mission planning teams are advised to include in the structure of TCC medical teams at least one veterinarian and at least one assistant. It is strongly advised that the military contingent veterinarians at least help and in case of lack of local capacities, conduct TNR campaigns by themselves. This is important, especially in war-affected regions, where the local veterinary sector is usually one of the least developed. In such situations, there is a high risk of animal-related hazards and threats, such as zoonoses, in mission environments. As zoonoses do not stop in front of the mission fences, it is important that missions are enabled to professionally respond to all such challenges, and that sufficient resources be allocated for animal management.

As part of animal management, missions shall appoint a focal point for animals and wild flora, thus avoiding dependence on sporadic actions that can be hazardous, especially when dealing with aggressive animals. The focal point shall identify, monitor and track all animal-related health and hygiene incidents and threats and coordinate all animal-related actions with the competent veterinary unit, the CMO and camp command. She/he shall report to or at least closely cooperate with the CMO and regularly consult with the mission's environmental unit, in order to act in line with United Nations health, hygiene, environmental and biodiversity regulations and norms. She/he shall furthermore be experienced in dealing with wild and domestic animals and flora, be duly instructed in animal-related health and hygiene risks and local prevalence of zoonoses, and have knowledge of local wildlife and its endangered and vulnerable species.

Animal population management shall be a mission responsibility and could be outsourced to experts based on a competitive bidding process and the budget line may be allocated from medical or general services.

Chapter 9 Annex G2

Rabies

A. Overview

Rabies⁷⁵ is a zoonotic disease (a disease that is transmitted to humans from animals) that is caused by a virus. The disease affects domestic and wild animals, and is spread to people through close contact with infectious material, usually saliva, via bites or scratches.

Although rabies is present on all continents except Antarctica, more than 95 per cent of human deaths from rabies occur in Asia and Africa. Once symptoms of the disease develop, rabies is nearly always fatal.

Rabies is a neglected disease of poor and vulnerable populations whose deaths are rarely reported. It occurs mainly in remote rural communities where measures to prevent dog to human transmission have not been implemented. Under reporting of rabies also prevents the mobilization of resources from the international community for the elimination of human-dog-mediated rabies.

B. Symptoms

The incubation period for rabies is typically one to three months, but may vary from less than one week to more than one year. The initial symptoms of rabies are fever and often pain or an unusual or unexplained tingling, pricking or burning sensation (paraesthesia) at the wound site. As the virus spreads through the central nervous system, progressive and fatal inflammation of the brain and spinal cord develops. Two forms of the disease can follow. People with furious rabies exhibit signs of hyperactivity, excited behaviour, hydrophobia and sometimes aerophobia. After a few days, death occurs by cardio-respiratory arrest.

Paralytic rabies accounts for about 30 per cent of the total number of human cases. This form of rabies runs a less dramatic and usually longer course than the furious form. The muscles gradually become paralyzed, starting at the site of the bite or scratch. A coma slowly develops, and eventually death occurs. The paralytic form of rabies is often misdiagnosed, contributing to the under-reporting of the disease.

C. Diagnosis

No tests are available to diagnose rabies infection in humans before the onset of clinical disease. Unless the rabies-specific signs of hydrophobia or aerophobia are present, clinical diagnosis may be difficult. Human rabies can be confirmed *intra vitam* and *post mortem* by

⁷⁵ For additional resources, see WHO, “Media centre: Rabies,” September 2014. Available from <http://www.who.int/mediacentre/factsheets/fs099/en/>; WHO, “Immunization, vaccines and biological: Rabies,” February 2014. Available from <http://www.who.int/immunization/diseases/rabies/en/>; WHO, “International travel and health,” 2015. Available from <http://www.who.int/ith/en/>.

various diagnostic techniques aimed at detecting the whole virus, viral antigens or nucleic acids in infected tissues (brain, skin, urine or saliva).

D. Transmission

People are usually infected following a deep bite or scratch from an infected animal. Dogs are the main hosts and transmitters of rabies. They are the source of infection in all of the estimated 50,000 human rabies deaths annually in Asia and Africa. Bats are the source of most human rabies deaths in the Americas. Rabies has also recently emerged as a public health threat in Australia and Western Europe. Human deaths following exposure to foxes, raccoons, skunks, jackals, mongooses and other wild carnivore host species are very rare.

Transmission can also occur when infectious material, usually saliva, comes into direct contact with human mucosa or fresh skin wounds. Human-to-human transmission by bite is theoretically possible but has never been confirmed. In rare cases, rabies may be contracted through inhalation of a virus-containing aerosol or via transplantation of an infected organ. Ingestion of raw meat or other tissues from animals infected with rabies is not a source of human infection.

E. Post-exposure prophylaxis

Post-exposure prophylaxis (PEP) consists of:

1. Local treatment of the wound, initiated as soon as possible after exposure.
2. A course of potent and effective rabies vaccine that meets WHO recommendations.
3. The administration of rabies immunoglobulin, if indicated.

Effective treatment soon after exposure to rabies can prevent the onset of symptoms and death.

F. Local treatment of the wound

Removing the rabies virus at the site of the infection by chemical or physical means is an effective form of protection. Therefore, prompt local treatment of all bite wounds and scratches that may be contaminated with rabies virus is important. Recommended first-aid procedures include immediate and thorough flushing and washing of the wound for a minimum of 15 minutes with soap and water, detergent, Povidone-iodine or other substances that kill the rabies virus.

G. Recommended post-exposure prophylaxis

PEP depends on the type of contact with the suspected rabid animal (see table).

Figure X

Table: Categories of contact and recommended post-exposure prophylaxis (PEP)

Categories of contact with suspect rabid animal	Post-exposure prophylaxis measures
Category I – touching or feeding animals, licks on intact skin	None
Category II – nibbling of uncovered skin, minor scratches or abrasions without bleeding	Immediate vaccination and local treatment of the wound
Category III – single or multiple transdermal bites or scratches, licks on broken skin; contamination of mucous membrane with saliva from licks, contacts with bats.	Immediate vaccination and administration of rabies immunoglobulin; local treatment of the wound

All category II and III exposures assessed as carrying a risk of developing rabies require PEP. This risk is increased if:

- The biting mammal is a known rabies reservoir or vector species;
- The animal looks sick or is behaving abnormally;
- A wound or mucous membrane was contaminated by the animal's saliva;
- The bite was unprovoked; and
- The animal has not been vaccinated.

In developing countries, the vaccination status of the suspected animal alone should not be considered when deciding whether to initiate prophylaxis or not.

H. Who is most at risk?

Dog rabies potentially threatens over 3 billion people in Asia and Africa. People most at risk live in rural areas where human vaccines and immunoglobulin are not readily available or accessible. Although all age groups are susceptible, rabies is most common in children under 15. On average, 40 per cent of PEP regimens are given to children aged 5 to 14 years and the majority are male.

Anyone in continual, frequent or increased danger of exposure to rabies virus either by nature of their residence or occupation is also at risk. Anyone travelling with extensive outdoor exposure in rural, high-risk areas where immediate access to appropriate medical care may be limited should be considered at risk regardless of the duration of their stay. Children living in or visiting rabies-affected areas are at particular risk.

I. Prevention

1. Eliminating rabies in dogs

Rabies is a vaccine-preventable disease. The most cost-effective strategy for preventing rabies in people is by eliminating rabies in dogs through vaccination. Vaccination of animals (mostly dogs) has reduced the number of human (and animal) rabies cases in several countries, particularly in Latin America. However, recent increases in human rabies deaths in parts of Africa, Asia and Latin America suggest that rabies is re-emerging as a serious public health issue. Preventing human rabies through control of domestic dog rabies is a realistic goal for large parts of Africa and Asia, and is justified financially by the future savings of discontinuing PEP for people.

2. Preventive immunization in people

Safe, effective vaccines can be used for pre-exposure immunization. This is recommended for travellers spending a lot of time outdoors, especially in rural areas, involved in activities such as bicycling, camping, or hiking, as well as for long-term travellers and individuals living in areas with a significant risk of exposure. Pre-exposure immunization is also recommended for people in certain high-risk occupations such as laboratory workers dealing with live rabies virus and other rabies-related viruses (lyssaviruses) and people involved in any activities that might bring them professionally or otherwise into direct contact with bats, carnivores, and other mammals in rabies-affected areas. As children are considered at higher risk because they tend to play with animals, may receive more severe bites, or may not report bites, their immunization could be considered if living in or visiting high-risk areas.

Chapter 9 Annex H

Integrated vector management

A. Overview

New strategies for the prevention and control of vector-borne diseases are emphasizing integrated vector management (IVM)⁷⁶ as an approach that reinforces linkages between health and environment, optimizing benefits to both. The most deadly vector borne disease, malaria, kills more than 1.2 million people annually, mostly African children under 5. Dengue fever, together with associated dengue haemorrhagic fever, is the world's fastest growing vector-borne disease. Poorly designed irrigation and water systems, inadequate housing, poor waste disposal and water storage, deforestation and loss of biodiversity, all may be contributing factors to the most common vector-borne diseases, including malaria, dengue and leishmaniasis.

IVM strategies are designed to achieve the greatest disease control benefit in the most cost-effective manner, while minimizing the negative impacts on ecosystems (e.g. depletion of biodiversity) and the adverse side effects on public health from the excessive use of chemicals in vector control. Rather than relying on a single method of vector control, IVM stresses the importance of first understanding the local vector ecology and local patterns of disease transmission, and then choosing the appropriate vector control tools from the range of options available.

These include environmental management strategies that can reduce or eliminate vector breeding grounds altogether through improved design or operation of water resources development projects, as well as the use of biological controls (e.g. bacterial larvicides and larvivorous fish) that target and kill vector larvae without generating the ecological impacts of chemical use. At the same time, when other measures are ineffective or not cost-effective, IVM makes judicious use of chemical methods of vector control such as indoor residual sprays, space spraying, and the use of chemical larvicides and adulticides, which reduce disease transmission by shortening or interrupting the lifespan of vectors.

IVM provides a framework for improved personal protection/preventive strategies that combine environmental management and chemical tools for new synergies (e.g. insecticide-treated nets). Trials using insecticide-treated bed nets in some malaria-endemic African countries have shown very substantial reductions in child and infant mortality. IVM also supports effective, accessible and affordable disease diagnosis and treatment within the framework of a multi-disease control approach.

IVM requires a multi-sector approach to vector-borne disease control. For instance, health impact assessments of new infrastructure development, e.g. water resource, irrigation and

⁷⁶ For additional resources, see WHO, "Vector-borne disease," 2015. Available from <http://www.who.int/heli/risks/vectors/vector/en/>; PAHO, "Integrated vector management," June 2014. Available from http://www.paho.org/hq/index.php?option=com_content&view=article&id=2640:integrated-vector-management-ivm&Itemid=3625&lang=en; WHO, "Position statement on integrated vector management," May 2008. Available from http://apps.who.int/iris/bitstream/10665/69745/1/WHO_HTM_NTD_VEM_2008.2_eng.pdf

agriculture, can help identify potential impacts on vector-borne disease upstream of major policy decisions so that effective action may be taken.

IVM is not a panacea. However, in many settings, the use of IVM strategies has yielded sustainable reductions in disease and transmission rates. In addition, certain IVM field experiences have been documented as cost-effective in terms of disease control, and potential generators of economic co-benefits in terms of development and growth. Still, more work needs to be done to link the health and economic outcomes.

Chapter 9 Annex I1

Ebola Virus Disease

A. Overview

Ebola⁷⁷ first appeared in 1976 in two simultaneous outbreaks in Nzara, Sudan and Yambuku, Democratic Republic of the Congo. The latter was in a village situated near the Ebola River from which the disease takes its name. Genus Ebolavirus is one of three members of the Filoviridae family (filovirus), along with genus Marburgvirus and genus Cuevavirus. Genus Ebolavirus comprises five distinct species:

1. Bundibugyo ebolavirus
2. Zaire ebolavirus
3. Reston ebolavirus
4. Sudan ebolavirus
5. Taï Forest ebolavirus

Bundibugyo ebolavirus, Zaire ebolavirus, and Sudan ebolavirus have been associated with large EVD outbreaks in Africa, whereas Reston ebolavirus and Taï Forest ebolavirus have not. The Reston ebolavirus species found in the Philippines and the People's Republic of China can infect humans but no illness or death in humans from this species has been reported to date.

B. Transmission

Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals. In Africa, infection has been documented through the handling of infected chimpanzees, gorillas, fruit bats, monkeys, forest antelope and porcupines found ill or dead in the rainforest.

Ebola then spreads in the community through human-to-human transmission, with infection resulting from direct contact through broken skin or mucous membranes with the blood, secretions, organs or other bodily fluids of infected people, and in direct contact with environments contaminated with such fluids. Burial ceremonies in which mourners have direct contact with the body of the deceased person can also play a role in the transmission of

⁷⁷ For additional resources see: WHO, "Ebola," 2015. Available from <http://www.who.int/csr/disease/ebola/en/>; WHO, "Media centre: Ebola virus disease," April 2015. Available from <http://www.who.int/mediacentre/factsheets/fs103/en/>; WHO, "Interim Infection Control Recommendations for Care of Patients with Suspected or Confirmed Filo virus (Ebola, Marburg) Hemorrhagic Fever." Available from http://apps.who.int/iris/bitstream/10665/130596/1/WHO_HIS_SDS_2014.4_eng.pdf?ua=1.

Ebola. Men who have recovered from the disease can still transmit the virus through their semen for up to seven weeks after recovery from illness.

Health care workers have frequently been infected while treating patients with suspected or confirmed EVD. This has occurred through close contact with patients when infection control precautions are not strictly practiced. Among workers in contact with monkeys or pigs infected with Reston ebolavirus, several infections have been documented in people who were clinically asymptomatic. Thus, Reston ebolavirus appears less capable of causing disease in humans than other Ebola species. However, the only available evidence comes from healthy adult males. It would be premature to extrapolate the health effects of the virus to all population groups, such as immunocompromised persons, persons with underlying medical conditions, pregnant women and children. Additional studies of Reston ebolavirus are needed before definitive conclusions can be drawn about the pathogenicity and virulence of this virus in humans.

C. Signs and symptoms

EVD is a severe acute viral illness, often characterized by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat. This is followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding. Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes. People are infectious as long as their blood and secretions contain the virus. Ebola virus was isolated from semen 61 days after the onset of illness in a man who was infected in a laboratory.

The incubation period, or the time interval from infection with the virus to the onset of symptoms, is between 2 and 21 days.

D. Diagnosis

Other diseases that should be ruled out before an EVD diagnosis can be made include: malaria, typhoid fever, shigellosis, cholera, leptospirosis, plague, rickettsiosis, relapsing fever, meningitis, hepatitis and other viral haemorrhagic fevers. Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests:

1. Antibody-capture enzyme-linked immunosorbent assay
2. Antigen detection tests
3. Serum neutralization test
4. Reverse transcriptase polymerase chain reaction assay
5. Electron microscopy
6. Virus isolation by cell culture

Samples from patients are an extreme biohazard risk; testing should be conducted under maximum biological containment conditions.

E. Vaccine and treatment

No licensed EVD vaccine is available. Several vaccines are being tested, but none are available for clinical use. Severely ill patients require intensive supportive care. Patients are frequently dehydrated and require oral rehydration with solutions containing electrolytes or intravenous fluids. No specific treatment is available. New drug therapies are being evaluated.

F. Natural host of Ebola virus

In Africa, fruit bats, particularly species of the genera *Hypsignathus monstrosus*, *Epomops franqueti* and *Myonycteris torquata*, are considered possible natural hosts for Ebola virus. As a result, the geographic distribution of Ebola viruses may overlap with the range of fruit bats.

G. Ebola virus in animals

Although non-human primates have been a source of infection for humans, they are not thought to be the reservoir but rather an accidental host like human beings. Since 1994, Ebola outbreaks from the Zaire ebolavirus and Taï Forest ebolavirus species have been observed in chimpanzees and gorillas. Reston ebolavirus has caused severe EVD outbreaks in macaque monkeys (*Macaca fascicularis*) farmed in the Philippines and detected in monkeys imported into the United States in 1989, 1990 and 1996, and into Italy in 1992. Since 2008, Reston ebolaviruses have been detected during several outbreaks of a deadly disease in pigs in the People's Republic of China and the Philippines. Asymptomatic infection in pigs has been reported and experimental inoculations have shown that Reston ebolavirus cannot cause disease in pigs.

H. Prevention and control

1. Controlling Reston ebolavirus in domestic animals

No animal vaccine against Reston ebolavirus is available. Routine cleaning and disinfection of pig or monkey farms (with sodium hypochlorite or other detergents) should be effective in inactivating the virus. If an outbreak is suspected, the premises should be quarantined immediately. Culling of infected animals, with close supervision of burial or incineration of carcasses, may be necessary to reduce the risk of animal-to-human transmission. Restricting or banning the movement of animals from infected farms to other areas can reduce the spread of the disease.

As Reston ebolavirus outbreaks in pigs and monkeys have preceded human infections, the establishment of an active animal health surveillance system to detect new cases is essential to providing early warning for veterinary and human public health authorities.

2. Reducing the risk of Ebola infection in people

In the absence of effective treatment and a human vaccine, raising awareness of the risk factors for Ebola infection and the protective measures individuals can take is the only way to reduce human infection and death. In Africa, during EVD outbreaks, educational public health messages for risk reduction should focus on several factors:

- (a) Reducing the risk of wildlife-to-human transmission through contact with infected fruit bats or monkeys/apes and the consumption of their raw meat. Animals should be handled with gloves and other appropriate protective clothing. Animal products (blood and meat) should be thoroughly cooked before consumption.
- (b) Reducing the risk of human-to-human transmission in the community arising from direct or close contact with infected patients, particularly with their bodily fluids. Close physical contact with Ebola patients should be avoided. Gloves and appropriate personal protective equipment should be worn when taking care of ill patients at home. Regular hand washing is required after visiting patients in the hospital, as well as after taking care of patients at home.
- (c) Communities affected by Ebola should inform the population about the nature of the disease and about outbreak containment measures, including burial of the dead. People who have died from Ebola should be promptly and safely buried.
- (d) Pig farms in Africa can play a role in the amplification of infection because of the presence of fruit bats on these farms. Appropriate biosecurity measures should be in place to limit transmission. For Reston ebolavirus, educational public health messages should focus on reducing the risk of pig-to-human transmission as a result of unsafe animal husbandry and slaughtering practices, and unsafe consumption of fresh blood, raw milk or animal tissue. Gloves and other appropriate protective clothing should be worn when handling sick animals or their tissues and when slaughtering animals. In regions where Reston ebolavirus has been reported in pigs, all animal products (blood, meat and milk) should be thoroughly cooked before eating.

3. Controlling infection in health-care settings

Human-to-human transmission of the Ebola virus is primarily associated with direct or indirect contact with blood and body fluids. Transmission to health care workers has been reported when appropriate infection control measures have not been observed. It is not always possible to identify patients with EBV early because initial symptoms may be non-specific. For this reason, it is important that health care workers apply standard precautions consistently with all patients, regardless of their diagnosis, in all work practices and at all times. These include

basic hand hygiene, respiratory hygiene, the use of personal protective equipment (according to the risk of splashes or other contact with infected materials), safe injection practices and safe burial practices.

Health care workers caring for patients with suspected or confirmed Ebola virus should apply, in addition to standard precautions, other infection control measures to avoid any exposure to the patient's blood and body fluids and direct unprotected contact with the possibly contaminated environment. When in close contact (within one metre) of patients with EBV, health care workers should wear face protection (a face shield or a medical mask and goggles), a clean, non-sterile long-sleeved gown, and gloves (sterile gloves for some procedures).

Laboratory workers are also at risk. Samples taken from suspected human and animal Ebola cases for diagnosis should be handled by trained staff and processed in suitably equipped laboratories.

WHO provides recommendations for infection control while providing care to patients with suspected or confirmed Ebola haemorrhagic fever in: *Interim infection control recommendations for care of patients with suspected or confirmed Filovirus (Ebola, Marburg) haemorrhagic fever*, March 2008. WHO has also created an aide-memoire on standard precautions in health care (currently being updated). Standard precautions are meant to reduce the risk of transmission of blood-borne and other pathogens. If universally applied, the precautions would help prevent most transmission through exposure to blood and body fluids.

Standard precautions are recommended in the care and treatment of all patients regardless of their perceived or confirmed infectious status. They include the basic level of infection control: hand hygiene, use of personal protective equipment to avoid direct contact with blood and body fluids, prevention of needle stick and injuries from other sharp instruments, and a set of environmental controls.

Chapter 9 Annex I2



United Nations Medical Services Division

Checklist of Ebola preparedness and response activities for United Nations health facilities

September 2014

The aim of this checklist is primarily to provide an outline of the essential minimum elements of Ebola preparedness and response, as well as specific elements that are considered desirable by the MSD.

It is recommended that all duty stations in locations where active outbreaks of EVD are occurring should review this checklist in detail. Duty stations that already have their own specific Ebola preparedness and response plan in place may use the checklist to evaluate the completeness of their current plan.

While most of the actions listed here fall under the responsibility of the United Nations medical staff in each duty station, some of these actions would also need to be implemented in coordination with the country office/missions' non-medical senior management and other non-medical stakeholders.

All affected duty stations should review this checklist and adapt it in accordance with the Ebola plans and guidelines from the local and/or national authorities.

A. Planning and coordination

- ☐ United Nations country office/mission's senior management or stakeholders should be briefed regarding the current Ebola outbreak situation, its possible outcomes and any related resource requirements for the country office/mission.
- ☐ United Nations senior medical staff should ensure systems are in place for close coordination with relevant stakeholders (e.g. WHO country office, national government, health authorities).
- ☐ United Nations country office/mission should convene either a formal coordinating committee for Ebola, or an equivalent committee (e.g. SMT/CMT) for management of the outbreak, or if the need should arise later.
- ☐ United Nations health facility should have a business continuity plan that will allow performance of critical functions with reduced numbers of staff.

- ☐ United Nations health facility should assess its medical preparedness status related to Ebola and identify any actions needed to fill gaps.

B. Public health and medical management

1. Preparedness

- ☐ United Nations medical staff and other relevant stakeholders should review, become familiar with, and implement the WHO/Centres for Disease Control and Prevention/MSD guidelines related to Ebola.
- ☐ United Nations medical staff, in coordination with the country office/mission management, should define the United Nations personnel who are considered high risk for Ebola infections (e.g. medical staff, cleaners of the health facility, staff disposing high-risk waste, laundry staff, laboratory staff, burial teams, etc.) and involve them in specific training as necessary.

2. Personal hygiene

- ☐ United Nations medical staff, in coordination with the country office/mission management, should raise awareness among United Nations personnel on how Ebola is spread, the prevention strategies of personal hygiene, including staying away from ill persons, hand washing and safe burial techniques.

3. Travel

- ☐ United Nations medical staff should review and be familiar with the contents of the MSD travel advisory.
- ☐ United Nations medical staff, in coordination with the country office/mission management and WHO advice on their Ebola website, should provide education to travellers and issue travel advisories, precautions or restrictions, as necessary.

4. Infection control

- ☐ United Nations medical staff should routinely and consistently implement universal precautions at all times regardless of the diagnosis of the patient. Emphasis should be put on routine hand washing, before and after examining patients with fever, and safe handling and disposal of used needles and syringes.
- ☐ Routine hand washing practices by medical staff, especially after contact with each patient, should be regularly monitored and improved, as needed.

- ☐ United Nations medical staff should be familiar with the immediate infection control precautions to take once an Ebola case is suspected, including barrier nursing and isolation precautions.
- ☐ United Nations medical staff and other relevant staff should be familiar with and trained regarding the proper cleaning and disinfection of medical and patient equipment and walls and floors of health facilities.
- ☐ United Nations medical and other relevant staff dealing with waste should be familiar with and trained regarding the proper procedures of disposal of Ebola-contaminated waste.
- ☐ United Nations medical staff and other relevant staff should be familiar with and trained regarding the safe preparation of bodies of deceased Ebola patients for burial and how to prevent disease transmission during the process.

5. Personal protective equipment

- ☐ United Nations medical staff should review the types of PPE needed for management of an Ebola case/outbreak.
- ☐ If these PPE are currently unavailable in the local supply, United Nations medical staff should identify the best sources, and procure the necessary quantities of PPE.
- ☐ United Nations medical staff and other staff identified as high risk populations should be trained on the proper use and disposal of the PPE.

6. Diagnosis of cases

- ☐ United Nations medical staff should familiarize themselves with how Ebola cases might present, know the possible differential diagnoses, and understand how to identify such cases if encountered.
- ☐ United Nations medical staff should know how to liaise with the local WHO country office and protocols for collection and transport of clinical specimens, and arrangement of laboratory testing of suspected Ebola cases, if encountered.

7. Management of cases

- ☐ United Nations medical staff should know how to administer supportive care to suspected/probable/confirmed Ebola cases, if encountered
- ☐ If applicable, United Nations medical staff should ensure that an isolation area or areas can be set up within its own health facility and that it meets WHO standards.

- ☐ United Nations medical staff should have the knowledge of the capacity and capabilities of local hospitals to handle Ebola cases, and know the protocols for referrals to such hospitals.

8. Reporting

- ☐ United Nations medical staff should be familiar with the procedures for informing the country office/mission's senior management, WHO country office, and MSD (email: medicaldirector@un.org) when an Ebola case is suspected.
- ☐ United Nations medical staff should be familiar with the procedures for informing the local health authorities when an Ebola case is suspected or confirmed.

9. Management of contacts

- ☐ United Nations medical staff should understand how to identify and manage potential contacts of Ebola cases, in conjunction with the WHO country office and local health authorities.

C. Communications and health education

- ☐ United Nations medical staff, in coordination with the country office/mission management, should update all staff on the current Ebola outbreak situation and the United Nations country office/mission's preparedness activities as necessary.
- ☐ United Nations medical staff should know where to obtain information concerning the latest outbreak situation from both WHO websites and the local health authorities.

Chapter 9 Annex J

HIV, AIDS and sexually transmitted infections⁷⁸

A. Overview

HIV and STIs⁷⁹ are diseases affecting the military, including United Nations peacekeeping troops and observers. Higher prevalence rates have been found among military personnel, including for certain TCCs to peacekeeping missions, though generally the levels are similar to national prevalence.

B. Risk factors

The following factors contribute to the particular vulnerability of deployed peacekeepers to STIs and HIV/AIDS, which arises largely from contact with infected sex workers.

1. Lengthy periods away from home and separation from regular sex partners.
2. Influence of alcohol and peers.
3. Fewer inhibitions and restrictions in the new country.
4. Money to spend, with fewer opportunities to spend during operational deployment.
5. Risk-taking ethos and behaviour in the military, which is part of the make-up of any soldier.
6. Easy access to sex workers near campsites and frequented off-duty areas.
7. In some situations, higher tendency towards drug abuse and lack of access to sterile hypodermic needles.
8. Higher chance of exposure to infected blood in the operational environment, either from fellow peacekeepers or the local population, particularly for medical personnel.

STIs and HIV infections are largely preventable through proper health education and training, as well as through the issuance of personal protection (condoms) to individual peacekeepers. An effective AIDS prevention programme will limit further spread of the disease among peacekeepers and the local population. Elements of such a programme include:

⁷⁸ For additional detail, see Chapter 6.

⁷⁹ For additional resources see WHO, “Media centre: HIV/AIDS,” November 2014. Available from <http://www.who.int/mediacentre/factsheets/fs360/en/>; WHO, “HIV/AIDS Q&A,” November 2014. Available from <http://www.who.int/features/qa/71/en/>; WHO, “WHO Guidelines on HIV/AIDS.” Available from http://www.who.int/publications/guidelines/hiv_aids/en/.

1. Health education on the risks of HIV and AIDS and to debunk myths and misconceptions regarding the disease. This is to be reinforced by publications, posters and other means of communication, in collaboration with HIV units.
2. HIV prevention training for peacekeepers prior to and during their deployment in United Nations PKOs, with emphasis on the proper use of prophylaxis and the moderation of behaviour in risky situations.
3. Supervised regular distribution of condoms to all peacekeepers, both male and female, particularly before time-off or leave. It is a national responsibility to ensure that troops deploy with an adequate supply of condoms. Additional condoms may be obtained from the medical unit supporting the contingent or through the mission HIV unit.
4. Available and accessible HIV testing for all United Nations peacekeepers and staff members deployed in the field. Counselling services by medical staff and voluntary confidential counselling and testing services in HIV units should be made available for infected individuals, if requested.
5. Promoting greater awareness among medical personnel and adopting universal precautions for handling patients, particularly during resuscitation and intravenous procedures. Ensuring the proper disposal and decontamination of medical wastes and consumables.
6. Further information regarding HIV and AIDS can be obtained from the booklet, "Protect yourself, and those you care about, against HIV/AIDS," published jointly by DPKO and UNAIDS and "Living in a world of HIV/AIDS" from the UN Cares website (www.uncares.org). This is available to all military observers, civilian police monitors and military contingents serving in peacekeeping missions.

Chapter 9 Annex K1

Water-related diseases

A. Diarrhoea

Diarrhoea⁸⁰ occurs throughout the world and causes 4 per cent of all deaths and 5 per cent of health loss to disability. It is most commonly caused by gastrointestinal infections that kill some 2.2 million people globally each year, most of whom were children under 5 in developing countries. Each year there are approximately 4 billion cases of diarrhoea worldwide. Although the use of water in hygiene is an important preventive measure, contaminated water is also an important cause of diarrhoea. Cholera and dysentery cause severe, sometimes life-threatening forms of diarrhoea.

B. The disease and how it affects people

Diarrhoea is the passage of loose or liquid stools more frequently than is normal for the individual. It is primarily a symptom of gastrointestinal infection. Depending on the type of infection, the diarrhoea may be watery (for example in cases of cholera) or passed with blood (for example in cases of dysentery). Diarrhoea due to infection may last a few days or several weeks, as in persistent diarrhoea. Severe diarrhoea may be life threatening due to fluid loss in watery diarrhoea, particularly in infants, young children, the malnourished and people with impaired immunity.

Among children, the impact of repeated or persistent diarrhoea on nutrition and the effect of malnutrition on susceptibility to infectious diarrhoea can be linked in a vicious cycle, especially in developing countries. Diarrhoea is also associated with other infections such as malaria and measles. Chemical irritation of the gut or non-infectious bowel disease can also result in diarrhoea.

C. The cause

Diarrhoea is a symptom of infection caused by a host of bacterial, viral and parasitic organisms, most of which can be spread by contaminated water. It is more common when there is a shortage of clean water for drinking, cooking and cleaning. Basic hygiene is important to prevention. Water contaminated with human faeces, for example from municipal sewage, septic tanks and latrines, is of particular concern. Animal faeces also contain microorganisms that can cause diarrhoea.

Diarrhoea can also spread from person to person, aggravated by poor personal hygiene. Food is another major cause of diarrhoea when it is prepared or stored in unhygienic conditions.

⁸⁰ For additional resources, see WHO, “Water sanitation health: Water-related diseases,” 2015. Available from http://www.who.int/water_sanitation_health/diseases/diarrhoea/en/; WHO, “Water sanitation health: Water-related diseases: information sheets,” 2015. Available from http://www.who.int/water_sanitation_health/diseases/diseasefact/en/.

Water can contaminate food during irrigation, and fish and seafood from polluted water may also contribute to the disease.

D. Distribution

The infectious agents that cause diarrhoea are present or are sporadically introduced throughout the world. Diarrhoea is a rare occurrence for most people who live in developed countries, where sanitation is widely available, access to safe water is high and personal and domestic hygiene is relatively good. Worldwide, some 1.1 billion people lack access to improved water sources and 2.4 billion have no basic sanitation. Diarrhoea due to infection is widespread throughout the developing world. In Southeast Asia and Africa, diarrhoea is responsible for as many as 8.5 per cent and 7.7 per cent of all deaths, respectively.

F. Interventions

Key measures to reduce the number of cases of diarrhoea include:

- Improving access to safe drinking water;
- Improving access to sanitation;
- Facilitating good personal and food hygiene; and
- Providing health education about how infections spread.

Key measures to treat diarrhoea include:

- Increasing fluid intake, including with oral rehydration salts solution, to prevent dehydration.
- Avoid fatty foods, artificial sweeteners and foods or drinks that can lead to further loss of body fluids.
- Consult with a health worker if there are signs of dehydration or other problems.

Chapter 9 Annex K2

Foodborne diseases

A. Overview

Foodborne disease:⁸¹

1. Is a problem in both developing and developed countries
2. Is a strain on health care systems
3. Severely affects infants, young children, the elderly and the sick
4. Creates a vicious cycle of diarrhoea and malnutrition
5. Hurts the national economy, development and international trade

Food can become contaminated with dangerous microorganisms at any point before consumption. Following simple food hygiene steps can prevent most foodborne diseases. WHO has developed a global food hygiene message with five key steps that promote health. The message explains safe food handling and preparation practices. Following the five key steps not only prevents illness from eating contaminated food but also contributes to the prevention of diseases caused by handling infected animals, such as avian flu.

B. The WHO five keys to safer food

1. Keep clean:

- (a) Wash hands before handling food and wash often during food preparation.
- (b) Wash hands after going to the toilet.
- (c) Wash and sanitize all surfaces and equipment used for food preparation.
- (d) Protect kitchen areas and food from insects, pests and other animal.

2. Separate raw and cooked food:

- (a) Separate raw meat, poultry and seafood from other foods.
- (b) Use separate equipment and utensils such as knives and cutting boards for handling raw foods.
- (c) Store food in containers to avoid contact between raw and prepared foods.

3. Cook thoroughly:

- (a) Cook food thoroughly, especially meat, poultry, eggs and seafood.

⁸¹ For additional resources see WHO, “Health topics: Foodborne diseases,” 2015. Available from http://www.who.int/topics/foodborne_diseases/en/; WHO, “Food safety: Publications on food hygiene,” 2015. Available from <http://www.who.int/foodsafety/publications/food-hygiene/en/>; WHO, “Foodborne disease outbreaks: Guidelines for investigation and control,” 2008. Available from http://whqlibdoc.who.int/publications/2008/9789241547222_eng.pdf?ua=1.

- (b) Bring foods like soups and stews to boiling to make sure that they have reached 70°C. For meat and poultry, make sure that juices are clear, not pink. Ideally, use a thermometer.
- (c) Reheat cooked food thoroughly.

4. Keep food at safe temperatures:

- (a) Do not leave cooked food at room temperature for more than two hours.
- (b) Promptly refrigerate all cooked and perishable food (preferably below 5°C).
- (c) Keep cooked food piping hot (more than 60°C) prior to serving.
- (d) Do not store food for too long, even in the refrigerator.
- (e) Do not thaw frozen food at room temperature

5. Use safe water and raw materials:

- (a) Use safe water or treat it to make it safe.
- (b) Select fresh and wholesome foods.
- (c) Choose foods processed for safety, such as pasteurized milk.
- (d) Wash fruits and vegetables, especially if eaten raw.
- (e) Do not use food beyond its expiry date.

Chapter 9 Annex L

Planning health education programmes for peacekeepers

A. Overview

Health education⁸² is the profession of educating people about health. It encompasses environmental health, physical health, social health, emotional health, intellectual health and spiritual health. Health education can be defined as the principle by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance or restoration of health. This can be achieved by:

1. Assessing individual and community needs for health education
2. Planning health education strategies, interventions and programmes
3. Implementing health education strategies, interventions and programmes
4. Communicating and advocating for health and health education

⁸² For general information about health education see WHO, “Health topics: Health education,” 2015. Available from http://www.who.int/topics/health_education/en/; WHO, “Health education: theoretical concepts, effective strategies and core competencies, 2012. Available from http://applications.emro.who.int/dsaf/EMRPUB_2012_EN_1362.pdf?ua=1.

Chapter 9 Annex M

Hygiene and sanitation task force

A. Overview

There is the need to take regular stock of hygiene, sanitation and proper disposal of waste⁸³ in camps in the field to ensure that proper health conditions exist for United Nations staff and that a positive message is sent to local communities. In this regard, it is critical that all missions develop hygiene and sanitation policies and guidelines. However, the monitoring and implementation of hygiene and sanitation policies and guidelines from the inception to the draw down phases of peacekeeping missions is challenging and requires a cross-cutting approach to address the issues that arise. A hygiene and sanitation task force involving relevant stakeholders must therefore be established.

B. Proposed members of a hygiene and sanitation task force

The proposed members of the task force include the following:

- | | |
|------------------------------------|--|
| • Task Force Leader | Public Health Physician |
| • Deputy Task Force Leader | Force Environmental Health Officer |
| • Medical Advisor | -Chief Medical Officer |
| • Force Medical Advisor | -Force Medical Officer |
| • Sanitation Advisor | Water and Environmental Protection Officer |
| • Engineering Advisor | -Chief Engineer |
| • Force Engineering Advisor | Force Engineer |
| • Logistic Coordinator | Chief, Joint Logistics Operations Centre |
| • Training Advisor | Chief, Integrated Training Centre |

Once established, the task force should meet bi-weekly to review, plan and implement recommendations. The task force will function as a standing body for handling on-going and contingency planning for health- and hygiene-related issues.

C. Task force terms of reference

The terms of the task force shall include but are not limited to the following:

1. To develop and publish an SOP on measures for maintaining a good hygiene and

⁸³For additional resources see WHO, "Water sanitation health: Fact sheets on environmental sanitation," 2015. Available from http://www.who.int/water_sanitation_health/hygiene/emergencies/envsanfactsheets/en/index1.html; WHO, "Water, sanitation and hygiene standards for schools in low-cost settings," 2009. Available from http://apps.who.int/iris/bitstream/10665/44159/1/9789241547796_eng.pdf?ua=1; WHO, "Guide to hygiene and sanitation in aviation," 2009. Available from http://whqlibdoc.who.int/publications/2009/9789241547772_eng.pdf?ua=1; WHO, "WHO guidelines on hand hygiene in health care," 2009. Available from http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf?ua=1.

- sanitation environment at the HQ, sector and team site locations, including procedures for repairing and reporting on unsatisfactory infrastructure.
2. To develop a management structure with the appropriate expertise and empowerment to monitor and take action to address hygiene public health-related issues. This should include a long-term action plan/strategy.
 3. To develop and implement an enduring awareness campaign on hygiene, public health and sanitation-related issues.
 4. To monitor the immunization status of all uniformed personnel in the mission area and advise accordingly.
 5. To develop an integrated training programme for military and police units
 6. To assist the inspection of food preparation and storage areas and ensure their proper transportation. If possible, this should include routine examination and certification of kitchen personnel, including bacteriological examination of stools for pathogens.
 7. To investigate any suspected outbreak of food poisoning or gastroenteritis.
 8. To formulate mission area policies concerning the consumption of local food and water.
 9. To ensure that logistics personnel conduct regular checks on the quality of potable water.
 10. To provide medical advice on the proper disposal of wastes, including human and medical wastes.
 11. To identify and implement prophylactic measures to reduce environmental and occupational related illness.

Chapter 9 Annex N

Environmental policy for field missions

A. Introduction

The Environmental Policy for Field Missions provides guidance on the conduct of missions to:

1. Improve the safety of the mission environment.
2. Reduce and manage the environmental impact of the mission including, inter alia, waste management.
3. Include environmental considerations in all operational actions of the mission.

The Environmental Policy and its associated guidelines require missions to, inter alia:

1. Undertake environmental baseline studies of all mission locations.
2. Develop and implement an environmental action plan and log.
3. Ensure all mission personnel are aware of the policy and conduct themselves in a proper environmental manner.

The Environmental Policy requires missions to properly manage, store and control hazardous substances, including medical material and equipment, and to properly manage mission waste, including clinical wastes.

B. Environmental safety and occupational health

The main focus of occupational health is summarized below:

1. The maintenance and promotion of peacekeepers' health and working capacity.
2. The improvement of the working environment to become conducive to safety and health.
3. The development of work organizations and working cultures in a direction that supports health and safety at work and in doing so also promotes a positive social climate, smooth operation and enhanced productivity.

In a peacekeeping mission, occupational health and safety measures should therefore be developed to focus largely on:

1. Mission personnel and their fitness to participate in PKOs given the numerous threats experienced in the mission area.
2. The specialties of peacekeepers (i.e. medical, engineering, infantry soldier, artillery soldier, etc.).
3. Mission-related incidents/accidents including road-traffic accidents.

C. Environmental safety and occupational health planning considerations

The early integration of environmental safety and occupational health considerations into deployment planning and implementation is critical to the overall success of the mission. The Special Representative of the Secretary-General must articulate the acceptable long-term health risk to the mission's personnel and the impact on the host country's environment. The mission planners will therefore have to identify the potential risks to personnel, equipment and facilities and then devise mitigation strategies.

The benefits of such strategies will be realized through the conservation of the health of the civilian and military personnel during and after the mission, reductions in national and multinational liabilities, as well as conservation and preservation of the host nation's natural resources.

Primary considerations of the environmental safety and occupational health planning efforts are the following:

1. Civilian and force health protection
2. Conservation and preservation of combat power and effectiveness
3. Environmental protection

Mitigating measures considered during the planning of environmental safety and occupational health should be balanced against the mission's task with the least operational constraints while maintaining at least minimum standards for environmental protection. A commander must articulate the acceptable long-term health risk to his troops, as well as the acceptable impact on the host country's environment.

Chapter 9 Annex O

Peacekeeping operation-related health hazards

A. Introduction

The deployed force and other United Nations personnel are subjected to a variety of specific operation-related hazards, which may include the following:

1. Climate conditions (e.g., excessive heat, cold and noise).
2. Infectious diseases.
3. Physical threats, including those associated with accidents, explosions, physical attack and weapons, and even certain forms of ionising radiation.
4. Ambient chemical and radiological contaminants in air, water, food and soil.

B. Occupational health hazards

There are two types of occupational health hazards:

1. Those endemic to the deployment site where the mission conducts operations (e.g., climatic conditions such as haboob,⁸⁴ etc.)
2. Those that are associated with routine operations conducted by mission personnel, such as vehicle maintenance, health care delivery, etc. Those associated with routine operations fall into four general categories:
 - (a) Chemical hazards: These arise from excessive airborne concentrations of mists, vapours, gases and solids such as fumes and dusts.
 - (b) Physical hazards: include exposures to excessive:
 - Vibration
 - Ionising and non-ionising radiation
 - Temperature extremes
 - Infrared or ultraviolet light (e.g. welding)
 - Ergonomic hazards such as lifting
 - Electrical hazards, such as frayed electrical cords
 - Injuries resulting from, for example, cuts or needle sticks
 - (c) Biological hazards: This is caused by living organisms that upon exposure may cause infections to humans such as HIV, hepatitis, Lassa fever, dengue fever, tuberculosis, SARS, etc.
 - (d) Psychosocial hazards: Examples of psychological hazards include shift work, sexual harassment, verbal and physical violence and stress, as well as exposure to traumatic stress.

⁸⁴ A haboob (Arabic: blasting/drafting) is a type of intense dust storm carried on an atmospheric gravity current. Haboobs occur regularly in arid regions throughout the world.

C. Steps in the risk management process

The steps in the risk management process include:

1. Identify the hazard.
2. Analyse the risk (probability and impact).
3. Develop risk control measures.
4. Implement risk control measures.
5. Verify and monitor effectiveness.

D. Steps required to ensure the health and safety of field staff

The steps required to ensure the health and safety of field missions are:

1. Medical screening (fitness to work) including pre-deployment health screening of all uniformed personnel.⁸⁵
2. Induction/training.
3. Pre-departure planning/briefing.
4. Health and safety support during deployment.
5. Activities based on risk management principles.
6. Post-deployment debriefing and follow up with care providers and receivers.

⁸⁵ For additional detail, see Chapter 5.

Chapter 9 Annex P

Road safety

A. Overview

Each year, 1.3 million people are killed and between 20 and 50 million are injured in motor vehicle crashes worldwide.⁸⁶

B. How to avoid a crash

The following steps will minimize the risk of injury in a crash:

1. Always wear seatbelts and put children in car seats.
2. When possible, avoid riding in a car in a developing country at night.
3. Don't ride motorcycles. If it is necessary to ride a motorcycle, wear a helmet.
4. Know local traffic laws before getting behind the wheel.
5. Don't drink and drive.
6. Avoid overcrowded, overweight or top-heavy buses or vans.
7. Be alert when crossing the street

C. Operational aspects of road safety

Road accidents are caused by three main factors:

1. **Human factors (road users):** The statistics show that 92 per cent of road accidents have been caused by road users who infringed the traffic law, for instance driving faster than limited speed, driving carelessly, driving drunk, etc.
2. **Road defect:** One part of the road accident was caused by road/bridge infrastructure that is not yet at the appropriate safety standard, for example potholes in the road.
3. **Vehicle defect:** Vehicles have caused road accidents due to lack of proper maintenance and regular vehicle inspection during operation. In these cases, road accidents can occur due to brake failure, tire blowout, power steering failure, headlight failure, etc.

D. Prevention

Most traffic accidents therefore result from human error. Although not directly responsible for accident prevention, the medical doctor in the field has a duty to advise the contingent commander if road safety measures are not being adopted. Strict enforcement of such measures

⁸⁶ For additional resources see WHO, "Violence and injury prevention: Road traffic injuries," 2015. Available from http://www.who.int/violence_injury_prevention/road_traffic/en/; CDC, "International road safety," April 2013. Available from <http://wwwnc.cdc.gov/travel/page/road-safety>.

will lead to the reduction of loss of human life and limb. Basic components of a road safety programme include:

1. The commander's emphasis on road and vehicular safety.
2. Clearly documented safety regulations and SOPs that are understood by all drivers and vehicle occupants. These measures must be strictly enforced (e.g. speed limits, use of seatbelts, alcohol control, vehicle breakdown drill, etc.).
3. Certified driving standards for military and heavy vehicles and orientation training for new drivers.
4. Regular maintenance schedules, with a system of close supervision and accountability.

Chapter 9 Annex Q

Medical-related Minimum Operating Security Standards⁸⁷

A. Introduction

MOSS is a fundamental policy document for all United Nations field operations. The purpose of MOSS is to establish a standard field-based criteria for minimum security arrangements to enhance staff security, reduce risk and support field operations.

B. Medical support requirements for Minimum Operating Security Standards

The medical support requirements are closely related to those of MOSS and are implemented simultaneously:

1. **Timeline for medical treatment:** A significant proportion of personnel with serious injuries will have increased chances of survival if they receive prompt and appropriate treatment.
 - (a) As a planning guideline, any casualty is expected to receive first aid at the incidence site within 10 minutes or advanced trauma care (pre-hospital trauma life support), or reach a Level 1 facility within one hour of injury.
 - (b) To improve the chances of survival and the quality of the treatment outcome, all seriously injured casualties should be evacuated to a facility that provides intensive care support, and where the necessary, surgical care support is also available. As a planning guideline, they are expected to receive damage control (life- or limb-saving) surgery, or must reach a Level 2 or above facility not longer than within two hours of injury.
 - (c) Missions are to maintain or have arrangements for a round the clock (24/7) capability to support MEDEVAC requirements. To ensure continuity of care, ambulance teams and AMETs are to be well trained and adequately equipped.
 - (d) In circumstances where any of the above three criteria cannot be achieved, additional medical capabilities may be required at a forward location to improve the chances of survival of any seriously injured casualty. Such support capabilities are well described in the COE Manual.
2. **Continuity of care:** Medical support in the field cannot be viewed from the perspective of any single medical facility, but comprises a continuum of care from basic first aid to definitive medical treatment at a Level 3 or 4 hospital. Equal emphasis is to be placed on first responder training and equipping, as on areas like blood supply and out-of-theatre air evacuation.
3. **Responsibility and accountability:** MOSS is a defined responsibility for senior managers in the field and at agency headquarters. In this context, the DFS medical

⁸⁷ See MOSS Instruction for Implementation, 1 March 2004 and DPKO MOSS Policy.

requirement for MOSS compliance in missions becomes the responsibility of the CMO and the FMO. Specific responsibilities include planning and executing medical MOSS compliance requirements for the mission and ensuring mass casualty contingency preparedness.

- 4. Medical equipping guidance:** The generic requirements to meet MOSS and e-MOSS by phases call for one trauma kit per common system for phase 3 and above. For implementation of this requirement, we define this as the availability of at least one emergency bag (UNCCS 481981) or equivalent for each regional HQ or team site. This bag is equipped for use by trained medical staff (i.e. doctor, nurse, and paramedic) and can be used to provide support by a mobile medical team; at a satellite clinic location; or brought by United Nations staff to a local health facility. In this case, the bag provides equipment and supplies for treatment of United Nations staff members by local healthcare personnel. The emergency bag is not to be confused with smaller vehicular or building first aid kits

Chapter 9 Annex R1

Mental health and psychological well-being: Major mental and substance use disorders⁸⁸

A. Depression

1. Symptoms: moderate to severe

Determine whether, during the past two weeks, the person has experienced at least two of the following core depression symptoms:

- (a) Depressed mood: For adults, most of the day for almost every day; and for children and adolescents, either irritability or depressed mood.
- (b) Loss of interest or pleasure in activities that are normally pleasurable.
- (c) Decreased energy or easily fatigued.

Determine whether, during the past two weeks, the person has experienced at least three other features of depression, such as:

- (a) Reduced concentration and attention
- (b) Reduced self-esteem and self-confidence
- (c) Ideas of guilt and unworthiness
- (d) Bleak and pessimistic view of the future
- (e) Ideas or acts of self-harm or suicide
- (f) Disturbed sleep
- (g) Diminished appetite

It should be noted that people currently exposed to severe adversity often experience psychological difficulties consistent with symptoms of depression but do not necessarily have moderate to severe depression. When evaluating whether the person has moderate to severe depression, it is essential to assess whether the person not only has symptoms but also has difficulties in day-to-day functioning due to the symptoms.

2. Treatment

Treatment considerations include:

- (a) Psycho education.
- (b) Addressing current psychosocial stressors.
- (c) Reactivation of social networks.

⁸⁸ Modified from WHO, “mhGAP Intervention Guide for Mental, Neurological and Substance Use Disorders in Non-specialized Health Settings,” 2010. See details, especially treatment information, in mhGAP-IG. Available at http://whqlibdoc.who.int/publications/2010/9789241548069_eng.pdf.

- (d) Administer antidepressants if necessary.
- (e) Psychological interventions, such as interpersonal therapy, behavioural activation or cognitive behavioural therapy, if necessary.
- (f) Adjunct treatments, including structured physical activity programme, relaxation training or problem-solving treatment, if necessary.
- (g) Do not manage the complaint with injections or other ineffective treatments (e.g. vitamins).
- (h) Regular follow-up.
- (i) MEDEVAC may be required in United Nations field missions where mental health diagnostic and treatment options are not available and the symptoms are dangerous or acute. In less severe situations where the staff member has non-acute symptoms, he/she should plan for assessment/treatment during home leave or family visit travel, and sick leave will be certified in accordance with relevant provisions of the staff rules.
- (j) In the case of recent bereavement or other recent major loss, the psychiatrist/psychologist should follow the above advice. However, it is important not to consider antidepressants or psychotherapy as first line treatment.

B. Psychosis

1. Symptoms

The symptoms of psychosis include:

- (a) Incoherent or irrelevant speech.
- (b) Delusions (fixed false idiosyncratic beliefs).
- (c) Hallucinations (hearing voices or seeing things that are not there).
- (d) Withdrawal, agitation or disorganized behaviour.
- (e) Belief that thoughts are being inserted or broadcast from one's mind.
- (f) Social withdrawal and neglect of usual responsibilities related to work, school, domestic or social activities.

2. Treatment

Treatment of psychosis includes:

- (a) Educate the person about psychosis and its treatment.
- (b) Antipsychotic medication.
- (c) Psychological and social interventions such as family therapy or social skills therapy.
- (d) Facilitation of rehabilitation in the community.
- (e) Regular follow-up.
- (f) Maintaining realistic hope and optimism.
- (g) MEDEVAC may be required in United Nations field missions where mental health diagnostic and treatment options are not available and the symptoms

are dangerous or acute. In less severe situations where the staff member has non-acute symptoms, he/she should plan for assessment/treatment during home leave or family visit travel, and sick leave will be certified in accordance with relevant provisions of the staff rules.

C. Bipolar disorder: manic episode

1. Symptoms

- (a) Elevated, expansive or irritable mood
- (b) Increased activity, restlessness or excitement
- (c) Increased talkativeness
- (d) Loss of normal social inhibitions
- (e) Decreased need for sleep
- (f) Inflated self-esteem
- (g) Distractibility
- (h) Elevated sexual energy or sexual indiscretion

If a person has multiple symptoms lasting for at least one week that are severe enough to interfere significantly with work and social activities or require hospitalization, “mania” is likely.

2. Treatment

Treatment considerations include:

- (a) Treat with medication.
- (b) Advise the person to modify lifestyle; provide information about bipolar disorder and its treatment.
- (c) Reactivate social networks.
- (d) Provide psychological interventions.
- (e) Rehabilitation, including appropriate economic and educational activities, using formal and informal systems.
- (f) Regular follow-up.
- (g) MEDEVAC may be required in United Nations field missions where mental health diagnostic and treatment options are not available and the symptoms are dangerous or acute. In less severe situations where the staff member has non-acute symptoms, he/she should plan for assessment/treatment during home leave or family visit travel, and sick leave will be certified in accordance with relevant provisions of the staff rules.

Even if the person is not currently manic or depressed, if the person has a history of mania, the person most likely has bipolar disorder and is currently between episodes. If the person has had two or more acute episodes, (e.g. two episodes of mania, or one episode of mania and one episode of depression), or a single manic episode involving

significant risk and adverse consequences, the same treatment is needed for relapse prevention.

D. Substance use disorders

1. Symptoms

The symptoms of substance abuse can be discussed under the particular substance that is being abused:

Alcohol use disorders:

- (a) Appearing to be under the influence of alcohol, e.g. smell of alcohol, looks intoxicated, hungover.
- (b) Presenting with an injury.
- (c) Somatic symptoms associated with alcohol use, e.g. insomnia, fatigue, anorexia, nausea, vomiting, indigestion, diarrhoea, headaches.
- (d) Difficulties in carrying out usual work, school, domestic or social activities.

Drug use disorders:

- (a) Appearing drug-affected (e.g. low energy, agitated, fidgeting, slurred speech)
- (b) Signs of drug use such as injection marks, skin infection, unkempt appearance.
- (c) Requesting prescriptions for sedative medication such as sleeping tablets, opioids.
- (d) Financial difficulties or crime-related legal problems.
- (e) Difficulties in carrying out usual work, domestic or social activities.

2. Treatment

Treatment considerations include:

- (a) Physical treatment such as detoxification, medications among others as needed.
- (b) In case of drug dependence, possibly self-help groups, or rehabilitation/therapeutic communities.
- (c) Psycho education for person and family members.
- (d) Psychosocial interventions such as family counselling or therapy, problem-solving counselling or therapy, cognitive behavioural therapy, motivational enhancement therapy, or contingency management therapy.
- (e) Harm reduction strategies for people who inject drugs.
- (f) MEDEVAC may be required in United Nations field missions where mental health diagnostic and treatment options are not available and the symptoms are dangerous or acute. In a less severe situation where the staff member has non-acute symptoms, he/she should plan for assessment/treatment during home leave or family visit travel, and sick leave will be certified in accordance with relevant provisions of the staff rules.

E. Self-harm and suicide

1. Symptoms

People exhibiting the following signs are at imminent risk of self-harm or suicide:

- (a) Current thoughts or plan to commit suicide or self-harm.
- (b) History of thoughts or plan of self-harm in the past month or act of self-harm in the past year.
- (c) Access to means of self-harm.

2. Contributing factors

Contributing factors to self-harm and suicide include:

- (a) Severe emotional distress
- (b) Hopelessness
- (c) Extreme agitation
- (d) Violence
- (e) Uncommunicative behaviour
- (f) Social isolation

3. Treatment

Treatment considerations include:

- (a) Removal of means of self-harm.
- (b) Creation of secure and supportive environment; if possible, offer separate, quiet room while waiting.
- (c) Do not leave the person alone.
- (d) Supervising and assigning a named staff member or a family member to ensure safety.
- (e) Respond to mental state and emotional distress.
- (f) Activate psychosocial support.
- (g) Intervention by mental health specialist is necessary.
- (h) Regular contact and follow-up.
- (i) MEDEVAC may be required in United Nations field missions where mental health diagnostic and treatment options are not available and the symptoms are dangerous or acute. In a less severe situation where the staff member has non-acute symptoms, he/she should plan for assessment/treatment during home leave or family visit travel, and sick leave will be certified in accordance with relevant provisions of the staff rules.

Chapter 9 Annex R2

Psychological first aid

A. Principles

1. Look:

- (a) Check for safety.
- (b) Check for people with obvious urgent basic needs.
- (c) Check for people with serious distress reactions.

2. Listen:

- (a) Approach people who may need support.
- (b) Ask about people's needs and concerns.
- (c) Listen to people, and help them to feel calm.

3. Link:

- (a) Help people address basic needs and access services.
- (b) Help people cope with problems.
- (c) Give information.
- (d) Connect people with loved ones and social support.

Chapter 9 Annex R3

Stress management⁸⁹

A. Introduction

Stress can be defined as a natural/automatic response to any stimulus that requires you to adjust to change. Both positive and negative changes can be stressors, and stress can be negative and positive (e.g. athletes can perform better under a certain amount of pressure).

B. Stress response

When experiencing stress, people tend to experience physical reactions such as faster heartbeat, tightened muscles, sweating, etc., caused by stress hormones (epinephrine/adrenaline, norepinephrine and cortisol/glucocorticoids). Long-term or repeated stress is associated with health problems such as gastrointestinal disorders, high blood pressure/hypertension, cardiovascular diseases, and compromised immune system, among others.

C. Stress management

Recognizing one's stress profile: Becoming aware of how you typically handle stress can help in facilitating healthy coping. If the pattern is understood, healthy coping strategies can be developed. For example, identify:

1. Factors that cause stress
2. Warning signs/symptoms of stress overload
3. Negative stress management practices
4. Positive stress management practices

D. Effective prevention and intervention to stress

Combinations of basic interventions are effective in preventing and intervening in stress. These include:

1. Physical exercise
2. Healthy diet
3. Sleep/rest
4. Social support
5. Spiritual practices
6. Entertainment/the arts/creatively
7. Active relaxation

Active relaxation includes:

⁸⁹ Based on Harvard Medical School, "A Harvard Medical School Special Health Report: Stress Management: Approaches for Preventing and Reducing Stress," 2008.

1. **Breath focus:** Focusing on slow, deep breathing and gently disengaging the mind from distracting thoughts and sensations.
2. **Muscle relaxation:** Muscle relaxation is a technique for reducing stress by alternately tensing and relaxing the muscles.
3. **Meditation:** Breathing deeply while staying in the moment by deliberately focusing on thoughts and sensations that arise during the meditation session.
4. **Visualization or guided imagery:** Using pleasing mental images to help you relax and focus.
5. **Yoga, tai chi, or qi going:** Three ancient arts that combine rhythmic breathing with a series of postures or flowing movements.
6. **Repetitive prayer:** Using a short prayer or phrase from a prayer to help enhance breath focus.
7. **Body scan:** Focusing on one part of the body or group of muscles at a time and mentally releasing any physical tension you feel there.

Chapter 10

Casualty management in the field

A. Introduction

Casualty management in United Nations field missions is complex and challenging due to the multiple tasking involved and thus may require both clinical and administrative procedures for its effective and efficient delivery.

Clinical procedures may be determined by the following:

1. Golden hour concept
2. Triage
3. Treatment capabilities⁹⁰
4. Evacuation procedures
5. Treatment and holding policy
6. Medical evacuation
7. Medical repatriation

Administrative procedures include the following:

1. Timely notification of incident, i.e. raising NOTICAS
2. Arrangements concerning the deceased

B. Golden hour concept

Casualty management in the field is intended to meet the requirements of military and civilian peacekeepers in remote locations without easy access to other medical care providers. As previously mentioned in Chapter 4, the golden hour principle aims to provide skilled first aid by trained non-medical staff, paramedics, medics or nursing assistants within 10 minutes of a trauma injury or onset of symptoms, and advanced life support by medical professionals as soon as possible, but not exceeding one hour. Where surgery is required, it must be carried out as soon as possible but not exceeding two hours. A more practical way to achieve satisfactory results within the golden hour is by adhering to the procedures outlined in the Chain of Survival and patient assessment aide memoire.

In practice, while every effort should be made to treat trauma victims within the first hour, treatment priority is determined in accordance with the United Nations medical triage practice. Having resuscitated and stabilized the patient, in consultation with the CMO, the patient should be referred or evacuated to the appropriate medical facility, even if such facility is a Level 3 or 4 hospital. Usually, medical emergencies such as acute myocardial infarction, cerebro-vascular accidents, etc., will be referred to a Level 3 or 4 hospital after stabilization in a Level 1. Surgical emergencies such as injuries with or without severe bleeding should be referred to a Level 2

⁹⁰ For additional information, see Chapters 3 and 11.

medical facility for damage control surgery after stabilization at the incident site. All mission medical personnel should have a clear understanding of where severely injured yet stable patients should be sent from any area in the mission in a timely manner. In this regard, the role of a qualified medical dispatcher, who should normally sit in the Joint Operations Centre, cannot be overemphasized.

C. Triage

Medical triage, or the sorting of casualties/patients, is the categorization of a patient or casualty based on clinical evaluation for the purpose of establishing priorities for treatment and evacuation. This facilitates the effective use of limited medical resources and ensures the survival of the greatest possible number of persons in a multiple casualty scenario. Triage is generally conducted by the most experienced doctor or paramedic. This is a continuous process as the casualty's condition may deteriorate, particularly during evacuation. It should be performed upon arrival at a medical facility and again prior to evacuation for further treatment. In the United Nations, two types of triage exist – simple and advanced – though in recent times there has been a great deal of discussion about a third variation, injury-based triage.⁹¹

1. Simple triage

Simple triage is also referred to by the acronym S.T.A.R.T, which stands for Simple Triage and Rapid Treatment. This is a simple triage system that can be performed by lightly trained lay and emergency personnel in emergencies (paramedics). Simple triage is typically used at the scene of an accident or MCI, in order to sort patients into those who need critical attention and immediate transport to the hospital and those with less serious injuries. This step can be initiated before transportation becomes available. The categorization of patients based on the severity of their injuries can be aided with the use of printed triage tags or coloured flagging.

2. Advanced triage

In advanced triage, doctors may decide that some seriously injured people should not get priority for advanced care because they are unlikely to survive. The decision is however based on a medically validated scoring system incorporated in triage cards using the Triage Revised Trauma Score. In most countries, the criterion used for this category of patient is a trauma score of consistently at or below 3. Advanced triage may have ethical implications because treatment is intentionally withheld from patients with certain injuries. However, by using Advanced Triage, scarce resources can be diverted from patients with little chance of survival and used to increase the chances of survival of other patients. The treatment being prioritized can include the time spent on medical care, drugs or other limited resources.

⁹¹ Reference work by UNMERT and the United Nations Medical Director's Working Group medical officers.

START triage

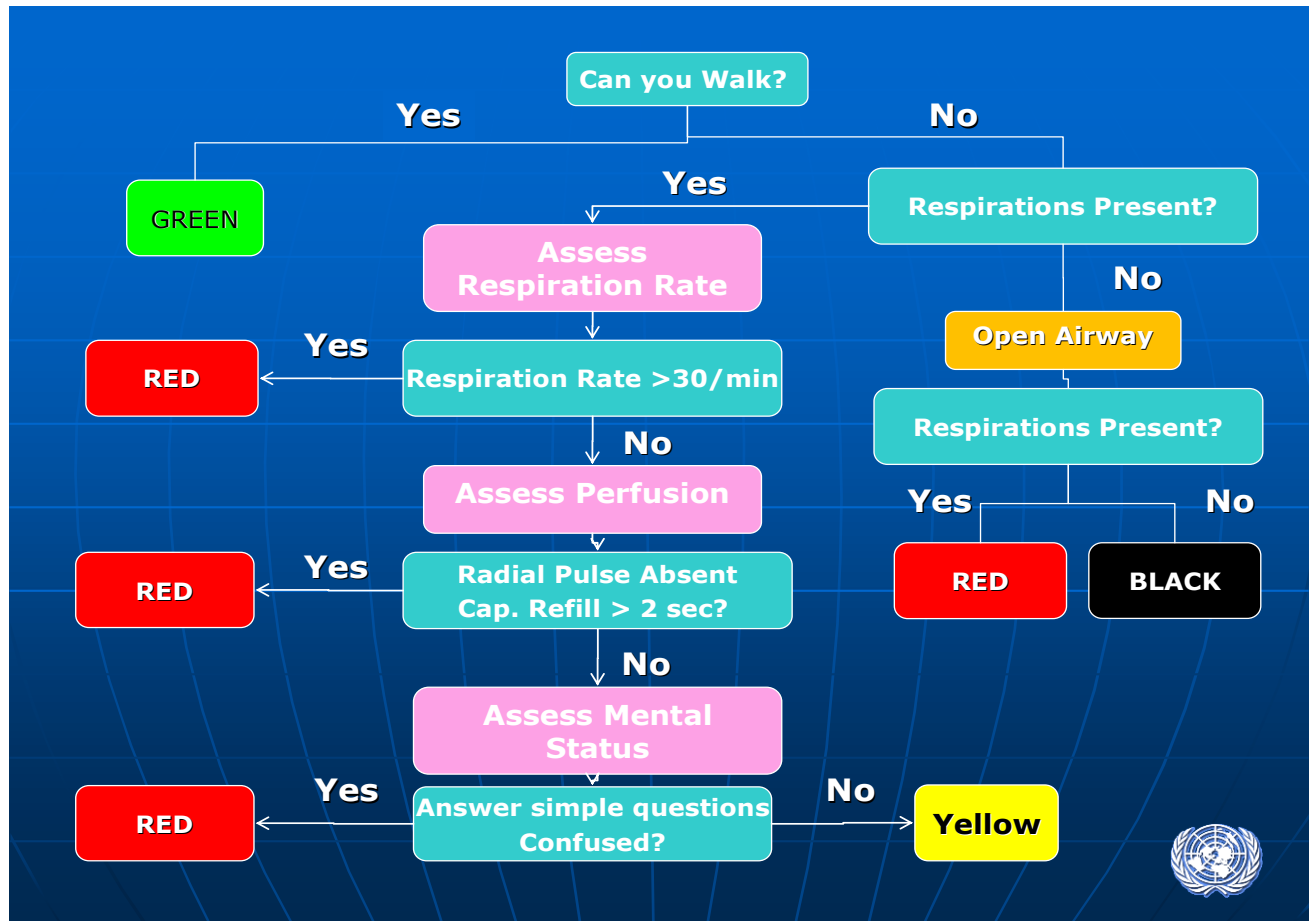


Figure 5: START Triage

Key

RED:	Priority 1 (immediate)
YELLOW:	Priority 2 (urgent)
GREEN:	Priority 3 (delay or hold)
BLACK:	Priority 4 (expectant or deceased)

D. SORT triage protocol

In a mass casualty situation, following the initial assessment by emergency trauma bag/basic first aid qualified personnel using the START protocol, a secondary triage using the SORT protocol is conducted by medical personnel at the advanced medical post. The SORT physiological scoring system has a high rate of reliability, providing accuracy in predicting survival rate and incorporating the use of the Glasgow Coma Scale, systolic blood pressure and respiratory rate.

Triage Revised trauma Score

GCS		BP		RR	
13 to 15	4	>90	4	10 to 29	4
9 to 12	3	76 to 89	3	>29	3
6 to 8	2	50 to 75	2	6 to 9	2
4 to 5	1	1 to 49	1	1 to 5	1
3	0	No BP	0	None	0

Figure 6: Triage revised trauma score

E- Eye Opening	V-Verbal Response	M-Motor Response
spontaneous = 4	orientated = 5	obeys commands = 6
to voice = 3	confused = 4	localizes = 5
to pain = 2	inappropriate = 3	pain withdraws = 4
none = 1	incomprehensible = 2	pain flexes = 3
	no response = 1	pain extends = 2
		no response = 1

GCS=E+V+M

Figure 7: Step 1: Calculate Glasgow Coma Scale

X=GCS	Y=Respiratory Rate	Z=Systolic BP
3-15 4	10-29/min 4	90 or more 4
9-12 3	30/min or more 3	76-89 3
6-8 2	6-9/min 2	50-75 2
4-5 1	1-5/min 1	1-49 1
3 0	0 0	0 0

CODED VALUE TOTAL	PRIORITY
1-10	Immediate (Red)
11	Urgent (Yellow)
12	Delayed (Green)

Figure. 9: Step 3: Assign a triage priority

E. Triage categories

The United Nations recommends adopting a four-category triage nomenclature based on the severity of the medical condition and the urgency for treatment.

1. Priority 1 (red/immediate)

This category has the highest priority for treatment or evacuation, as urgent resuscitative interventions are required to ensure the survival of the casualty or patient. Examples include airway obstruction, respiratory emergencies, shock and severe trauma. It is likely that such cases will die within two hours or earlier in the absence of appropriate medical treatment. These are patients requiring urgent transportation and treatment for survival.

2. Priority 2 (yellow/urgent)

This comprises cases that require early treatment, particularly surgery, and it is recommended that evacuation to a surgical facility take place within six hours of injury. Examples include visceral injury, closed thoracic injury without threatening asphyxia, major limb injuries and fractures, closed head injury, open eye injury and moderate burns. These are patients who are not likely to suffer adversely from a delay in transportation and/or patients whose injuries are of such severity as to make survival unlikely.

3. Priority 3 (green/delayed or hold)

Treatment is less urgent in this category and can be deferred if there are other casualties requiring limited treatment or evacuation assets. Examples include simple closed fractures, soft tissue injury, closed chest injury and maxillofacial injury. These are patients who are ambulatory and able to follow simple commands and self mobilize away from the incident.

4. Priority 4 (black/expectant or deceased)

This category refers to casualties whose injuries or illnesses are so serious that they have minimal chance of survival or are dead on arrival. Should there be competition for limited medical resources, such cases will have lower priority for evacuation or treatment, despite the severity of their condition. Examples of these self-explanatory medical conditions include brain-stem death, terminal illness, etc. Such casualties should be given the least priority for evacuation.

F. Treatment and holding policy

The treatment available at a medical facility is determined by the level of medical support the facility provides (see Chapter 3). At the point of injury, the emphasis is on resuscitation and stabilization prior to evacuation to the appropriate level of care. In serious injuries, definitive treatment is rarely available after stabilization and efforts should be made to minimize delaying subsequent evacuation.⁹²

The holding policy within a mission, also known as the evacuation policy, balances the treatment capability of each level against the availability of evacuation assets. This is achieved by stating the maximum period during which a patient may be treated at each level, following which the patient will be transferred, if he/she cannot return to duty. This policy is determined by:

1. Limitations on evacuation caused by unavailability of evacuation assets, operational restraints, weather or topography.
2. Demand on medical resources, for example when large numbers of patients are anticipated, the holding duration may shorten.

⁹² Refer to golden hour concept described in Chapter 3.

3. Availability of medical assets, for example at the start or drawdown of a mission, there are relatively few facilities and the holding period is relatively short.

G. Medical evacuation/repatriation policies and procedures⁹³

The authority to approve MEDEVAC within the mission area is vested in the Head of Mission, DMS or CMS, in consultation with the CMO or the FMO, if the latter is approved to obligate budgetary funds. After a careful review of the evacuation request, the CMO should verbally activate and coordinate the evacuation process to ensure a timely and efficient MEDEVAC. The paperwork follows for documentation and audit purposes.

The responsibility for planning and establishing an effective MEDEVAC system lies with the planning staff in MSD, MSS, the mission's administration and medical staff in the mission area. The CMO and FMO are required to coordinate all in-theatre MEDEVAC activities with the support of the mission administration. Decision for out-of-theatre evacuation must be coordinated with MSD for approval. MSS provides guidance and oversight on all activities involved in the procurement of the air-MEDEVAC services that would facilitate the evacuation. Details of the evacuation plan must be included in the mission SOP. There are two categories of patient or casualty transfer:

1. Casualty evacuation

CASEVAC entails the evacuation (by air or land) of a casualty from the site of injury to the closest medical facility. This category of patient transfer shall be conducted within one hour of injury.

2. Medical evacuation

MEDEVAC entails the evacuation of a casualty between two medical facilities; either within the mission area (in-theatre) or out of the mission area. A MEDEVAC should be conducted depending on the medical urgency to save lives.

Factors to be considered when drawing up a mission MEDEVAC plan include the following:

1. Medical indication for evacuation

The clinical condition of a patient is the key criterion for determining timing and means of evacuation between levels of care.

2. Mission holding policy⁹⁴

The mission holding policy is determined by the treatment capability and capacity required at each level and the supporting evacuation requirements.

⁹³ This should be read in reference to ST/AI/2000/10.

⁹⁴ Refer to Chapter 3.

3. Evacuation time to medical facility

Evacuation must be conducted in a timely manner, allowing a patient requiring life and limb saving intervention to receive this as early as possible. Casualty evacuations shall be completed within 60 minutes of occurrence of the life-threatening injuries. If necessary, the evacuation time to life and limb saving surgical capability for patient stabilization is two hours.

4. Air evacuation

For any mission with air assets, one or more aircraft must be designated, equipped and manned to function as an aero-medical evacuation asset. Should a medical facility not be available within the mission area, rotary or fixed-wing aircraft must be made available at short notice for MEDEVAC to such facility.

5. Ground evacuation

It is important that all medical facilities are deployed with the required ground ambulance transport support, which must be well equipped with life support medical equipment with enough space for accompanying medical staff. The number of vehicles will depend on the task, but on average, will be two ambulances for a Level 1 clinic and three or more for Level 2 and 3 hospitals. The topography of the area of operation, including rocks, sand, flood-prone and road conditions, as well as the existing weather conditions, are factors that should determine the type of the ambulance vehicle to be deployed.

Out-of-mission MEDEVAC will be considered when available medical facilities within the mission's theatre of operation, whether mission-owned or from national medical infrastructure, are inadequate to provide the necessary treatment. Policies and procedures concerning MEDEVAC are as follows:

1. Internationally recruited staff members, military and police contingent members, UNMEM and United Nations IPOs may be evacuated at United Nations expense for the purpose of securing essential medical care or treatment not available within the mission area. This provision also applies to eligible family members of internationally recruited staff members. Locally-recruited staff members for whom the organization has not assumed a responsibility for relocation to or from the duty station are expected to avail themselves of the medical facilities available locally. However, when an acute life-threatening medical emergency has occurred, medical evacuation will be considered when the available local facilities do not offer an adequate response to the medical emergency. This provision will also apply to eligible family members of locally-recruited staff members.
2. In emergency situations, the Head of Mission or FC may directly authorise medical evacuations after consultation with the CMO⁹⁵/FMO and the DMS/CMS. Prior

⁹⁵ Applicable to the FMO in Missions where the most senior medical officer is the FMO.

approval by United Nations HQ is not required for MEDEVAC within the mission area.

3. Evacuation may be by land or air transportation and should be to the closest appropriate medical facility to the duty station. The nature of illness or injury and the type of treatment required must also be taken into consideration.
4. It is essential that the patient's pre-evacuation and in-flight treatment is adequately documented and if indicated, travel of an accompanying doctor or nurse may be authorized.
5. Should a nation decide to evacuate its own personnel contrary to the opinion of the medical officer in charge or the CMO/FMO, it becomes a national responsibility and at national expense.
6. In non-emergency cases, referrals may be made to the necessary medical facility. These cases do not qualify for a MEDEVAC. For MEDEVAC expected to exceed 45 days or for any extension of MEDEVAC beyond 45 days, authorization must be obtained from the United Nations Medical Director. For this purpose, the head of department or office shall forward all relevant medical documentation to the United Nations Medical Director. United Nations HQ approval is to be sought prior to out-of-mission MEDEVAC. In emergencies, this is not required, although United Nations HQ must be informed immediately after MEDEVAC has taken place. All relevant and supporting documents must be submitted to the Director, MSD, according to the format outlined in Chapter 10 Enclosure 1: Medical statements by attending physician.
7. After having been certified fit by the attending doctor, a copy of the certificate should be forwarded to the Director, MSD, who will determine the staff member's fitness to return to the duty station. In cases of serious illness or injury, the patient may not return to duty at United Nations cost prior to approval by the Medical Director.
8. Procedures for MEDEVAC of military personnel must be detailed in the SOP for the mission. Guidelines for MEDEVAC of United Nations staff are outlined in the United Nations Field Administration Manual (Manual 4), while further details can be found in the Revised ST/AI/2000/10 on Medical Evacuation.

H. Medical repatriation⁹⁶

Medical repatriation is the return of a patient or casualty to his/her country because of medical reasons, after which he would be unlikely to return to duty. Policies and procedures concerning repatriation are as follows:

⁹⁶ This paragraph applies mainly to uniformed personnel and should be read in reference to "The Generic Guidelines Troop Contributing Countries Deploying Military Units to the UN," "Guidelines for UN Police Officers on Assignment with Peace keeping Operations" and the "Guidelines for Formed Police Units on Assignment with Peace Operations."

1. Individuals in missions who are in non-compliance with the overall standards stated in the guidelines for pre-deployment medical examination should be repatriated.
2. Repatriation is at the cost of the United Nations if the change in medical status has clearly occurred while the affected person is in the mission area.
3. Repatriation is at the cost of the TCC where deployment of the individual has clearly been in breach of the guidelines.
4. Repatriation on medical grounds applies to all personnel who are unlikely to be fit to return to duty based on the holding policy (evacuation policy) established or who require treatment not available within the mission area. Thirty days is the accepted guideline for holding policy.
5. Authorization for medical repatriation must be obtained in advance from the Director, MSD. A written recommendation must be submitted by the CMO, his designate or doctor in charge, regardless of whether costs are to be borne by the United Nations, a national government or the individual concerned. Requests for medical repatriation must be made using the format outlined in Chapter 10 Enclosure 1: Medical statements by attending physician. Once authorized, the CMS/DMS proceeds to arrange repatriation by the mission or contingent via the most economical means.
6. Uniformed pregnant women should be repatriated by the end of the fifth month of gestation.
7. All personnel with clinical symptoms or signs of AIDS must be repatriated to their home country once the diagnosis has been made.
8. If possible, regular rotation or scheduled service flights should be utilized for repatriation. Payment of travel subsistence allowance and terminal expenses may be authorized in cases undertaken at United Nations expense. Baggage allowance is identical to that of personnel rotated on an individual basis. Should an escort be required, this is limited to the free allowance granted by the airline and in accordance with existing rules and regulations.
9. For cases requiring urgent medical repatriation, military or civilian aircraft (air ambulance) may be contracted to carry out the task.

I. Procedure for Notification of Casualty incidences⁹⁷

A NOTICAS shall be prepared and dispatched in the event of any of the following incidents involving military, police or civilian personnel assigned to a United Nations peace operation:

1. Death

⁹⁷ The subject is discussed in this chapter in reference to Standard Operating Procedures on Notification of Casualties in Peacekeeping Operations and Political and Peace-Building Missions, approved on 3 January 2006.

2. Serious injury or illness, defined as an acute, life-threatening medical or surgical condition that may lead to death or significant and permanent loss of body functions

The NOTICAS procedures include the following steps:

Step 1: Once an incident resulting in a casualty occurs, the Responsible Field Mission Unit shall notify the DMS/CMS immediately. In all cases, the report should be received no later than six hours after the Responsible Field Mission Unit learns that an incident involving a casualty has occurred.

Step 2: Upon receipt of the initial notification, the DMS/CMS shall immediately inform HQ (responsible HQ unit and situation centre) via telephone, e-mail or facsimile, and provide the following information, as available:

- (a) Service number/index number
- (b) Rank/grade
- (c) Last name and all other names in brackets
- (d) Gender
- (e) Nationality
- (f) Date of birth
- (g) Next of kin (name, address, and relationship)
- (h) Category (contingent member, UNMEM, United Nations IPOs or civilian)
- (i) Date of the incident (day/month/year) and time
- (j) Circumstances of occurrence (was the individual on duty at the time of incident?)
- (k) Place the incident occurred
- (l) Type of casualty (death, injury, or illness)
- (m) Cause of casualty (in order to protect medical confidentiality, no specific details pertaining to an individual's medical diagnosis or underlying medical condition(s) shall be included)

Step 3: The Responsible Field Mission Unit shall immediately start to prepare the NOTICAS (see Chapter 7 Enclosure 1: NOTICAS form). There is a need to ensure that every individual's right to medical confidentiality is balanced with the organization's needs and purposes. To achieve this, the NOTICAS shall not include specific details pertaining to an individual's medical diagnosis, underlying medical condition(s) or any medical records. Such confidential medical information will be passed on from the CMO to MSD and MSS through secure channels.

Step 4: The Responsible Field Mission Unit shall provide the DMS/CMS with the completed NOTICAS form.

Step 5: Within 12 hours of the incident, the DMS/CMS shall submit the completed NOTICAS form to the following:

- (a) DPKO HQ, attention Situation Centre
- (b) Responsible HQ unit
- (c) MSD/DM
- (d) MSS/LSD/DFS
- (e) Office of the United Nations Spokesman

Step 6: The DMS/CMS shall record the NOTICAS in the field mission NOTICAS log (see Chapter 10 Enclosure 2: Field mission NOTICAS log template).

Step 7: In the case of United Nations staff members, a medical statement by the attending physician will have to be completed in duplicate and forwarded to the Medical Director, MSD (see Chapter 10 Enclosure 1: Medical statement by the attending physician).

Step 8: For purposes of official documentation for compensation and claims, a report of accident or illness is subsequently prepared by the Medical Director, MSD. Copies of this are distributed to the ABCC and the Security and Safety Section (see Chapter 5 Enclosure 3: Documentation for compensation and claims).

J. Arrangements concerning the deceased

In the event of the death of military or civilian personnel, it is imperative that all arrangements for the preparation and transport of the remains of the deceased be made in conformity to the practices of the government concerned. The DMS/CMS will notify MSD. For the details⁹⁸ of such arrangements, see Chapter 10 Annex A: Death at the field mission - actions to be taken at the field mission. Important points to note include the following:

1. Ascertain the nature of death

Upon the death of a member of a mission, the Security Section will coordinate assistance, including investigation of the circumstances with the local police when the death occurs at the work place. Medical Services will be consulted in establishing the cause of death.

2. Death under special or unclear circumstances

In the event that death occurs as a result of an emergency, accident or unclear circumstances, similar procedures will be followed as under Heading (J) above. In addition, UNDSS will secure the scene of death and collect information.

⁹⁸ Takes reference from United Nations, "Death in Service Handbook," Department of Management, Office of Human Resources Management, Emergency Preparedness and Support Team, 2011.

3. Movement of remains

The remains will then be moved to an appropriate United Nations or local government facility in preparation for repatriation and/or autopsy (applicable to all cases of suspected wrongdoing). Preparations of remains usually include embalming. The next of kin should be consulted about whether specific religious or cultural customs require special preparation of the remains.

4. Authorization of the autopsy

Should an autopsy be necessary to determine the cause of death, authorization should be coordinated by the human resources and legal office of the mission in consultation with UNDSS, next of kin/family focal point and local authorities. The Contingent Commander of the police dealing with the death and the United Nations Police Commissioner of the mission (for United Nations IPO cases) must be involved as well. Religious and other local customs should be given due consideration.

5. Transportation of remains and travel arrangements

The United Nations shall pay the reasonable cost of transporting the body to a place where the deceased is entitled to return transportation. In the case of uniformed personnel (both military and police), the Contingent Commander must be involved in the designation of the escort to transport the remains. In the case of civilian death, the determination is made by the ad hoc committee. An escort from the same contingent shall be appointed to accompany the remains and to attend funeral rites and ceremonies in the home country on behalf of the FC or Police Commissioner. All travel expenses are borne by the organization.

6. Ad hoc committee

Upon the death of a member of a mission, a committee is convened comprising the DMS/CMS, Chief Finance Officer, Legal Adviser, CMO/FMO and a representative of the respective national contingent. This committee will review the incident leading to the death, determine management of remains, decide on ceremonies (if any) to take place and appoint an escort.

7. Documentation

The DMS/CMS will prepare all necessary documentation, including the travel authorization and documents required by the host government and airline used. In the case of United Nations staff, six copies of the death certificate are required, which are to be forwarded to different offices listed under Paragraph 13 of the Personnel Directive. All pertinent information must be relayed to United Nations HQ in New York and to the country concerned.

8. Travel arrangements

The DMS/CMS is responsible for arranging transport of remains to the home country. All arrangements shall be covered by form PT8 in accordance with travel-related ST/AI.

9. Use of United Nations flag

A United Nations flag, to be used for draping over the casket during ceremonies in the mission area and in the home country, will be issued to the escort. The flag shall not be disposed of with the remains of the deceased, but may be given to the next-of-kin of the deceased, if such a wish is expressed.

Annex:

Chapter 10 Annex A: Death at the field mission: Actions to be taken at the field mission

Chapter 10 Annex A

Death at the field mission: Actions to be taken at the field mission⁹⁹

A. Responsibilities of the mission Head of Administration

1. Ascertain the nature of death

- (a) Contact the field mission security section. The security section will coordinate assistance with the local police when the death takes place at the work place.
- (b) Investigate the scene of the death. This is the responsibility of the Chief of Security of UNDSS.
- (c) On behalf of the Designated Official, the Adviser or the Area Security Coordinator will coordinate the local police authority investigation. Where possible, United Nations security staff should visit the scene of the death and collect information.
- (d) Medical Services will be consulted to establish the cause of death.
- (e) If the death occurs as a result of an emergency, accident or under unclear circumstances, UNDSS (when present) will implement or advise on immediate actions to secure the scene of death and collect information and evidence.
- (f) Movement of the remains: The remains should be moved to an appropriate United Nations or local government facility to prepare for repatriation and/or autopsy. An official and/or the family focal point should be in attendance.

2. Notify the Department of Field Support/Field Personnel Division and identify and notify the emergency contact or next of kin

- (a) Notify DFS or the parent office of the concerned staff member of the emergency or fatality. DMS/CMS or a designated representative should report immediately to the Field Personnel Division by telephone all emergencies and fatalities. If the deceased is a UNV, notification of the death should also be given to UNV Bonn.

Specific actions in case of death of United Nations civilian staff and UNVs

- (b) Send notification to the emergency contact designated by the staff member. Information on the emergency contact should be contained in the official status file of the deceased at the Field Personnel Division, UNV Bonn or the field/administrative office. The information can also be found on the staff member's most recent copy of the P2 form.
- (c) For all cases of death, including situations of missing persons or unconfirmed deaths, the procedures outlined below should be followed:

⁹⁹ Note: This Annex takes reference from the Death in Service Handbook by the DM/OHRM/Emergency Preparedness and Support Team, United Nations HQ, 2011.

- (d) Whenever possible, a United Nations representative should convey notification of the death promptly and in person. This should be done by the DMS and/or CMS, or if not possible, the officer-in-charge of administration, the Chief Civilian Personnel Officer or a United Nations representative at their location. In all cases, the information should be conveyed promptly and to the fullest extent possible, in person. If applicable, a family focal point should be present during notification.
- (e) The Field Personnel Division, in conjunction with the Emergency Preparedness and Support Team, will appoint a family focal point at United Nations HQ in New York to assist the family of international staff with the many administrative procedures that will follow repatriation. A family focal point in the mission area will be appointed by DMS/CMS to assist the families of national staff.
- (f) Notification by telephone: If, for whatever reason, it is not possible to follow the procedure set out above, DMS/CMS should telephone the persons designated by the staff member to notify them of the death.
- (g) Alternative approaches to notification: If, for whatever reason, it is not possible to follow the procedures outlined above, DFS senior officials will make the determination as to who should notify the next of kin.

Specific actions in case of death of military contingent members, United Nations Military Experts on Mission or United Nations individual police officers

- (h) Notify the Situation Centre at HQ and the United Nations Police Division for United Nations IPO of the death.
- (i) If the deceased is a military contingent member, the Military Contingent Commander in the field shall inform both the national HQ and the country's permanent mission HQ of the deceased. These HQ will then inform the next of kin.
- (j) If the deceased is a UNMEM, the Chief Military Personnel Officer shall contact the national HQ of the deceased to provide confirmation of the death. The national HQ will then inform the next of kin.
- (k) If the deceased is a United Nations IPO, DMS, CMS or the Contingent Commander at the United Nations Police HQ shall contact the national police HQ and the permanent mission HQ of the deceased to provide confirmation of the death. These HQ will then inform the next of kin.

3. Complete the Notification of Casualty form:

- (a) The Chief Military Personnel Officer for military personnel or the CMS/DMS for civilian personnel shall prepare the NOTICAS.
- (b) The NOTICAS form shall be dispatched to the following offices in DPKO at United Nations HQ:
 - Situation Centre

- Military Adviser, for military personnel only
- Field Personnel Division/DFS, for mission personnel
- MSD/OHRM
- United Nations Police Adviser
- Office of the Under Secretary-General, DPKO
- Office of the Spokesperson

(c) The Chief Military Personnel Officer, or either the DMS or CMS, as appropriate, is responsible for maintaining a list of the prepared NOTICAS forms for all casualties in the mission concerned during its existence. The Police Personnel Section of the mission, under the responsibility of the Police Chief of Personnel or Police Chief of Staff will keep a list of NOTICAS forms for all casualties within the United Nations police component.

4. Arrange for an autopsy and/or an investigation, as appropriate (this is applicable in all cases of suspected wrongdoing)

- (a) The immediate family of the deceased should be consulted prior to an autopsy. In the case of death due to suspected wrongdoing, the next of kin should be advised that an autopsy is needed so that a proper investigation can be made. UNDSS will respond to any request from the family for an autopsy to be conducted or waived.
- (b) Should an autopsy be necessary to determine the cause of death, the human resources and legal office of the mission, in consultation with UNDSS, the next of kin and local authorities, should coordinate the autopsy authorization. The Contingent Commander of the Police dealing with the death, as well as the United Nations Police Commissioner of the mission must be involved in the case of death of United Nations IPO. Religious and other local customs need to be given due consideration.
- (c) A United Nations doctor should be present, whenever possible, when the local government authorities conduct an autopsy.

5. Arrange for proper handling of the remains, pending transportation

- (a) Preparation of the remains normally includes embalming. The next of kin should be consulted about whether specific religious or cultural customs require special preparation of the remains.
- (b) The United Nations shall pay the expenses incurred for transporting the body to a place to which the deceased was entitled to return transportation. These expenses shall include reasonable costs for preparation of the body.
- (c) In the case of uniformed personnel, both military and police, the Contingent Commander must be involved in the designation of the escort to transport the remains. In the case of a civilian death, the determination is made by the ad hoc committee. An escort from the same contingent shall be appointed to accompany the remains and attend funeral rites and ceremonies in the home

country on behalf of the FC/PC. All travel expenses are borne by the United Nations.

6. Reimburse expenses for local interment

If local interment is selected, reasonable expenses incurred may be reimbursed. The family should be advised of this during the visit to the family of the deceased by the designated United Nations officials.

7. Receive the remains

The family focal point should inform the family of the deceased and DFS of the date and time of the arrival of the remains. DFS will coordinate with the family for the reception via the family focal point.

8. Hand a letter of condolence to the next of kin

A letter of condolence from the DMS/CMS will be given to the escort for delivery by hand to the next of kin.

Chapter 11

Mass casualty situations and disaster management

A. Introduction

Casualty incidents involving multiple United Nations staff have necessitated system-wide guidance on the management of MCI. Adequate response in such emergency situations requires prior planning, preparation and rehearsal. All medical units must be prepared for mass casualty situations and disasters within the mission area. Contingencies must be planned and resources allocated at the beginning of a new mission, and coordinated in line with the mission's operational and security plans. The medical component of the plans should be prepared at each level, from the team site through the contingent HQ, sector HQs and up to mission HQ level. The MCI plans must be shared with MSD and MSS.

B. Definition

An MCI or disaster is a situation in which the need to manage multiple casualties overwhelms the available resources at the particular level of care. This can be the result of natural (e.g. earthquakes) or man-made (e.g. terrorist actions, road traffic accidents) catastrophes and may be accompanied by substantial material damage to infrastructure and environment. These situations call for a special contingency plan known as a mass casualty plan, which stipulates matters of policy, planning and a pre-organized response system formulated to mitigate the effects of MCI.

1. Principles of medical support during a mass casualty incident

The principles of medical support during an MCI include the following:

- (a) MCI plans must clearly define the roles, responsibilities and expected activities of all those dealing with the incident. They must allow response to be scaled up from the team site to the sector and mission levels in a seamless manner, with no confusion as to who is in charge at each phase of the response. Close cooperation with the local administration is required to ensure smooth handling and transfer of patients to higher levels of care, including host nation medical facilities.
- (b) In the acute phase, medical units will mobilize all of their available resources to provide immediate support. This includes establishing first aid posts and medical reception centres at the incident site, and supporting search and rescue activities.
- (c) Triage is important for establishing priority for treatment and for evacuation by land and air to United Nations, local and NGO medical facilities. It is essential that evacuation of casualties to these facilities be centrally coordinated and managed.
- (d) Treatment provided at the site should be aimed at providing basic life support (i.e. stabilization and resuscitation of casualties). The primary objective is

stabilization of the injured and their evacuation to adequately staffed and equipped medical facilities.

- (e) Brief documentation of casualty data should accompany all casualties. This should include name, date of birth, blood group, injuries and treatment provided. If available, triage tags should be attached.
- (f) Management of the dead should be planned, including on-site identification (if possible). Close cooperation with the local administration is required to ensure the smooth handling and transfer of remains for definitive identification and burial.

2. Guidelines for developing a mass casualty incident plan

The guidelines for developing an MCI plan include the following:

- (a) Identify risk factors, including accidents, natural disasters, etc., and potential threats, including hostile acts (e.g. improvised explosive device attacks, significant ambush of United Nations convoys or chemical, biological, radiological or nuclear attacks by local parties).
- (b) Gather information and prepare inventory of available medical resources within the mission area, including air evacuation assets and local infrastructure, engineering resources, warehousing, cold storage, cargo handling and emergency shelters.
- (c) Conduct contingency planning, including grouping of medical units, defining areas of responsibility and individual tasks and identifying potential casualty holding areas and evacuation routes.
- (d) Ensure that the communications plan includes the allocation of radios and other communications resources and ensure coordination with the crisis response chain of command.
- (e) Ensure that the resource management plan covers all medical logistics elements, including medical equipment and supplies, such as mass casualty boxes, ambulances and AMET resources, as well as special medical requirements, including medical debriefing and stress management procedures for victims, rescuers and medical personnel.
- (f) Establish SOPs for the deployment of all resources and for medical documentation in emergency cases, patient tracking and internal reporting.
- (g) Identify pre-planned support, such as signing of MOU for non-mission assets, including over-flight rights in cases of emergencies and adequate visa policies for supporting United Nations Medical Emergency Reaction Team (UNMERT) personnel.
- (h) Identify ways to coordinate with the host nation government on cases of outbreaks of contagious or communicable diseases.
- (i) Reconcile mass casualty plans at each level of medical care, at each sector and at special and specific installations (i.e. airports, etc.).
- (j) Develop public information-related procedures.
- (k) Develop training programmes for members of the rescue chain, including senior management.

- (l) Conduct regular review of the mission mass casualty plan, including the medical support component.

3. Key players in a mass casualty incident:

The key players in MCI include:

- (a) The principal responsibility for mass casualty planning lies with the Designated Official, who is responsible for all security-related issues, including cases of disaster. The CMO, in conjunction with the FMO, develops the medical aspects of the plan.
- (b) A pre-identified Crisis Management Team (CMT), usually comprising the MCI Planning Committee, should be convened as soon as possible and be operational within 30 minutes of the incident occurrence. They will work from the Crisis Operations Centre (COC). The FMO will be in contact with the CMO at the COC.
- (c) The COC is the sole organ in charge of decision-making and coordination at the country level during the acute phase of the crisis. Its tasks, depending on the nature and extent of the crisis, consist of:
 - Deciding the level at which the MCI response plan should be implemented and the allocation of staff for the implementation of its various components.
 - Establishing an inventory of needs, and identifying and allocating resources.
 - Centralizing the available evacuation assets in order to evacuate casualties by priority and ensuring the documentation of all movements of patients.
 - Organizing the reception of family members and informing them of the welfare or well-being of their relations.

4. The key factors in the management of a mass casualty incident

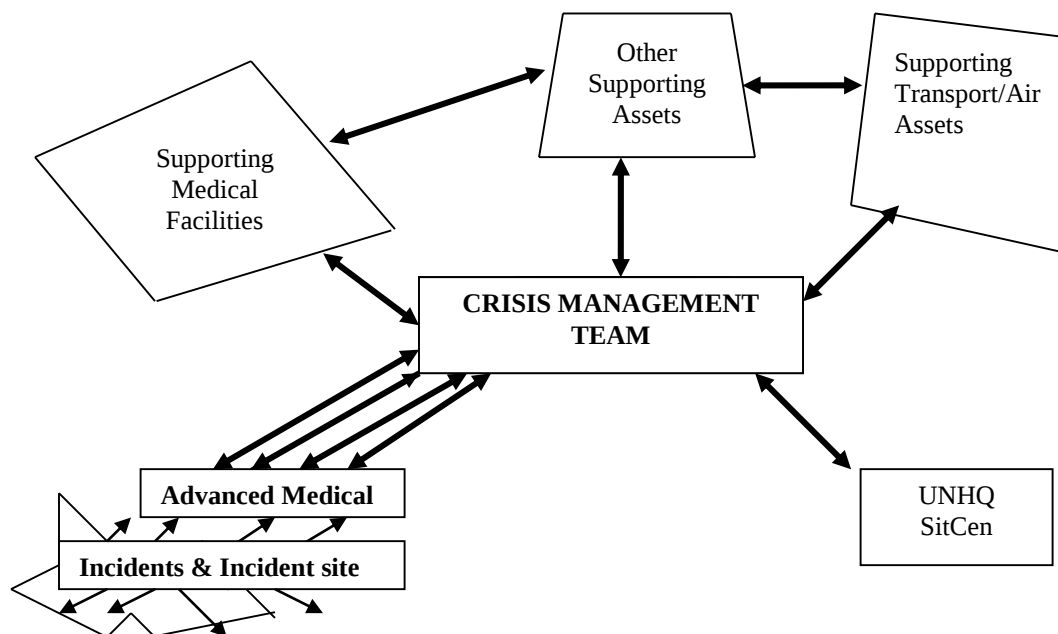
The key factors in the management of an MCI are:

- (a) Organization, leadership and efficient communication.
- (b) Trained medical personnel.
- (c) Short response times.
- (d) Transport support, including airlift and surface transport.

It is important to note that all information relevant to the operations is received, analysed and managed by the CMT operating from the COC. The information collected will be analysed and managed accordingly to support the judicious deployment of resources, such as transport, personnel and equipment, including vital medical equipment. The CMT, through the COC, is linked to all functional medical facilities in the mission, the various mission regional HQs, HQs

of United Nations entities in the mission, and United Nations HQ. The COC is usually furnished with adequate and detailed maps and other relevant support systems.

Figure X Activities of the Crisis Management Team



C. United Nations Medical Emergency Reaction Team

The UNMERT is part of the United Nations medical response capability for crises involving mass casualties. It consists of an inter-agency standby cadre of trained doctors, nurses and emergency medical technicians from United Nations system organizations that have volunteered for deployment to crisis or emergency sites resulting in mass casualties among United Nations staff. The UNMERT acts as the medical eyes and ears on the ground for United Nations HQ. On arrival in an area where MCI has occurred, UNMERT evaluates and monitors local medical support capacity, and coordinates and tracks medical evacuations.

UNMERT is primarily deployed to assess and monitor the medical needs of all United Nations system staff and dependants, irrespective of the employing organization. While UNMERT would supplement local medical services if needed, for critical services, UNMERT would not serve as a primary medical response capability. Due to the inevitable deployment timelines, immediate medical treatment will always have to be provided by local medical services. With UNMERT handling the functions mentioned above, local medical services can focus resources on casualty management. Following a major event involving United Nations system staff, the MSD Director in United Nations HQ in New York will activate UNMERT in coordination with the CMT/country SMT.

Chapter 12

Medical logistics

A. Introduction

Medical logistics refer to the logistics of pharmaceutical, medical and surgical supplies, medical devices and equipment, consumables and other products required to provide medical support to field missions. Medical material has unique characteristics such as its protected status, extensive national and international regulations, special handling requirements, short notice clinical demands and national restrictions. Blood and blood products and medical gasses are supply items of special importance for operational purposes.

The availability and capability of medical material, which includes supply and re-supply rates, must be provided in accordance with the required levels of United Nations readiness and sustainability. In United Nations field missions, continuity and consistency in the supply of medical material is particularly important given the likely paucity of effective local resources. The medical logistics system must be monitored, efficient and cost effective.

B. Medical logistics planning considerations

The overall planning and budgeting for medical logistics for field missions is the responsibility of MSS and is described in each mission's medical support plan. The latter forms a component of the mission support plan, which is based on the mission CONOPS.¹⁰⁰ In planning the medical logistics for field missions, the following must be considered:

1. The lack of standardization in formulating, packaging and labelling medical supplies and drugs, which are generally produced for national markets.
2. The use of trade names in place of generic names, and labelling in foreign languages, which present particular problems for medical personnel in the field.
3. Differences in clinical regimes and protocols adopted by health personnel from different countries and backgrounds.
4. The need to maintain a high quality of medical supplies and equipment, ensuring that these meet accepted international standards.
5. The limited shelf life of some medical products, which requires tight control of inventory to ensure efficacy of supplies and minimization of waste.
6. Special transport and storage requirements for certain medical products, including the need to maintain the cold chain during transport and in-country refrigerated storage.

¹⁰⁰ See Chapter 3.

7. Supply and re-supply of the medical items to field missions and the use of United Nations global medical systems contracts.
8. Stockpiling of essential drugs and medical equipment/supplies by field missions for emergency situations.

C. Categories of medical logistics support

Medical logistics support can be broadly categorized into the following:

1. Medical service

This includes the provision of primary healthcare, preventive medicine, emergency medical treatment and casualty evacuation services to mission personnel. In addition, treatment capabilities required may include aero-medical services, dental care and specialist medical treatment, including surgery, laboratory, rehabilitation and radiological investigations.

2. Medical supplies

The procurement, transportation, distribution, storage and accounting of medical supplies such as pharmaceuticals, medical consumables, blood and blood products and medical stationery, to ensure the continuous operation of medical facilities deployed in the field.

3. Medical equipment

Refers to major, special case and minor medical equipment required for the routine operation of medical facilities and includes mobile medical containers and their auxiliary units. Mission air assets required for the provision of aero-medical services are also included.

4. Installation and maintenance of equipment and training of personnel on the use of medical equipment

Refers to the installation and periodic preventive maintenance of deployed medical equipment and all repairs, including labour costs, spare parts and transportation (if required). Installation and maintenance services may be provided by the United Nations, TCC/PCC, international contractor or local contractor, depending on the type of lease established. Services of suppliers or local technicians can also be contracted to train medical personnel on how to effectively and efficiently use the equipment.

D. Responsibilities for effective medical logistics

Responsibilities for effective and efficient medical logistics will change throughout the phases of the mission and the stages of the supply chain. Both TCC/PCC and the United Nations must meet the responsibilities articulated in related United Nations reference documents and in accordance with national/international standards particular to the product.¹⁰¹ In the case of medical support deployed by national contingents, re-supply of medical items and maintenance of medical equipment is most commonly implemented by the TCC/PCC as specified in the Contribution Agreement/MOU under a wet lease arrangement.¹⁰² Under a dry lease arrangement, the United Nations manages the medical logistics re-supply chain and equipment maintenance requirements.

In new missions, it often takes time to establish a functioning medical supply chain. Accordingly, all levels of the medical unit, United Nations or TCC/PCC should remain self-sufficient without re-supply for an initial period of 60 days,¹⁰³ including all pharmaceuticals and medical consumables. Ultimately, the CMO¹⁰⁴ remains responsible for oversight of the availability of supplies and the maintenance of medical logistics standards and quality control in the mission area. In consultation with the FMO, and any medical logistician, pharmacist or medical supply officers, the CMO is to ensure that processes and controls are employed and sustained to ensure the seamless and continuous availability of supplies and services.

E. Medical standards and quality controls

In United Nations field missions, there is a requirement for standard categorization and nomenclature of medical products in order to cater to multi-national medical units and personnel. Common terminology and standards enable users of different national backgrounds to identify the product and ensure greater safety in prescribing, dispensing and administering drugs. Standardization also facilitates requisitioning, the international bidding process adopted by the United Nations,¹⁰⁵ and regulates medical supply through national channels. Standardization permits quality control and performance measurement against transparent and common minimum United Nations standards.

1. United Nations Medical Catalogue of items for field missions

Only generic names of medical products and pharmaceuticals are to be used in the United Nations system, and this is strongly recommended to TCCs/PCCs. The United Nations Medical Catalogue, which lists the generic names in English (international non-proprietary names) of more than 1000 essential drugs and consumables commonly used in field missions, is the reference document for United Nations

¹⁰¹ See: UN Procurement Manual; UN COE Manual; UN Catalogue for Medical Items, UN Medical Equipment Handbook; Mission SOPs.

¹⁰² Specific details related to effective re-supply and reimbursement of same are captured in Chapter 13 of this Manual and the COE Manual.

¹⁰³ See COE Manual, 2011, Chapter 3 Annexes A and B.

¹⁰⁴ In larger missions where the medical section is a self-accounting unit, the CMO and his Medical Logistician/Pharmacist are responsible for this role. Otherwise the Chief Supply Officer is responsible for that function.

¹⁰⁵ Refer to the UN Procurement Manual

medical logistics. The United Nations Medical Catalogue includes detailed specifications of formulation, strength, packaging, shelf-life and storage conditions for products. The Catalogue serves as a reference guide for medical requisitions for field missions and its use is recommended to avoid incorrect or incomplete requisitions.¹⁰⁶

2. Equipment function standardization and inspection

TCCs/PCCs are to deploy equipment that meet the standard functional specifications described in the Medical Equipment Handbook.¹⁰⁷

3. Medical gases

Medical gases are essential commodities and their procurement is the sole responsibility of the mission, which supplies them to the TCC/PCC medical facilities on a reimbursable basis. However, some TCCs/PCCs may have their own capability for re-supplying of the commodity. Upon arrival in the mission, the Commander of the TCC/PCC medical facility, has the responsibility of notifying the CMO of whether or not the medical facility will be depending on the mission for the supply of the medical gases.

4. Blood and blood products¹⁰⁸

The provision of safe blood and blood products is a critical component of medical support in the field. The United Nations adheres to strict guidelines and provides oversight through a centralized approach to procurement and supply.

Blood and blood products will be provided by the United Nations according to United Nations standards, including in regards to transport, testing, handling and administration, unless otherwise determined in the TCC MOU.

In the event that the United Nations is incapable of supplying blood and blood products and where national blood supply standards meet those stipulated by the United Nations, the TCC may be requested to supply the items under the MOU, with reimbursement for same. Reimbursement will be agreed between the parties in accordance with United Nations systems contracts and/or COE self-sustainment reimbursement rates.¹⁰⁹ Should a contingent request a national supply of blood products without United Nations authorization, its use is limited only to their nationals and will be provided at their own risk and at no additional expense to the United Nations. In large-scale emergencies where it is imperative to obtain blood from the field, great care must be taken to ensure quality control. For such

¹⁰⁶ A copy of the catalogue can be obtained from the MSS/DFS upon request.

¹⁰⁷ The Handbook takes its reference from COE Manual, 2011 Chapter 3, annexes A and B, appendixes 1-10 and is annexed to this Manual.

¹⁰⁸ In reference to medical Guidelines for Peacekeeping Operations for the Use of Blood and Blood Products.

¹⁰⁹ UN System Contract for Blood Costs and/or the COE Manual Chapter 9 will be used as the basis for negotiation with the TCC/PCC.

emergencies where the host nation or regional organization such as the Red Cross Society's blood supply standards meet those stipulated by the United Nations, additional supplies can be sourced at cost to the organization. Transfusion of non-United Nations personnel with United Nations-sourced blood in emergency situations must be duly documented. Other considerations in blood management in the field include the following:

Due to the high risk of contamination, non-United Nations-sourced blood is only to be used when based on the clinical decision that it is mandatory to save a life. The CMO is required to establish a blood support plan for such contingencies.¹¹⁰

- (a) Exacting standards are to be maintained through collection, processing and testing, and continued throughout the transport and storage phases of the supply chain. Documentation associated with blood and blood products requires diligent oversight and compliance throughout all stages of the supply chain, including product acquisition, packaging, transportation, supply, issue and disposal.
- (b) In line with the provisions of the United Nations global systems contract for blood and blood products, when blood or blood products are administered to a patient, a clear record of the administration is required to be kept/archived for no less than 30 years.¹¹¹ TCCs shall provide a copy of such records to the CMO following the patient's departure from the mission.
- (c) Blood or packed red cells must be maintained at a temperature of between +2°C to +6°C (36°F to 43°F) during transport and storage. Maintenance of the cold chain is imperative.¹¹²
- (d) All blood products (blood, blood components, plasma derivatives and some vaccines) must meet WHO requirements and at minimum be tested for the following:

- Erythrocyte antibodies
- Treponema agglutination test
- HIV 1 and 2
- Hepatitis C virus
- Hepatitis B virus
- ALT (alanine aminotransferase)/GPT (glutamic pyruvic transaminase)
- Human T-lymptropic virus types I and II
- Chagas disease
- Malaria
- Treponema pallidum (syphilis)

¹¹⁰ Transfusions are only performed after full cross-matching in accordance with international standards and are not to be based exclusively on records, labelling or verbal information on blood types.

¹¹¹ Refer to the United Nations systems contract for blood and blood products. Further information is available through MSS/DFS.

¹¹² A blood refrigerator or blood box must be available at all centres providing hospital level care and must have temperature control and alarm, as well as back-up power supply.

5. Packaging and storage controls

TCC/PCC and United Nations oversight is required to ensure that the pharmaceuticals supplied are of acceptable quality and have a reasonable period of remaining shelf-life.¹¹³ Products must be properly stored, packaged and transported, meeting any special conditions stipulated by the manufacturer or contractor. Recommendations on the procurement of pharmaceuticals and medical supplies, packaging and labelling are included in Chapter 12 Annex A: Recommendations on the procurement of pharmaceuticals and medical supplies, packaging and labelling.

F. Procurement, contracts and strategic deployment stocks

Procurement functions include all actions necessary for the acquisition, by purchase or lease, of property, including products and real property, and of services, including works. United Nations procurement procedures and timelines are often lengthy or protracted and constitute a challenge in the delivery of medical commodities and services to missions. In this regard, the United Nations has mitigated logistical challenges through the employment of SDS and the establishment of systems contracts.

1. Strategic deployment stocks

Strategic deployment stock (SDS) is the United Nations peacekeeping material reserve that supports rapid deployment and the initial operational capability of a peacekeeping mission. The medical component includes medical equipment and medical consumables.¹¹⁴ The medical component of SDS is vendor-managed,¹¹⁵ including its disposition and replenishment, in coordination with MSS and the UNGSC, on behalf of DFS. Though the medical component of the SDS is essentially for the set up of the UNOE aspect of the medical support for a new mission or the expansion of an existing one, it may be available, at cost, to TCCs/PCCs should they lack components of capability required to deploy to United Nations missions.¹¹⁶

2. Systems contracts¹¹⁷

A systems contract is an arrangement between the United Nations and a vendor for the supply of a commodity or service over a period of time for an estimated amount and at an agreed price. Such contracts facilitate prompt processing of procurement requirements and minimize the number of time-consuming and repetitive solicitations for the same item(s). Other benefits of systems contracts include, but are not limited to the following:

¹¹³ A reasonable period of shelf life is based on a number of factors, including the supply chain timeline and the specific drug.

¹¹⁴ A modularized concept is under development and will comprise complete packages/modules of medical equipment, furniture, accommodation with pre-installed plumbing, electricity, ventilation, air conditioning, sanitary and medical waste disposal capabilities.

¹¹⁵ The medical component of strategic deployment stock is provided via a systems contract.

¹¹⁶ Negotiations should be conducted between United Nations FGS and MSS and the TCC/PCC to identify requirements and associated costs.

¹¹⁷ For details of the system contracts, see Chapter 12 Annex 2.

- (a) Rapid delivery of medical equipment and consumables at start-up of missions
- (b) Continuous availability of support to medical services to the field
- (c) Streamlined replenishment of the medical equipment component of the SDS.
- (d) Zero dollar procurement at HQ
- (e) Limiting the effect of inflation on the cost of medical equipment, consumables and pharmaceuticals
- (f) Avoidance of cumbersome procurement procedures

Medical systems contracts include:

- (a) Medical equipment and medical consumables
- (b) Drugs and pharmaceuticals
- (c) Blood and blood products
- (d) Commercial medical services for medical personnel (on-going solicitation)

For details of United Nations HQ systems contracts, see Chapter 12 Annex B: Details of United Nations HQ systems contracts.

3. Local procurement authority

The mode of procurement of medical items and services in the field is not restricted to systems contracts alone. Procurements may be initiated both at HQ and mission levels from other sources following the local procurement authority. Local Procurement Authority (LPA) is issued to a mission for the establishment of a specific locally negotiated arrangement for the provision of services or consumables that, for a variety of reasons, are unavailable through the systems contracts. Whatever source is chosen, all procurements at both the HQ and mission levels must be undertaken in accordance with United Nations procurement policies.¹¹⁸

4. Sole source

In dire emergencies and during pandemics and outbreaks of emerging diseases in particular, essential medical items such as vaccines and PPE that are needed for immediate intervention and to mitigate impact on the health and well-being of United Nations personnel in the field may not be available under existing systems contracts. In such situations, the United Nations can procure items on a “sole source” basis that does not involve the regular procurement process. However missions do not have any authority to procure medical equipment and pharmaceuticals without first securing DFS clearance and LPA from the Procurement Department. This procedure must still be followed in the case of emergencies. The right to go sole source is based on Financial Rule 105.16. The sub clause (vii), “when there is an exigency for the requirement,” is the rule that is most likely to be invoked by a mission or United Nations HQ during an emergency. It should be noted that for the exigency rule to be invoked, it has to meet the criteria defined by the General Assembly, which is, “an

¹¹⁸UN Procurement Manual, Revision 6, March 2010.

exceptional, compelling, emergent need or situation of force majeure not resulting from poor planning or management or from concerns over the availability of funds, that will lead to serious damage, loss or injury to property or persons, if not addressed immediately.” In addition, Financial Rule 105.16 sub clause (i), “where there is no competitive marketplace for the requirement, such as where a monopoly exists, where prices are fixed by legislation or government regulation or where the requirement involves a proprietary product or service,” may also be invoked depending on the product(s) being procured.

5. Supply chain and procurement challenges

Lack of understanding of the United Nations system is the most common contributor to supply chain shortfalls, delays and/or inefficiencies. The CMO plays a significant role in ensuring that all mission medical support staff are conversant with the United Nations medical logistics, supply chain and procurement systems and rules and standards governing the same. In collaboration with United Nations HQ, mission logistics staff, FMO and medical contingent commanders, the CMO should implement education and oversight measures regarding supply chain and procurement matters in the mission. A mission-specific medical logistics and supply chain SOP should be developed and revised annually.

Annexes

Chapter 12 Annex A: United Nations Department of Peacekeeping Operations requirements for the provision of medical supplies

Chapter 12 Annex B: Details of United Nations Headquarters systems contracts

Chapter 12 Annex A

United Nations Department of Peacekeeping Operations requirements for the provision of medical supplies¹¹⁹

A. Policy within the Department of Peacekeeping Operations

The following rules and regulations must be implemented in all medical logistics support matters within DPKO:

1. Procurement action through the Procurement Department, United Nations HQ.
2. Local Procurement in DPKO field missions.
3. Self-sustainment contracts of TCCs.
4. Provision of medical goods and services on the basis of an LOA.
5. Donations from other agencies, manufacturers, vendors, governments and other parties.

B. Quality control and quality assurance

Quality assurance and quality control of medical supplies (drugs and medical consumables):

1. All medical supplies and consumables used in peacekeeping missions must meet WHO standards/internationally accepted standards.
2. All medical supplies and consumables are to be supplied by manufacturers that meet the terms and conditions stipulated in the document pertaining to quality.
3. All statements of work and statement of requirement for medical goods and services must carry the requirement for quality control and quality assurance.

C. Requisition and purchase order must meet the following requirements:

1. Each requisition and procurement order must contain the following information:
 - (a) Quality assurance/product liability requirements.

¹¹⁹ For additional resources, see UN, *Recommendations On The Transport Of Dangerous Goods*, 15th Edition, New York, 2007; IATA, *Dangerous Goods Regulations*, 53rd Edition, Montreal-Geneva, 2012; WHO, *The Use of Essential Drugs: Ninth Report of the WHO Expert Committee*, 2012; WHO, *International Non-Proprietary Names (INN) For Pharmaceutical Substances*, List No. 14, 1992; WHO, *The International Pharmacopoeia*, Fourth Edition, Vols. 1 and 2, 2011; WHO, *WHO Expert Committee On Biological Standardization, 42nd Report*, Technical Report Series No. 822, 1992; WHO, *WHO Expert Committee on Biological Standardization 32nd Report*, Technical Report Series No. 823, 1992; WHO, *WHO Expert Committee on Specifications For Pharmaceutical Preparations, 31st Report*, Technical Report Series 790, 1990; WHO, *WHO Expert Committee On Biological Standardization, 41st Report*, Technical Report Series No. 814, 1992; WHO, *WHO Expert Committee On Biological Standardization, 43rd Report*, Technical Report Series No. 840, 1992; WHO, *WHO Expert Committee on Biological Standardization, 44th Report*, Technical Report Series No. 848, 1992; WHO, *WHO Expert Committee on Biological Standardization, 45th Report*, Technical Report Series No. 858, 1992; WHO, *WHO Expert Committee On Specifications For Pharmaceutical Substances, 29th Report*, Technical Report Series No. 704, 1984; WHO, *Safe Blood And Blood Products-Guidelines For Safe Blood Transfusion Practices, Blood Donation, Screening For HIV*, Blood Group Serology, Geneva 1993; WHO, "WHO Drug Information," 1993; WHO, *WHO Expert Committee On Specifications For Pharmaceutical Preparations, 27th Report*, Technical Report Series 645, 1980; WHO, *Guidelines For Developing National Drug Policies*, 1988.

- (b) Requirements for packaging and storage (including cold chain) following the rules of WHO/International Pharmacopoeia.
 - (c) Generic name/description of the item, type formulation/presentation.
 - (d) The strength per dosage of the preparation
 - (e) The unit of issue (package size)
- 2. Information of shelf life requirements and /expiration dates:
 - (a) Drugs: At least two years
 - (b) Vaccines: At least six months
 - (c) Blood: At least 28 days
- 3. Indicate the quantity requested.
- 4. Indicate the terms of delivery
 - (a) Usually within four weeks of order
 - (b) No partial delivery accepted and if it must, it should be first discussed and cleared with the mission placing the order
 - (c) Transportation according to rules of the United Nations
- 5. Where necessary, must indicate whether to be transported under the IATA Rules on Dangerous Goods.
- 6. Provide information on language of labelling. Usually, all label on goods must be in the English language and show generic names and special instructions, if any.

Chapter 12 Annex B

Details of United Nations Headquarters systems contracts

A. Global systems contracts

Currently there are three existing System Contracts namely:

1. The Medical Equipment and Medical Consumables System Contract was established in 2003. The contract term is for five years: three years with a provision for extension for two consecutive one-year periods depending on the performance of the vendor. The contract is renewed every five years.
2. The Drugs and Pharmaceuticals System Contract was established in 2007. The contract term is for five years: three years with a provision for extension for two consecutive one-year periods depending on the performance of the vendor. The contract is renewed every five years.
3. The Blood and Blood Products System Contract was established in 2008. Considering the stringent requirements for blood supply to the field, this contract is now being managed on a sole source basis.

B. Medical Equipment and Medical Consumables System Contract

The contract has the following features:

1. Equipment turnover: Capable of replenishing all items in the strategic deployment stock inventory through a linkage between the contract and the strategic deployment stock catalogue.
2. Procurement of the PPE component of the influenza pandemic contingency stockpile.
3. Electronic ordering catalogue at predetermined prices linked to the strategic deployment stock stockpile.
4. Use by United Nations HQ offices, United Nations PKOs and other United Nations agencies.
5. Availability of warranties in respect to goods.
6. Delivery is in accordance with INCOTERM 2010: Delivered at Place - mission port of entry.
7. Receipt and inspection within 14 days.
8. Ordering of perishable goods.
9. Ordering of reagents and other equipment not covered by the contract.
10. Payment is in Euros and within 30 days of receipt of equipment or services.
11. Disputes that may arise affecting payments are stated in Article 12 of the contract.
12. Installation and preventive equipment maintenance.
13. Training.
14. Inventory management.
15. Warehousing of strategic deployment stock/avian flu PPE stockpile.
16. Strategic deployment stock disposition.

C. Drug and Pharmaceuticals Systems Contract

The recently renewed contract was established to meet start-up mission requirements and to facilitate easy ordering by on-going missions. The features of the Drug and Pharmaceuticals System Contract in the new solicitation include the following:

1. More kits included than previously: basic care kit, surgery kit, malaria kit, vaccine and hormones kit and general drugs and pharmaceuticals catalogue. No more Level 1 and 2 drugs.
2. Possibility of split awards within the basic care kit and general drugs and pharmaceuticals catalogue and between the kits.
3. General drugs and pharmaceuticals catalogue comprise most drugs requested for in missions' LPA requests.
4. Provisions made for individual line item ordering.
5. Shelf life/expiration dates:
 - (a) At the point of delivery to the mission, all drugs and medicinal products shall have at least 80 per cent of the original shelf life remaining. Items with less than 12 months of shelf life will not be accepted except for items with short shelf lives (to be specified by vendor).
 - (b) Delivery times for all kits and items from the drugs catalogue shall be 30 days from receipt of purchase order.
 - (c) Drugs for emergencies shall reach the mission by courier service within 10 days.

D. Blood Systems Contract

Until the establishment of the Blood System Contract in 2008, the management of blood supply to the missions was decentralized without adequate United Nations HQ supervision and often times missions experienced delays in the establishment of new contracts when blood was needed. The aim of the Blood System Contract is therefore to achieve centralized procurement with adequate HQ oversight functions considering the delicate and critical nature of this product.

Features of the contract:

1. Procurement is on a non-exclusive basis.
2. Supply is from a minimum of 327 units monthly and 3,924 units annually.
3. Partial deliveries are not accepted.
4. Delivery shall be DDU to each mission's specified airport (as defined under INCOTERM 2000)
5. Cold chain preservation for total shipping time of not more than 48 hours.

6. Notification of the United Nations of non-conforming goods.
7. Payments shall be effected within 30 days of receipt of invoices.
8. The United Nations shall use reasonable efforts to keep records of each unit of the goods for the purpose of tracking (Article 9, Paragraph 9.1).

E. Commercial Medical Systems Contract for Medical Personnel

This contract is under solicitation. It aims to provide medical personnel to bridge the gap from mission mandate to arrival of United Nations and TCC/PCC medical facilities and personnel in the mission.

F. Challenges with systems contracts

Challenges include but are not limited the following:

1. Limited scope of the current catalogue, giving rise to numerous LPA requests. This warrants the continuous review of the contract to include frequently purchased items with an aim of reducing the frequency of LPA requests from the field.
2. Missions' lack of understanding of the terms and conditions of the contract.
3. Poor vendor performance evaluation by missions.
4. Late payment of invoices. Missions to pay for partial shipment received.
5. Missions requesting drugs and medical equipment beyond the capability of their medical facility.
6. Missions not checking their LPA requests against what is available in the systems contracts.
7. Incomplete and delayed shipment by vendor.
8. Lack of an emergency stockpile of drugs and medical consumables to respond to emergency situations.

Chapter 13

Reimbursement of troop and police contributing countries

A. Introduction

In its resolution 50/222 of 11 April 1996, the General Assembly authorized the procedures for reimbursement to member states for the deployment of COE.¹²⁰ The principles of the reimbursement system are simplicity, accountability, and financial and management control. This chapter will outline the current systems of reimbursement and the components and services that attract reimbursement.

B. Mechanisms of reimbursement

There are two mechanisms through which a TCC/PCC is reimbursed for equipment, services and supplies deployed or provided to a United Nations mission.

1. Contribution Agreement/Memorandum of Understanding

Through this mechanism, the United Nations reimburses the TCC/PCC based on a fixed monthly rate on a per capita basis according to United Nations standard requirements outlined in the COE Manual.¹²¹

2. Letter of Assistance arrangement

Through this mechanism, the United Nations reimburses the TCC/PCC for an agreed cost of goods and services deployed and provided (fee for service) and includes a depreciation value on the agreed equipment.¹²²

In some cases, the TCC/PCC may deploy personnel only, with no associated national equipment. In this situation, the United Nations provides UNOE and takes responsibility for the operability and maintenance of the equipment and the provision of requisite supplies.

B. Contribution Agreement/Memorandum of Understanding

The Contribution Agreement is the most common approach to reimbursing TCCs/PCCs that have deployed contingents in PKOs. The United Nations responsibility is to ensure that the peacekeeping mission has the personnel and equipment required to fulfil its mandate, that the troop/police contributors provide personnel, equipment and services as detailed in the specific

¹²⁰This chapter takes reference from the COE Manual, 2011. The COE Manual should be read in conjunction with other related documents such as the Operation Support Manual, the Guidelines to Troop/Police-Contributing Countries (mission-specific and issued before deployment of troops), as well as the Standby Arrangements in the Service of Peace and the Tables of Organization and Equipment (2009).

¹²²Reference is made to Chapter 3, annexes A and B, appendix 11 of 2011 Edition of COE Manual

MOU, and that the contingents perform according to minimum United Nations standards. The Contribution Agreement/MOU affords the following benefits:

- Simplifies accounting and logistics management and reduces the administrative workload for the peacekeeping mission, United Nations HQ and the TCC/PCC.
- Standardizes reimbursement rates determined on an equitable basis and agreed by member states in the COE Manual.¹²³
- Facilitates timely forecasting and budgetary planning by missions, United Nations HQ and the TCC/PCC.
- Provides an efficient and transparent reimbursement process for the TCC/PCC.
- Applies minimum standards across services, supplies and equipment, which enables quality assurance and performance management.
- Establishes an efficient re-supply process through a national TCC/PCC channel.

C. Reimbursement under Contribution Agreement/Memorandum of Understanding

Under this system, an MOU is signed by the TCC/PCC and the United Nations prior to deployment, stipulating the obligations of each party related to personnel, major equipment and self-sustainment. The following components of medical support are reimbursable under this system:¹²⁴

- Major equipment, including medical facilities and capabilities and special case equipment under wet or dry lease contract
- Medical services, supplies, consumables and minor medical equipment under self sustainment¹²⁵ arrangement
- Pre-deployment preparations
- High-risk areas (epidemiological)¹²⁶
- Post-deployment medical assessment

1. Major equipment¹²⁷

Reimbursement is limited to those items of serviceable major equipment (including associated minor equipment and consumables) specifically agreed to by the United Nations in the MOU. The MOU specifies whether the reimbursement will be in accordance with a wet or dry lease contract. Should a contingent provide less major equipment or self-sustainment categories than that stipulated in the MOU, the TCC/PCC will be reimbursed only for major equipment or self-sustainment

¹²³ The COE Manual is revised every three years and is a consultative, negotiated activity between member states, TCC representatives, DFS, DPKO and other relevant United Nations departments.

¹²⁴ Specific information may be found in Chapter 3 and Chapter 8 of the 2011 COE Manual

¹²⁵ Self sustainment is a logistics support concept for troop contingents/police units in a peacekeeping mission whereby the contributing state provides some specific or all logistics support to the contingent on a reimbursable basis.

¹²⁶ Epidemiological risk is one of a number of mission factors that are mission specific. Mission factors include whether greater than standard risk exists for which TCC/PCC should be compensated through reimbursement.

¹²⁷ To be read in conjunction with the UN Manual on Policies and Procedures Concerning Reimbursement and Control of Contingent Owned Equipment of Troop Contributing Countries Participating in Peacekeeping Missions published by DPKO in 1996.

categories actually provided. Should a contingent provide more equipment or self sustainment than agreed in the MOU, the contingent is not reimbursed and the costs are to be met wholly by the TCC/PCC.

2. Wet or dry lease

The TCC/PCC are reimbursed under a wet or dry lease as per the rates adopted by the General Assembly. The type of lease offers the TCC/PCC an option with respect to the maintenance of the deployed equipment and services.

- (a) A wet lease is a COE reimbursement system whereby the TCC/PCC assumes the responsibility for maintaining and supporting major and minor items of equipment deployed. The TCC/PCC is entitled to reimbursement for providing this maintenance support.
- (b) A dry lease is a COE reimbursement system whereby the TCC/PCC provides equipment to a peacekeeping mission but the United Nations provides the maintenance services or contracts the services to a third party.

3. Special case equipment:

Special case equipment is major equipment for which a standard rate of reimbursement has not been defined in the tables of reimbursement because of the uniqueness of the item, its high value or the lack of a generic group. Special case equipment will be negotiated separately between the troop/police contributor and the United Nations. Reimbursement rates will be adjusted for any period for which troop/police contributors are not meeting the standards agreed.

4. Self-sustainment

Self-sustainment means a logistics support concept for a TCC/PCC in a peacekeeping mission whereby the contributing member state provides specific or all logistical support to the contingent on a reimbursable basis. Minor equipment and consumables or services not directly related to major equipment are reimbursed as self-sustainment. Should a contingent provide less self-sustainment categories than that stipulated in the MOU, the TCC/PCC will be reimbursed only for self-sustainment categories actually provided. In addition, should a contingent provide more self-sustainment than agreed to in the MOU, the contingent is not reimbursed and the costs are to be met wholly by the TCC/PCC. Detailed information regarding self-sustainment categories and requirements are addressed in Chapter 8 of the COE Manual.

5. Environmental conditions

High-risk environmental factors apply to the reimbursement rates for major equipment and for self-sustainment that take into account the increased costs borne by the troop/police contributor for extreme mountainous, climatic and terrain conditions.

From the medical perspective, the TCC/PCC is entitled to reimbursement under self-sustainment for medical supplies, chemoprophylaxis and preventive health measures in areas with high incidences of endemic infectious diseases for which there is no vaccine.

6. Pre- and post-deployment costs

Reimbursement is provided to the TCC/PCC for a number of pre- and post-deployment costs incurred in the preparation or repatriation phases of deployment.¹²⁸

D. Letter of Assistance arrangement¹²⁹

An LOA is a contract document issued by the United Nations to a government or agency authorizing the provision of goods or services to a United Nations peacekeeping mission. Reimbursement will be made to the Government for goods and services provided under the LOA, not exceeding the predetermined cost at the time of the contract signing.¹³⁰ An LOA may be raised for the following:

- Medical services
- Medical supplies and consumables
- Maintenance and depreciation of COE
- Spare parts
- Transport of equipment and personnel
- Air transport - air ambulance

E. Integrated missions

Provision of support to missions is increasingly moving towards an integrated approach. Thus, mission medical facilities will be increasingly required to provide support to an integrated dependency. MOUs will be negotiated in consideration of integrated mission requirements. Integration will include a potential dependency of military, police, United Nations civilians (United Nations agencies, funds and programmes staff and families) and, in some environments, the civilian population. All levels of medical facilities, including UNOE and TCC Level 1, 2 and 3 units, may be required to treat all personnel operating in the mission.

All United Nations and TCC/PCC Level 1, 2, 2+ and 3 medical facilities must be equipped and staffed to receive and treat all United Nations personnel, regardless of gender, religion or culture, preserving the dignity and individuality of all patients.¹³¹

Accordingly, medical care must be flexible and responsive to the needs of the dependency in the location. The services and capabilities must be transparent and reliable and must meet minimum

¹²⁸ For additional detail, see COE Manual, 2011, Chapter 9.

¹²⁹ Reference is made to COE Manual, 2011, Chapter 3, annexes A and B, appendix 11.

¹³⁰ In accordance with costs and General Assembly guidelines and as agreed between the parties.

¹³¹ See A/C.5/55/39, annex III.B, para 34 and COE Manual, 2011 Chapter 3, Annex B.

United Nations standards continuously and consistently. Reimbursements to TCCs/PCCs for medical services and consumables shall be in accordance with one of the following systems:

1. Self-sustainment rates

Self-sustainment rates apply where the actual number and type of dependency to be supported each month is detailed in the MOU document and COE Manual.

2. Fee-for-service rates

Fee-for-service rates apply where this mode of reimbursement is articulated in the MOU and based on the standard fee schedule outlined in the COE Manual.¹³² The DMS/CMS is responsible for all fee-for-service reimbursements to the TCC/PCC and/or for claims to United Nations civilian insurance companies.

No UNOE or TCC/PCC facility shall accept or demand payment in cash or in kind for medical services, including professional services, laboratory investigations, imaging procedures, dental services, consumables and the provision of drugs.

F. Verification and controls

TCC/PCC compliance with verification and control procedures is key to ensuring that the terms of the MOU between the United Nations and the troop/police contributor are met by both parties at the outset of the deployment and throughout the period of the MOU. Major equipment and self-sustainment standards are defined in the COE Manual to ensure that operational capability and minimum standards of care are available to all mission personnel.

Recommended lists of standard medical equipment and supplies required for each level of United Nations medical care are established and provide a clear guide to the TCC/PCC for configuring medical units for PKOs. Standardised lists of medical equipment ensure operational requirements and expected treatment capabilities are well understood and transparent. Minimum requirements and capability expectations provide a measure of effectiveness against which poor performance or non-compliance can be measured and reported.

Chapter 3 of the COE Manual outlines the process for MOU compliance and verification of TCC/PCC capability and performance under the MOU or LOA. In preparing the verification report, the quality, capacity, and capability of medical support, as defined in the MOU or LOA, are the overriding considerations. Therefore, an objective medical opinion must be sought regarding the operational impact of any shortfall, discrepancy, corrective action or equipment substitution. A consultative approach is to be taken by the COE Unit and the CMO when any decision related to COE and reimbursement of medical support is required.

¹³² See COE Manual, 2011, Chapter 3 annexes A and B, appendix 11.

1. Chief Medical Officer/Force Medical Officer responsibilities in contingent owned equipment verification exercises

The CMO/FMO is critical to the good management of operational capability and the reimbursement system. The CMO/FMO, in collaboration with the COE Unit in the mission, is responsible for the verification and oversight of the adequacy and operability of the equipment and services deployed/delivered by TCC/PCC. The CMO/FMO is to:

- (a) Remain cognisant of the various MOUs and LOAs under which troop/police are deployed in his/her mission area.
- (b) Develop thorough knowledge of the COE Manual and the verification processes.
- (c) Develop strong working relationships with the Property Control and Inventory Unit and COE Unit in the mission.
- (d) Work collaboratively and proactively with the FMO and Chief, COE Unit to ensure all TCCs/PCCs remain compliant.
- (e) Provide advice and training, as required, to the TCC/PCC with regards to their responsibilities and the impact of non-compliance on reimbursements.

Online COE resources are available from:

<http://www.un.org/en/peacekeeping/sites/coe>

<http://www.un.org/en/peacekeeping/sites/coe/docs.shtml>

Chapter 14

Medical records and reports

A. Medical information management policy

The efficient management of medical information, particularly regarding patients, is a vital element of competent medical support planning and medical service delivery. This information must be standardized and distributed rapidly to all who need it without violating medical professional confidentiality. All information will be recorded by the medical facility initiating the treatment, and a patient file is further created and passed along with the patient whenever the patient is referred or transferred to another medical facility. The initial medical facility will be responsible for maintaining a master file on the patient and will not release any patient information without written authorization from the Office of the CMO. Next of kin notification will be the responsibility of the appropriate national contingent commander in due consultation with the mission leadership and is done before any official statement of the incident is made public.

B. Medical records

Medical records describe the systematic documentation of a single patient's medical history and care across time within one particular health care provider's jurisdiction. The information contained in the medical record allows health care providers to determine the patient's medical history and provide informed care. The medical record serves as the central repository for planning patient care and documenting communication among patients, health care providers and professionals contributing to the patient's care, hence the need for detailed and unambiguous reporting. Information recorded includes but is not limited to:

- Personal details
- Clinical history
- Medical care at all levels (document to accompany the patient/casualty to the next facility)
- Evacuation requirements
- Logistics support provided

C. Medical documentation

Careful and standardised medical documentation in an operation is essential for the following reasons:

- Medical treatment
- Quality control
- Programming medical supplies and other logistics support
- Medical intelligence documentation
- Statistics and medical surveillance system functions

- Budgetary and legal matters
- Facilitating easy processing of administrative matters like medical claims, compensation and determining the degree of disability.

D. Pre-deployment documentation

Medical documentation commences prior to the deployment of military or civilian personnel into a mission area. All personnel participating in a United Nations operation are required to submit their health records to the medical authorities in the mission area. This information should include a summary of significant medical history, current medical treatment (if any), known drug allergies, blood grouping and an updated international certificate of vaccination (see Chapter 3).

These records are to be securely filed by the respective medical unit or authority responsible for the daily health care of the individual. Personal medical records are to be treated as “medical-in-confidence” and should not be provided to anyone not directly involved in patient care (see Chapter 7).

E. Deployment documentation

If illness or injury occurs, the diagnosis and treatment provided must be accurately documented in these records, including any medical leave issued. As patient or casualty care may be disrupted by treatment by different doctors at different levels of medical support, there is a need to outline a clear treatment plan at each medical facility. Patient progress must also be periodically recorded under the progress notes. The medical records are to accompany the patient or casualty during evacuation to the next level of medical support, including repatriation to his home country. The records must be properly sealed and marked with the instructions “medical-in-confidence - to be opened by addressee only.”

F. Post-deployment/re-deployment

At the end of a peacekeeper’s tour of duty or following the completion of a mission, the health records are to be issued to the respective individual or unit in a sealed envelope, to be handed over to the respective national health authority or to his/her regular physician. Should a medical unit be repatriated, all medical records are to be handed over to the unit replacing it. In the absence of the latter, the records should be handed over to the Office of the CMO. No medical or treatment records should be left unattended within the mission area, and if these are no longer required, the records should be destroyed or repatriated with the respective unit.

G. Medical reports

Routine medical reports are important in medical support operations to constantly inform and update senior mission personnel and United Nations HQ on the medical status of the mission. These provide indicators of the capabilities of medical units and their daily utilization and reflect the overall health status of mission personnel. The information is maintained in the medical component of the DPKO peacekeeping database, and is useful for monitoring trends and

analysing data, with a view to implementing timely corrective measures and improving medical support.

The CMO is accountable for timely, complete and accurate medical documentation and reporting in all missions. The Office of the CMO or FMO shall ensure that reports arising from TCC/PCC medical facilities in all United Nations operations are reported to MSS accurately and in a timely manner. The Office of the CMO or FMO oversees the collection and compilation of the required data from medical units for submission to MSS. All medical units, including those in national contingents, must comply with CMO or FMO instructions on reporting procedures. Information on serious injuries and diseases requiring MEDEVAC or hospitalization must be communicated as soon as possible to MSD.

There are five types of reports that the CMO is required to submit to MSS. These are outlined as follows:

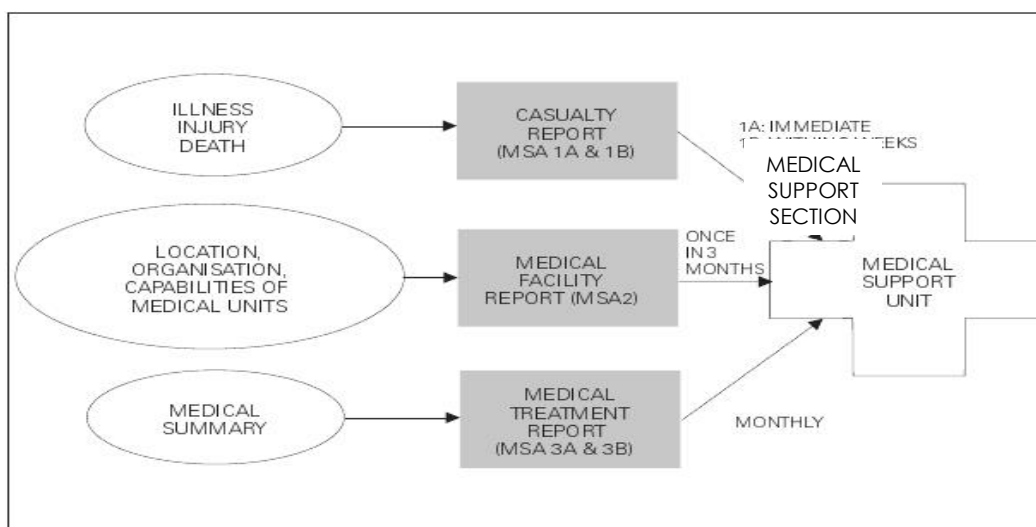


Figure 10: Regular reports to the Medical Support Section, DFS

- Medical Staff Aid 1A (Casualty Incident Report)
- Medical Staff Aid 1B (Casualty Individual Report)
- Medical Staff Aid 2 (Medical Facility Report)
- Medical Staff Aid 3A (Medical Treatment Report Per Capita)
- Medical Staff Aid 3B (Medical Treatment Report by Diagnosis)

1. Medical Staff Aid 1A (Casualty Incident Report)

Medical Staff Aid 1A (MSA-1A) is to be used for reporting serious accidents or diseases affecting a group of mission personnel that require MEDEVAC or hospitalisation. This is a summary that lists all casualties involved in a particular incident, including pertinent medical information and an assessment of the severity of each casualty. The CMO is required to send this to the MSS within 24 hours of the incident occurring. A copy of MSA-1A is attached as Chapter 14 Enclosure 1.

2. Medical Staff Aid 1B (Casualty Individual Report)

Medical Staff Aid 1B (MSA-1B) contains detailed information regarding the condition of each individual casualty, including a record of evacuation and treatment. This should be reported once information on the outcome of a casualty's initial treatment is available, and should be sent within two weeks of the incident occurring. Subsequent information could be forwarded when this becomes available, in which case the original report number is to be cited. A copy of MSA-1B is attached as Chapter 14 Enclosure 2.

3. Medical Staff Aid 2 (Medical Facility Report)

Medical Staff Aid 2 (MSA-2) is a detailed record of the composition and capability of a medical unit, and is to be submitted by every United Nations and contingent medical unit deployed within the mission. MSA-2 is to be submitted every three months, or following any rotation or change in composition of medical units. This information provides MSS with an overview of the medical support readiness within the mission area, and facilitates administrative procedures like the reimbursement of respective troop-contributing countries. A copy of MSA-2 is attached as Chapter 14 Enclosure 3.

4. Medical Staff Aid 3A (Medical Treatment Report Per Capita)

Medical Staff Aid 3A (MSA-3A) is a summary of medical outpatient and inpatient attendances at United Nations medical facilities within a mission area. This is to be compiled by the CMO/FMO for all units within the mission, and is to be submitted monthly (prior to the fifth day of the preceding month). The report is an indicator of the workload at each medical facility by personnel type, and reflects the adequacy of medical resources within the mission area, particularly if medical services are provided for local civilians and displaced personnel. While completing MSA-3A (see Enclosure 4), it should be noted that the report is an indicator of total workload. Therefore all daily outpatient attendances are to be recorded, including repeat visits for the same medical condition. In the event where an individual is treated at different levels for the same condition, each attendance will be reflected as part of the data at each of these levels.

Medical outpatient treatment includes all medical consultations, routine medical examinations, follow-up treatment and dental care. This does not include visits primarily for vaccinations or routine investigations (e.g. chest X-ray), where consultation with a doctor is not required. Should United Nations personnel be referred to local hospitals (Level 2 and above) supporting the mission, this should be reflected under the respective level, indicating the name of each hospital as a separate entry.

5. Medical Staff Aid 3B (Medical Treatment Report by Diagnosis)

Medical Staff Aid 3B (MSA-3B) (see Chapter 14 Enclosure 5), summarizes the medical health of United Nations personnel within the mission area and provides important epidemiological information for monitoring and planning purposes. The report identifies common medical conditions and injuries, allowing preventive measures to be taken, and provides a guide as to the effectiveness of such measures. It is also useful for determining medical logistics requirements for different missions. The following points are to be borne in mind while compiling MSA-3B.

MSA-3B is to be completed by every United Nations and contingent medical unit and submitted to the respective FMO on a monthly basis. The FMO is required to compile this information, showing the total number of cases treated in each disease category within the mission area as a whole. As this report is for epidemiological purposes, it is important to avoid double counting.

Unlike MSA-3A, only the initial diagnosis of a medical condition is to be reported in MSA-3B, unless the condition is a relapse or recurrence of a previously treated condition. Repeat and follow-up visits for the same condition or chronic illness at the same medical facility will not be reflected. Similarly, a patient treated both as an outpatient and inpatient for the same condition will only be reflected under the “inpatient” column. Should a patient or casualty be evacuated or referred to a higher level United Nations medical unit, this should be indicated only under the “medical evacuation to United Nations facility” column by the referring unit, and will not be computed by the CMO within the overall data for the mission. This case will instead be reflected in the data of the receiving Level 2 or Level 3 unit. Should evacuation take place to a non-United Nations medical facility, this has to be indicated as such in the “medical evacuation to others” column by the referring unit. This data will be included in the CMO’s compilation.

MSA-3B was designed to reflect the health status of United Nations personnel in a mission area. As such, statistics of the local population treated (including family members of local staff, non-United Nations international staff, refugees and internally displaced persons) will not be included. Where the mandate for the mission specifically includes humanitarian aid to the local population, such aid provided is to be recorded using a separate copy of MSA-3B.

H. Electronic Medical Records and Occupational Health Management System Medgate (EarthMed)

Future data management processes in the United Nations medical services will involve the global implementation of the Electronic Medical Records and Occupational Health Management System Medgate (EarthMed). Its use will consolidate, standardize and streamline clinical data in PKOs. Though EarthMed has been implemented in some missions, it currently only covers data for United Nations civilian staff.

I. Medical Support Section Reporting Tool

The MSS Reporting Tool is a secure, easy-to-use online application that provides user-friendly navigation and content creation. MSS developed the tool internally in collaboration with the Information and Communication Technology Division for the United Nations to streamline the collection of statistics on numbers of patients and diseases. The application is designed to allow the CMOs to input their data directly into the electronic templates of MSA-3A and MSA-3B instead of dealing with hardcopies of Excel templates and emails, which do not have sufficient data interactive capability. This makes data collation and analysis difficult for planning purposes. Data entered into the MSS Reporting Tool is stored securely and archived. The report functionality is such that the information will be readily available for decision-making purposes. The Reporting Tool manages data for contingent members, United Nations civilian and local staff, staff of agencies, funds and programmes, and other agencies, as well as local populations that access DPKO/DFS medical facilities.

J. Transmission of medical reports

All medical reports should be transmitted to the MSS electronically using the appropriate form template. Monthly medical data shall be accompanied by a brief medical report by the CMO, and incorporate his/her comments on any health trends or problems encountered by medical units.

K. End of tour of duty report

At the end of his/her tour of duty, the FMO is required to submit a final report to the First Reporting Officer, with a copy to the Office of the CMO. The CMO has to forward a copy of the same to both MSS and MSD. This report should highlight FMO observations, assessments and recommendations on medical administrative and operational matters. The report should further highlight challenges faced in medical issues, including epidemics, potential health threats, problems encountered by medical units and an assessment of local hospitals. A copy of this report should also be made available to the new FMO. If desired, the FMO may also submit an end of assessment report to the Policy, Training and Evaluation Division, DPKO/DFS.

Enclosures:

Chapter 14 Enclosure 1: MSA-1A
Chapter 14 Enclosure 2: MSA-1B
Chapter 14 Enclosure 3: MSA-2
Chapter 14 Enclosure 4: MSA-3A
Chapter 14 Enclosure 5: MSA-3B

Chapter 14 Enclosure 1 : MSA-1A

MEDICAL STAFF AID 1A CASUALTY INCIDENT REPORT			Date of Incident: -----			TYPE OF INCIDENT:			
Mission: -----			Time of Incident: -----			Weapon [] Mines []			
Report No: -----			NOTICAS NO: -----			Accident [] Disease []			
Reporting Date: -----			NOTICAS Date: -----			Others [] specify : -----			
						No of Casualties: -----			
S/N	Name	Rank	Gender (M/F)	UN ID No.*	Duty station	Service status [#]	Birth date (dd/mm/yy)	Nationality	Medical condition [@]

* UN ID No.: UN Identification Number

[#] Service Status: MILOB - Military Observer, TROOP – Military Contingent Member, STAFF (I) - UN International Staff, STAFF (L) – UN Local Contracted Staff, UNV – UN Volunteer, OTHERS

[@] Medical Condition: P1 – Priority 1 (Severe), P2 - Priority 2 (Intermediate), P3 – Priority 3 (Light), P4 – Priority 4 (Expectant), Dead

Chapter 14 Enclosure 2: MSA-1B

MEDICAL STAFF AID 1B CASUALTY INDIVIDUAL REPORT

Report No:		Date of Report:	
NAME: MUKHTAR HAMID			UN ID No:
DISEASE / INJURY	Weapon incident [] Disease [] Mine incident [] Others: [] Vehicle incident []	Remarks: Injury by a machine	
AREA OF INJURY <i>May have more than one area affected</i>	Head & Neck [] Extremities [] Thorax [] Superficial [] Abdomen & Pelvis [] Others: []	Remarks:	
MEDICAL CONDITION	P1 [X] P2 [] P3 [] P4 [] Dead []	Remarks:	
EVACUATION INFORMATION			
S/N	Evacuated From*:	Evacuated To*:	Time taken (hours)
			UN ambulance [] Helicopter [] UN other vehicle [] Aircraft [] Others: []
			UN ambulance [] Helicopter [] UN other vehicle [] Aircraft [] Others: []
Other Comments:			

* Identify medical unit and indicate Level of medical support. Designate site of injury or incident as Level 0.

Medical-in-Confidence

Medical facility	Treatment summary e.g. First aid, CPR, antibiotics, wound dressing, surgery or no treatment	Blood transfusion If Yes, indicate blood group and number of units	Duration of stay	Remarks
INCIDENT SITE				
LEVEL 1				
LEVEL 2				
CASUALTY OUTCOME				
Diagnosis	Cut Injury in Left upper chest wall and penetrating wound in same side. Possible iron fragments into left upper chest wall.			
Secondary diagnosis				
Trauma score (if available)				
Outcome	Return to duty (RTD) [] Medevac [] Repatriation [] Death []			
<i>Cause of Death</i>	Primary cause of death: ----- ----- Secondary cause (if any):----- ----- Post-mortem done: Yes / No (Attach Post-mortem report)			

* For permanent disability, give detailed description (use separate sheet if space provided is insufficient).

Medical-in-Confidence

Chapter 14 Enclosure 3: MSA-2



MEDICAL STAFF AID 2 UNITED NATIONS MEDICAL FACILITY REPORT

Page 1

1	LEVEL	Level 1 ☐ Level 2 ☐ Level 3 ☐			
2	EQUIPMENT	UNOE ☐ COE ☐ TCC:			
3	SENIOR MEDICAL OFFICER	RANK:		NAME:	
4	LOCATION (NAME AND GRID REFERENCE)				
5	NEAREST AIRFIELD (NAME AND GRID REFERENCE)				
6	AIRFIELD CAPACITY (AIRCRAFT TYPE)				
7	NEAREST HELIPAD (NAME AND GRID REFERENCE)				
8	PERSONNEL	DOCTORS BY SPECIALTY	No.	OTHER STAFF BY SPECIALTY	No.
9		Anesthesia		Ambulance driver	
10		Cardio-thoracic surgery		Dental Assistant	
11		Dentistry		Equipment technician	
12		Dermatology		Hygiene Officer	
13		Emergency / Critical Care		Nurse, administration	
14		ENT		Nurse, ICU	
15		General Practice		Nurse, OT	
16		Gynecology		Nurse, ward	
17		Infectious Diseases		Nurse, other	
18		Intensive Care		Nurse's aid / medic	
19		Internal Medicine		Pharmacists Assistant	
20		Neurosurgery		Physiotherapist	
21		Ophthalmology		Psychologist	
22		Orthopedics		Social Worker	
23		Pathologist		Technician, Hygiene	
24		Pharmacist		Technician, ICU	
25		Psychiatry		Technician, Laboratory	
26		Public Health		Technician, Medical	
27		Surgery, general		Technician, OT	
28		Surgery, other		Technician, X-Ray	
29		Other:		Technician, Other	
30				Other:	
31		Sum Doctors	0	Sum Other staff	0
32		Total personnel	0		
33	BED CAPACITY	General Ward (Low dependency)		ICU (High Dependency)	
34		Isolation		Other	
35	HIGH DEPENDENCY	Ventilator / Respirator		Type:	
36		Multiline monitor		Type:	
37		Defibrillator		Type:	
38		Syringe pump		Type:	
39		Other:		Type:	
40	SURGERY	Anaesthesia machine		Type:	
41		Surgical tables		Type:	
42		Surgical teams			



43	LABORATORY	Biochemistry	Specify:		
44		Blood cross match	Specify:		
45		Haematology	Specify:		
46		HIV tests	Specify:		
47		Malaria testing	Specify:		
48		Microbiology	Specify:		
49		Microscopy	Specify:		
50		Rapid tests	Specify:		
51		Urinanalysis	Specify:		
52		BLOOD BANK	BLOOD STOCK:	No.	
53	A (+)			A (-)	
54	B (+)			B (-)	
55	AB (+)			AB (-)	
56	O (+)			O (-)	
57	Blood refrigerator			Temperature monitor	
58	Hepatitis test		Specify:		
59	HIV tests		Specify:		
60		VDLR test	Specify:		
61	RADIOLOGY		YES		
62		X-Ray: Extremities			
63		X-Ray: Head			
64		X-Ray: Columna			
65		X-Ray: Pelvis			
66		X-Ray: Chest			
67		X-Ray: Contrast		Specify:	
68		CT Scan			
69		MRI Scan			
70		Ultrasound			
71		Other:			
72	DENTISTRY	Dental Chair	Specify:		
73		Dental X-Ray	Specify:		
74	PREVENTIVE MEDICINE		YES		
75		Hygiene Inspection		Specify:	
76		Water Quality Control		Specify:	
77		Vector Control		Specify:	
78		Veterinary service		Specify:	
79		Other:		Specify:	
80	PHARMACY	Dispensary			
81		Medical Store			
82	AMBULANCES		No.		No.
83		Ambulance		With emergency equipment	
84		Ambulance 4 x 4		With emergency equipment	
85		Ambulance tracked		With emergency equipment	

Chapter 14 Enclosure 4: MSA 3A



MEDICAL STAFF AID 3A
MEDICAL TREATMENT REPORT - PRO CAPITA

MISSION		REPORT MONTH/YEAR	
FACILITY / CONTINGENT		DATE	
"POPULATION"			

	OUTPATIENTS						INPATIENTS					
	UNMO	Civ Pol	Troop/ Police	Int. staff	Local staff	Non -UN	UNMO	Civ Pol	Troop/ Police	Int. staff	Local staff	Non- UN
UNOE LEVEL 1												
TCC LEVEL 1												
UNOE / CONTRACTED LEVEL 2												
COE LEVEL 2												
UNOE / CONTRACTED LEVEL 3												
COE LEVEL 3												

Chapter 14 Enclosure 5: MSA-3B



MISSION
FACILITY / CONTINGENT
"POPULATION"

MEDICAL STAFF AID -3B

REPORT
MONTH/YEAR

DATE

		Evacuation to		DEATH
		OUT-PATIENT	IN-PATIENT	
INJURY	Weapons / Mines			
	Road Traffic			
	Sport / recreational			
	Other (Specify)			
DISEASES NON- INFECTIOUS	Cardiovascular			
	Pulmonary			
	Gastrointestinal			
	Urogenital			
	Musculo-skeletal			
	Neurological			
	Eye			
	Ear-Nose-Throat			
	Skin			
	Tumor / Neoplasm			
	Other (Specify)			
DISEASES INFECTIOUS	Upper respiratory			
	Pulm. Tuberculosis			
	Gastroenteritis unspec.			
	Gastroenteritis (specify)			
	Hepatitis (A/B/C)			
	Dengue fever			
	Meningitis			
	Malaria verified			
	Malaria presumptive			
	Amoebiasis			
	Giardiasis / helminths			
	Impetigo			
	Scabies			
	Others (Specify)			
SEXUALLY TRANSMITTED INFECTIONS	Gonorrhoea			
	Syphilis			
	HIV / AIDS			
	Others (Specify)			
GYNECOLOGY	Vaginitis			
	Pelvic Inflammation			
	Pregnancy			
	Other (Specify)			
POISONING	Accidental			
	Substance Abuse			
	NBC Agent			
BITE	Dog			
	Snake			
	Others (Specify)			
DENTAL	Fillings			
	Extractions			
	Other (Specify)			
Miscellaneous	Routine examination			
	Vaccination			

Chapter 15

Medical standard operating procedures

A. Development of medical standard operating procedures

Every United Nations mission has a set of SOPs that outlines all aspects of routine operations and administration. While some of these procedures are common to most field missions, others may have to be tailored to meet the specific requirements of a particular mandate, operation or function. It is important for the SOP of any mission to be well documented to ensure that it is effectively managed, particularly due to high staff turnover.

This chapter provides general guidelines for developing a medical SOP for a United Nations field mission. It covers important aspects of medical support for a mission, and it is recommended that this format be maintained to ensure that all relevant points are covered. While an attempt has been made to ensure that this is comprehensive, certain sections relevant to specific missions may have been omitted. It is important to ensure that such mission-specific considerations are included by the missions where necessary.

In conjunction with the FMO, the CMO is responsible for developing, reviewing and updating the medical SOP for the mission. This has to be based on the policies and procedures set out in this manual and directives from MSS and MSD, and should also be in accordance with the rest of the mission SOPs. The SOP must be established at the onset of a mission, and consulted on with both MSD and MSS prior to its endorsement by the respective head of mission (Special Representative to the Secretary-General, Joint Special Representative, Executive Representative of the Secretary-General, FC, etc.). A copy of the final mission medical SOP will then be sent to MSD and MSS.

For an SOP to be effective, it has to be readily accessible to all personnel dealing with medical administrative matters in a mission, and promulgated to all sub-units, which will in turn develop their individual SOPs based on the higher HQ SOP. SOPs shall be reviewed biennially, or as required, with a change in the operating circumstances or with a change of deployment. United Nations HQ (MSS, MSD and the Policy and Best Practice Service/DPKO) must be informed of any amendments or updates to the SOP.

B. Format of medical standard operating procedure

It is recommended that the main text of the SOP be kept concise, with detailed procedures attached in the annexes. All standard forms and formats, including examples, should be attached to ensure consistency and to serve as a reference source for new staff members. The recommended format for the medical SOP is illustrated in the following section.

C. Medical standard operating procedure for peacekeeping missions

1. Introduction

- (a) Medical mission statement for the peacekeeping operation
- (b) Objectives of medical support, including key tasks of sub-units
- (c) Scope of the SOP (contents)

2. Structure and organization of the mission

- (a) Structure and organization of mission and mission HQ
- (b) Organizational chart (annex)

3. Structure and organization of medical support

- (a) Structure and organization of medical support (HQ Medical Branch and medical units)
- (b) Organizational chart (annex)
- (c) Functions of medical units
- (d) Roles and responsibilities of key medical personnel
 - i. CMO, FMO, regional or sector medical officers, if applicable
 - ii. SOs in FMO Cell, including but not limited to Sector SOs/Medical; FHO/EHO; Preventive Medicine/Epidemiologist Officer; Force Psychiatrist
 - iii. SMO
 - iv. Medical Unit Commander
 - v. Contingent Medical Officer
 - vi. Duty personnel

4. Work procedures

- (a) Work routine (daily/weekly/monthly)
- (b) Regular meetings and engagements
- (c) Relation with higher medical HQ
- (d) Relation with medical units in the mission.
- (e) Relation with other departments and non-medical units in the mission.
- (f) Relation and dealing with local authorities and hospitals.
- (g) Relation and dealing with NGOs and voluntary organizations

5. Medical support concept

- (a) General concept
- (b) Level 1 medical support
- (c) Level 1+ medical support
- (d) Level 2 medical support
- (e) Level 2+ medical support

- (f) Level 3 medical support
- (g) Level 4 medical support
- (h) Location and contact numbers of medical units (annex)
- (i) Composition and capabilities of medical units (annex)

6. Medical support policies and procedures

- (a) Medical threat assessment of mission area
- (b) Preventive medicine policy, including:
 - i. Immunization requirements
 - ii. Disease prophylaxis
 - iii. Environmental health
 - iv. Food and water hygiene
- (c) Regulations and guidelines concerning entitlement to medical care
 - i. UNMEM, United Nations IPOs and military contingent members
 - ii. United Nations international staff and UNVs
 - iii. United Nations locally contracted staff and their family members
 - iv. Non-United Nations personnel, local population, internally displaced persons, refugees
- (d) Certification of medical leave
- (e) Reimbursement policy for medical expenses and compensation for disability
- (f) Dental treatment policy.

7. Casualty treatment and evacuation

- (a) Triage classification
- (b) Guidelines on emergency medical care
- (c) Medical holding policy within mission area
- (d) Evacuation policy
 - Land evacuation within mission area
 - Air evacuation within mission area
 - MEDEVAC to another country
 - Medical repatriation
 - Activation and approval procedure
 - Airfield information, including important contact numbers (annex)
- (a) Mass casualty and emergency response
- (b) Management of dead and remains
- (c) Notification and reporting procedure

8. Medical logistics

- (a) Medical re-supply by United Nations or TCC/PCC
- (b) Distribution of supplies to medical units
- (c) Requisition of medical items
- (d) Accounting procedures for equipment, supplies and consumables
- (e) Stock checks, quality control and inspection of medical items
- (f) Preventive maintenance and repair of equipment, including reimbursement

- policy
- (g) Blood supply, vaccines, anti-venom and other special requirements
- (h) Disposal of medical wastes
- (i) Logistics claims procedures

9. Medical records and reporting

- (a) Medical documentation
- (b) Reporting procedures and medical staff aids
- (c) Financial records for medical treatment
- (d) Receiving and inspection reports
- (e) Special reports
- (f) Investigation of medical incidences

10. Communications

- (a) Communications instructions
- (b) Important contact numbers

11. Medical training

- (a) Training of medical personnel (medical and non-medical skills)
- (b) First-aid training for non-medical personnel
- (c) Health education for military contingents

Chapter 16

Medical training

A. Introduction

The United Nations medical support system aims to deploy the correct category of medical staff and level of medical care in all field operations. However, this comes with some challenges inherent in the principles of the PKO that have some impact on medical support in the field. These are described below.

B. Uniqueness of peacekeeping operations

Medical support for PKOs differs from peacetime healthcare, and to some extent, from medical support for conventional military operations. There is a need to work under new operational settings, with new policies, regulations and procedures. There is also a need to manage unfamiliar diseases and problems, often with a general lack of medical infrastructure within the mission area. In specifying medical training requirements, the United Nations should also be mindful of the danger inherent in the introduction of diseases into the host country's environment, particularly where such diseases are assumed to be non-existent prior to peacekeeping. This is especially important for communicable diseases such as cholera. For guidelines on cholera prevention and hygiene awareness training for United Nations field mission personnel, see Chapter 16 Annex D.

C. Need to operate independently

The mission mandate, combined quite often with the dilapidated condition of the host country's medical infrastructure, requires that missions be self-reliant as far as their medical care is concerned. Therefore, it is expected that all categories of personnel, including UNMEM and United Nations IPOs, have standard training in first aid in case their mission mandate does not provide for the deployment of an elaborate United Nations medical infrastructure, or where access to medical care is limited. Level 1 and Level 2 medical facilities also need to function with greater autonomy, as they are required to manage a wide range of medical conditions with relatively limited resources.

D. Multi-national participation in peacekeeping operations

Some field missions involve multi-national participation with medical units and personnel from different countries that may have different backgrounds, equipment, supplies and standards of medical training. There is a need for training to ensure a common understanding of the United Nations medical support system and to facilitate integration and interoperability of medical units.

E. Absence of experience in medical practice

No United Nations member state is precluded from deploying medical facilities in the field. However, medical personnel from some TCCs/PCCs may have little or no experience with

United Nations field missions. There is a general lack of knowledge of the United Nations organization and modus operandi, individual roles and responsibilities, operational requirements, and administrative procedures and approaches to in dealing with other agencies within the mission area.

F. Types of medical training

The challenges identified above require that the United Nations put in place a training parameter that would harmonise the knowledge, experience and resources required for the delivery of effective and efficient medical support in field operations. Professional and technical training of medical personnel remains the responsibility of the TCCs/PCCs. Such training will take place in accordance with national requirements for registration or certification of such personnel. In addition, there are several aspects of medical training specific to United Nations field missions, as well as others recommended by MSS, in conjunction with MSD, for maintaining the operational readiness and medical proficiency of personnel deployed in the field. The following sections describe aspects of training that would achieve this purpose.

G. First aid training

All United Nations peacekeepers must have basic knowledge of and be trained in basic first-aid.¹³³ The training must, at a minimum, cover the following areas:

- Cardio-pulmonary resuscitation
- Bleeding control
- Fracture immobilization
- Wound dressing and bandaging (including burns)
- Casualty transport and evacuation
- Communication and reporting

These areas of focus, though not exhaustive, are considered the minimum core requirement for training in basic first aid for United Nations peace operations. See details in Chapter 16 Annex A: First aid training for peacekeepers.

H. Pre-deployment training for peacekeeping operations

Pre-deployment medical training normally covers the different outlooks of PKOs and therefore may be designed for the specific audiences mentioned below:

- Senior medical appointment holders.
- Contingent members (military and police).
- UNMEM and United Nations IPOs.
- Medical staff deployed in various contingents.

¹³³ See COE Manual, 2011, Chapter 3 Annex A and B, appendix 1

I. Senior medical appointment holders

It is important to train all medical personnel, particularly senior medical appointment holders, on the different aspects of field missions and on specific medical problems encountered in the field. This commences with the training of national trainers from TCCs/PCCs by DFS or other agencies providing peacekeeping training. Such trainers will be equipped with knowledge and materials to conduct further training for medical personnel in their home country. The purpose of such training is to provide greater understanding of United Nations field missions, planning and operational parameters, medical support organization, medical policies and administrative and logistics procedures. In addition, it should cover treatment and prevention of common health threats encountered in the field, particularly tropical diseases, HIV and AIDS and stress-related disorders, as well as other aspects of environmental and occupational health. The specific training objectives of such a programme are listed in Chapter 16 Annex B.

J. Contingent members (military and police)

Situations might arise in the field when medical personnel are not readily available. Therefore non-medical service members must rely heavily on their own skills and knowledge of life-sustaining methods to survive in combat situations or other hostile circumstances. Chapter 16 Annex C on pre-deployment training for PKOs outlines the aspects of training for both self-aid and aid to other service members (buddy aid) that contingent members must be conversant with. More importantly, it emphasizes prompt and effective action for sustaining life and preventing or minimizing further suffering and disability. First aid is the emergency care given to the sick, injured or wounded before being treated by medical personnel. As required by the COE Manual, non-medical uniformed peacekeepers must receive basic first aid training and should remain skilled in the correct procedures for giving first aid. The procedures discussed in Chapter 16 Annex B apply to all types of casualties and the measures described are for use by both male and female uniformed peacekeepers.

K. United Nations Military Experts on Mission and United Nations individual police officers

As highlighted earlier, there is a need for UNMEM and United Nations IPOs to have a working knowledge of first aid because they are required to operate in small groups, often with no immediate access to medical care. Initial treatment provided at the point of injury may be critical to saving a life, organ or limb, and such knowledge is a pre-requisite in the training of such individuals. It is also strongly recommended that all mission personnel and military contingent members have basic knowledge of first aid. This training should take place prior to deployment in the mission area and is the responsibility of the respective TCC. It is recommended that such training focus on practical aspects of first aid, covering only the bare essentials of theory. Components of such training are outlined in Chapter 16 Annexes A, B and C.

L. Medical staff deployed in various contingents

Medical personnel in PKOs have the dual responsibility of providing skilled medical services to the peacekeepers, as well as continuously training other non-medical members of the contingent

to administer first aid and maintain high standards of public health in the field. In addition, the medical staff in the field would be required to enhance their capabilities in the delivery of first aid by acquiring skills in basic cardiac life support or equivalent, advanced cardiac life support or equivalent and Prehospital Trauma Life Support or any equivalent training. The necessary training modules for the above medical skills are available in the annexes of this manual.

M. Mission-specific training

Mission-specific training commences prior to deployment within a mission area, and is largely dependent on the time available for preparing a medical unit before its actual deployment. This involves updating personnel on the political and military situation within the country, on the United Nations mandate for the mission, and on the epidemiological and medical intelligence for the mission area. Training continues following deployment, with the need to conduct familiarization training of the mission area, rules of engagement and mission SOPs, as well as standardization of procedures and coordinating measures with other medical units. Medical personnel may also need to be familiarized with medical equipment and supplies from other countries that they may be required to use.

N. Continuing medical training

Medical skills, if not used or practiced regularly, may deteriorate, and it is not uncommon for medical personnel deployed for long durations during PKOs to lose these skills through relative professional inactivity. This is particularly so in the relatively long-standing missions where there is no active armed conflict or where there are less environmental and work-related hazards. It is, therefore, mandatory for core medical skills and procedures to be regularly practiced in missions by paramedics and nurses, and for a continuing medical education programme to be conducted for doctors. In conjunction with the FMO, the CMO and other SMOs are responsible for the coordination of such programmes, which should be included in the mission medical SOP. Medical unit commanders are required to ensure that their personnel remain current in medical knowledge and attend such programmes. Continuous in-mission medical training programmes should therefore be well planned and coordinated to ensure core medical skills and procedures are regularly practiced by paramedics and doctors.

O. Health education for military contingents

Regular health education shall be conducted for military contingent personnel within the mission area. The FMO and SMO are responsible for overseeing this programme, which is to be conducted by the medical unit overseeing health care for the respective contingent. This should focus on prevention of common health problems, including vector-borne diseases, HIV and AIDS, accident prevention and stress management.

P. Oversight/key performance indicator

Verification of peacekeepers' first aid skills must be included in the pre-deployment COE inspection and in cases of non-compliance, unit deployment should be delayed or suspended.

Annexes:

Chapter 16 Annex A: First aid training for peacekeepers

Chapter 16 Annex B: Medical training for medical professionals

Chapter 16 Annex C: Pre-deployment training for peacekeeping operations

Chapter 16 Annex D: Training proposal on cholera prevention and hygiene awareness for United Nations peacekeeping and civilian personnel in the field

Chapter 16 Annex A

First aid training for peacekeepers

S/N	Topic	Specific objectives	Target group
1	Cardiopulmonary resuscitation	a) Scene size-up and initial assessment b) Assessment of level of consciousness c) Positioning of unconscious d) Circulation: Restore blood circulation with chest compression e) Airway: Clear the airway f) Breathing: Breathe for the person using mouth-to-mouth; mouth-to-nose; use of ventilation mask	a) Medical staff b) All contingent members c) Military observers d) United Nations police monitors
2	Control of haemorrhage	a) Importance of universal precautions b) Types of PKOs c) Pressure dressing and bandaging d) Preventing further bleeding	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
3	Wound dressing	a) Dressing common wounds in various parts of the body	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
4	Fracture immobilization	a) Immobilization techniques b) Handling casualties with suspected head and neck injuries	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
5	Casualty transport and evacuation	a) Triage b) Preparing casualty for transport c) Casualty transport by stretcher d) Improvised techniques for transporting casualty	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
6	Health care policies and procedures	a) United Nations medical standards and policies b) Entitlement to medical care, compensation and reimbursement for medical expenses c) Medical accreditation and verification d) Ethical code for care providers	a) Contingent appointment holders b) Senior medical appointment holders
7	Burns	a) Definition b) Causes c) Preventive measures d) Management	a) Medical staff b) All contingent members c) Military observers d) United Nations Police

			monitors
8	Heat stroke	a) Definition b) Causes c) Signs and symptoms d) Preventive measures e) Management	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
9	Bites and stings	a) Types of bites from snakes, insects, humans, animal, etc. b) Signs and symptoms c) Preventive measures d) Management	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
10	Influence of alcohol and drugs	a) Common drugs and alcoholic beverages in PKOs b) Causes of drug abuse c) Influence d) Available support mechanisms	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
11	Nuclear, biological and chemical environment	a) Classification of nuclear, biological and chemical agents b) Various first aid materials c) Signs and symptoms d) First aid procedures	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors
12	Communications and reporting	a) Reporting procedures for accidents b) Activating procedures for ambulance and air evacuation	a) Medical staff b) All contingent members c) Military observers d) United Nations Police monitors

Chapter 16 Annex B

Medical training for medical professionals

S/N	Topic	Specific objectives	Target group
1.	Advanced life support in a peacekeeping hospital setting	a) Cardiac monitoring b) Cardiac defibrillation c) Intravenous cannulation d) Intraosseous access and intraosseous infusion e) Surgical cricothyrotomy f) Needle cricothyrotomy g) Needle decompression of tension pneumothorax h) Advanced medication administration through parenteral and enteral routes (intravenous cannulation, intraosseous access, per-os, per rectum, endo tracheal, sub lingua, topical, and transdermal) i) Advanced cardiac life support pre-hospital trauma life support, basic trauma life support or international trauma life support	a) All doctors and nurses in Level 2 and Level 3 facilities
2.	Advanced trauma life support for peacekeeping missions	a) Primary survey (ABCDE) b) Secondary survey (complete exam and history)	a) All doctors, nurses, nursing assistants, paramedics (including ambulance medics)

Chapter 16 Annex C

Pre-deployment training for peacekeeping operations

S/N	Topic	Specific objectives	Target group
1	United Nations HQ	a) Role and functions of the United Nations b) Structure and organization of United Nations HQ c) Structure and organization of DPKO, its planning and administrative processes	a) Contingent appointment holders b) Military observers c) United Nations Police monitors d) Senior medical appointment holders
2	PKOs	a) Peacekeeping mandate b) Types of peacekeeping operations c) Problems encountered in peacekeeping operations d) Key players: United Nations agencies, NGOs and governmental agencies	a) Contingent appointment holders b) Military observers c) United Nations Police monitors d) Senior medical appointment holders
3	Field mission organization	a) Structure and organization of field missions, including civilian and military components b) Key appointment holders	a) Contingent appointment holders b) Military observers c) United Nations Police monitors d) Senior medical appointment holders
4	United Nations HQ medical organizational structure	a) Structure and organization of MSD and MSS b) Roles and functions of MSD and MSS	a) Military observers b) United Nations Police monitors c) Senior medical appointment holders
5	Medical support for PKO	a) Medical support planning b) Organization of medical support c) Levels of medical support d) Roles of key medical appointment holders: CMO, FMO, SMO, etc.	a) Senior medical appointment holders
6	Health care policies and procedures	a) United Nations medical standards and policies b) Entitlement to medical care, compensation and reimbursement for medical expenses c) Medical accreditation and verification d) Ethical code for care providers	a) Contingent appointment holders b) Military observers c) United Nations Police monitors d) Senior medical appointment holders
7	Tropical medicine	a) Common infectious diseases encountered in PKO	a) All medical practitioners b) Military observers c) United Nations Police monitors
8	Preventive	a) Immunization policy	a) Senior medical

	medicine	b) Disease prophylaxis and vector control c) HIV, AIDS and sexually transmitted diseases d) Food and water hygiene and sanitation e) Prevention of accidents f) Stress management g) Health education	appointment holders b) Military observers c) United Nations police monitors d) All medical practitioners
9	Medical survey	a) Conduct of medical technical survey/reconnaissance	
10	Casualty treatment and evacuation	b) Triage, treatment and holding policy c) CASEVAC, MEDEVAC and medical repatriation d) NOTICAS e) Mass casualty and disaster preparedness	a) Senior medical appointment holders b) All medical practitioners
11	Humanitarian assistance	a) Principles of disaster medicine b) Initial assessment and planning c) Programme objectives and strategy d) Programme evaluation	a) Senior medical appointment holders b) All other medical practitioners
12	Medical records and reporting	a) Medical documentation b) Medical confidentiality c) Concepts of medical epidemiology and health statistics d) United Nations medical reporting	a) Senior medical appointment holders b) All other medical practitioners
13	Medical logistics	a) Categories of medical logistics support b) United Nations catalogue of medical items for PKO c) Sustainment and reimbursement arrangements for TCCs/PCCs d) Medical logistics management e) Requisition procedure for medical items f) Blood and blood products	a) Contingent appointment holders b) Senior medical appointment holders
14	Basic medical training	a) First aid b) Basic life support	a) All medical personnel b) Contingent members ¹³⁴ c) Military observers d) United Nations Police monitors
15	Advanced medical training	a) Advance cardiovascular life support b) Pre-hospital trauma life support	a) Contingent doctors and nurses
16	Advanced life support training	a) Advanced life support in a hospital setting	a) All doctors and nurses in Level 2 and Level 3 facilities
17	International humanitarian law	a) Aspects of international humanitarian law and their implications to PKOs b) Geneva Convention and its protocols c) Privileges and immunities of United Nations peacekeepers	a) Contingent appointment holders b) Senior medical appointment holders

¹³⁴ For this group of people the focus will be on First Aid Training

18	Security issues	a) Basic and essential field security measures b) Mine awareness	a) Contingent appointment holders b) Military observers c) United Nations Police monitors d) Senior medical appointment holders
19	Personal skills	a) Good public relations, liaison and negotiation skills b) Working with interpreters c) Dealing with media	a) Contingent appointment holders

Chapter 16 Annex D

Training proposal on cholera prevention and hygiene awareness for United Nations peacekeeping and civilian personnel in the field

A. Introduction

Cholera¹³⁵ is an acute diarrhoeal infection caused by the ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. Every year, there are an estimated 3 to 5 million cholera cases and 100,000 to 120,000 deaths due to cholera. The short incubation period of between two hours and five days enhances the potentially explosive pattern of outbreaks.

B. Symptoms

Cholera is an extremely virulent disease. It affects both children and adults and can kill within hours. Approximately 75 per cent of people infected with *V. cholerae* do not develop any symptoms, although the bacteria are present in their faeces for 7 to 14 days after infection and are shed back into the environment, potentially infecting other people.

Among people who develop symptoms, 80 per cent have mild or moderate symptoms, while around 20 per cent develop acute watery diarrhoea with severe dehydration. This can lead to death if untreated. People with low immunity such as malnourished children or people living with HIV, are at an greater risk of death if infected.

C. History

During the 19th century, cholera spread across the world from its original reservoir in the Ganges delta in India. Six subsequent pandemics killed millions of people across all continents. The current (seventh) pandemic started in South Asia in 1961, reached Africa in 1971 and the Americas in 1991. Cholera is now endemic in many countries.

D. *Vibrio cholerae* strains

Two serogroups of *V. cholerae* cause outbreaks: O1 and O139. *V. cholerae* O1 causes the majority of outbreaks, while O139, first identified in Bangladesh in 1992, is confined to Southeast Asia. Non-O1 and non-O139 *V. cholerae* can cause mild diarrhoea but do not generate epidemics.

Recently, new variant strains have been detected in several parts of Asia and Africa. Observations suggest that these strains cause more severe cholera with higher case fatality rates. Careful epidemiological monitoring of circulating strains is recommended. The main reservoirs of *V. cholerae* are people and aquatic sources such as brackish water and estuaries,

¹³⁵ For additional resources, see WHO, “Media centre: Cholera,” February 2014. Available from <http://www.who.int/mediacentre/factsheets/fs107/en/>; WHO, “Cholera,” 2015. Available from <http://www.who.int/cholera/en/>.

often associated with algal blooms. Recent studies indicate that global warming creates a favourable environment for the bacteria.

E. Risk factors and disease burden

Cholera transmission is closely linked to inadequate environmental management. Typical at-risk areas include peri-urban slums, where basic infrastructure is not available, as well as camps for internally displaced people or refugees, where minimum requirements of clean water and sanitation are not met. The consequences of a disaster such as disruption of water and sanitation systems, or the displacement of populations to inadequate and overcrowded camps can increase the risk of cholera transmission should the bacteria be present or introduced. Epidemics have never arisen from dead bodies.

Cholera remains a global threat to public health and a key indicator of lack of social development. Recently, the re-emergence of cholera has been noted in parallel with the ever-increasing size of vulnerable populations living in unsanitary conditions. The number of cholera cases reported to WHO continues to rise. For 2011 alone, a total of 589,854 cases were notified from 58 countries, including 7,816 deaths. Many more cases were unaccounted for due to limitations in surveillance systems and fear of trade and travel sanctions.

F. Prevention and control

A multidisciplinary approach based on prevention, preparedness and response, along with an efficient surveillance system, is key to mitigating cholera outbreaks, controlling cholera in endemic areas and reducing deaths.

G. Treatment

Cholera is an easily treatable disease. Up to 80 per cent of people can be treated successfully through prompt administration of oral rehydration salts (WHO/UNICEF ORS standard sachet). Very severely dehydrated patients require administration of intravenous fluids. Such patients also require appropriate antibiotics to diminish the duration of diarrhoea, reduce the volume of rehydration fluids needed, and shorten the duration of *V. cholerae* excretion. Mass administration of antibiotics is not recommended, as it has no effect on the spread of cholera and contributes to increasing antimicrobial resistance.

In order to ensure timely access to treatment, cholera treatment centres should be set up among the affected populations. With proper treatment, the case fatality rate should remain below 1 per cent.

H. Outbreak response

Once an outbreak is detected, the usual intervention strategy is to reduce deaths by ensuring prompt access to treatment, and to control the spread of the disease by providing safe water, proper sanitation and health education for improved hygiene and safe food handling practices

by the community. The provision of safe water and sanitation is a formidable challenge but remains the critical factor in reducing the impact of cholera.

I. Oral cholera vaccines

There are two types of safe and effective oral cholera vaccines currently available on the market. Both are whole-cell killed vaccines, one with a recombinant B-sub unit, the other without. Both have sustained protection of over 50 per cent lasting for two years in endemic settings. Both vaccines are WHO prequalified and licensed in over 60 countries. Dukoral has been shown to provide short-term protection of 85 to 90 per cent against *V. cholerae* O1 among all age groups at four to six months following immunization.

The other vaccine (Shanchol) provides longer-term protection against *V. cholerae* O1 and O139 in children under 5.

Both vaccines are administered in two doses given between seven days and six weeks apart. The vaccine with the B-subunit (Dukoral) is given in 150ml of safe water. WHO recommends that immunization with currently available cholera vaccines be used in conjunction with the usually recommended control measures in areas where cholera is endemic, as well as in areas at risk of outbreaks. Vaccines provide a short-term effects, while longer-term activities like improving water and sanitation are put in place.

WHO has never recommended the use of the parenteral cholera vaccine due to its low protective efficacy and the high occurrence of severe adverse reactions.

J. Main objectives of training

The main objectives of the training are to:

1. Implement a cholera awareness and prevention strategy throughout United Nations peacekeeping missions.
2. Increase peacekeeping personnel's awareness of and capacity for cholera prevention and control.
3. Contribute to strengthening United Nations field mission capacity in response to potential cholera outbreaks.

K. Training requirement and responsibility

Based on existing deployment guidelines for United Nations PKOs, all peacekeepers, including uniformed contingents (military contingents and formed police unit) and individual peacekeeping personnel (UNMEM, United Nations IPOs and other civilian staff) are required to have pre-deployment training based on the Core Pre-deployment Training materials circulated by the United Nations DPKO, and in-mission orientation and continuous training programmes as planned and conducted by field missions. Health education is an integral component in these trainings. To further enhance peacekeepers' awareness of and capacity for cholera prevention and control, a dedicated session on cholera prevention and hygiene awareness could be included

in the health education component among the Core Pre-deployment Training and in-mission orientation and continuous training programmes.

As part of the Core Pre-deployment Training, enhanced health education remains the responsibility of the TCCs/PCCs. Such training will take place in accordance with national requirements and cover prevention of common health problems including vector-borne diseases, foodborne and waterborne diseases, and also the epidemiological and medical intelligence in the designated mission area.

Training continues following deployment. The enhanced health education programme integrated within mission orientation and regular training programmes should be conducted for uniformed contingent personnel and individual peacekeeping personnel within the mission area. The CMOs and FMOs in the mission are to be responsible for planning and overseeing the programmes, which are to be conducted by the medical unit overseeing the health care for the respective contingent/unit. Regular spot-check evaluation systems by superiors/senior medical officers should be established to assess learning outcomes and enhance training by identifying barriers to effective training and modifying curricula or approach.

L. Training sequence and duration

The dedicated cholera training session can be placed anywhere in the health education component of the Core Pre-deployment Training and in-mission orientation and health education programmes, while it may be helpful to place this session sometime after the sessions on disease prophylaxis and vector control and food and water hygiene and sanitation have been completed, since some messages in these sessions will provide a foundation for this session.

The times shown below are the minimum recommended time periods for the training. Additional activities and discussions can be added as time permits.

Minimum session time	Lecture/presentation	Questions/assessment	Session activities
90 minutes	30 minutes	Participant questions/ Discussion: 15-20 minutes Assessment: 15 minutes	Video: 15 minutes Hand washing demonstrations: 10 minutes
Additional options	Mission specific: As needed	Optional film	Optional activity

M. Training methodology and preparation

The training session and related information must be determined by a certified health care provider, such as a registered nurse or doctor. The following points outline a suggested methodology. Experienced instructors may choose to use alternative methods and activities to

present the material and key messages for this session. Instructors are encouraged to add examples and mission-specific information related to the specific deployment of participants.

1. Presentations using the PowerPoint slides
2. A film followed by a discussion of key issues raised in the film
3. Informal question and answer periods
4. Hand outs, pamphlets, posters, leaflets, stickers prepared to promote messages about good hygiene and sanitation practices, which will also be posted in contingent bathrooms, dining areas and gathering spaces.
5. Learning assessment questions at the end of the session

The training on cholera prevention and hygiene awareness should cover basic knowledge about cholera, including modes of transmission, primary means of prevention, hand washing practices, safe drinking water, safe water storage, safe food preparation, camp hygiene and sanitation, use of Oral Rehydration Solution, and sewage and waste management, etc. The training should be guided by related United Nations policies and regulations on pre-deployment training, field safety and security and medical support for PKOs. The instructors are provided with the following guidelines and materials in preparation for the training.

1. WHO Technical Guidelines for Cholera
2. DPKO Core Pre-deployment Training Materials Unit 4 - Part 4: Safety and Security (PBPS/DPKO, 2009).
3. DPKO/DFS Policy on the Applicability of the Arrangement of the United Nations Security Management System to Individually Deployed Military and Police Personnel in DPKO or DPA led Missions (May 2008).
4. UN Field Security Handbook (January 2006).
5. Basic Security in the Field: Staff Safety, Health and Welfare (ST/SGB/2003/19). United Nations (December 2003).
6. UN Medical Support Manual for Peacekeeping Operations (1999).
7. UN Medical Guidelines for Peacekeeping Operations: Environmental Safety and Occupational Health (ESOH) Guidelines (Medical Support Unit/DPKO, 2005).
8. UN Medical Guidelines for Peacekeeping Operations: Guidelines for Food Safety Management in Peacekeeping Missions (Medical Support Unit/DPKO, 2003).
9. UN Medical Guidelines for Peacekeeping Operations: Pest control in Peacekeeping Missions (Medical Support Unit/DPKO, 2003) UN Medical Guidelines for Peacekeeping Operations: Waste Management (Medical Support Unit/DPKO, 2003).
10. Community Health Worker Training Materials for Cholera Prevention and Control, US CDC: (http://www.cdc.gov/cholera/pdf/chw_trainingmaterialsforcholera_v2.pdf)
11. Guidelines and educational materials from the International Centre for Diarrheal Disease Research, Bangladesh



UNITED NATIONS
NATIONS UNIES