



Safe management of wastes from health-care activities

Second edition

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Declarations of interest

The members of the health-care waste-management working group completed the WHO standard form for declaration of interests prior to the meeting. At the start of the meeting, all participants were asked to confirm their interests, and to provide any additional information relevant to the subject matter of the meeting. It was from this working group that chapter authors and lead editors were selected.

None of the members declared current or recent (<1 year) financial interests related to commercial organizations.

Two members declared consultation contracts for work relevant to the subject matter of the meeting.

Bill Townend: Consultant for two industry nongovernment organizations, one of which – the International Solid Waste Association – is a nongovernmental organization in official relations with WHO, and provided technical and financial support for the publication.

Ute Pieper: Consultant in health-care waste management in projects financed by international agencies, development banks and bilateral government agreements.

These interests were not considered to give rise to a conflict with the aims of the meeting and the publication arising from the meeting and formed the basis of the expertise of the panel.

The following participants were adjudged to have no potentially conflicting interests in the subject matter of the meeting, based on their completed declarations: Jorge Emmanuel, Philip Rushbrook and Ruth Stringer.

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Contents

Foreword to the first edition	xiii
Acknowledgements	xv
Acronyms and abbreviations	xvii
1 Introduction	1
2 Definition and characterization of health-care waste	3
2.1 General definition and classification	3
2.1.1 Sharps waste	4
2.1.2 Infectious waste	4
2.2 Pathological waste	5
2.3 Pharmaceutical waste, including genotoxic waste	5
2.4 Chemical waste	6
2.5 Radioactive waste	8
2.6 Non-hazardous general waste	8
2.7 Sources of health-care waste	9
2.8 Generation of health-care waste	11
2.9 Physicochemical characteristics	15
2.10 Minimum approach to overall management of health-care waste	20
2.11 Desirable improvements to the minimum approach	21
2.12 References and further reading	21
3 Risks associated with health-care waste	25
3.1 Overview of hazards	25
3.1.1 Types of hazards	25
3.1.2 Persons at risk	25
3.1.3 Hazards from infectious waste and sharps	26
3.1.4 Hazards from chemical and pharmaceutical waste	28
3.1.5 Hazards from genotoxic waste	29
3.1.6 Hazards from radioactive waste	30
3.1.7 Hazards from health-care waste-treatment methods	30
3.2 Public sensitivity	31
3.3 Public health impact	31
3.3.1 Impacts of infectious waste and sharps	31
3.3.2 Impacts of chemical and pharmaceutical waste	34
3.3.3 Impacts of genotoxic waste	34
3.3.4 Impacts of radioactive waste	34
3.4 Survival of pathogenic microorganisms in the environment	34
3.5 The need for further research and epidemiological surveys	35
3.6 References and further reading	36
4 Legislative, regulatory and policy aspects of health-care waste	41
4.1 Importance of a national policy	41
4.2 Guiding principles	41
4.3 International agreements and conventions	42
4.3.1 The Basel Convention	42

4.3.2	The Bamako Convention	43
4.3.3	The Stockholm Convention.....	43
4.3.4	The environment and sustainable development conferences	43
4.3.5	United Nations Committee of Experts on the Transport of Dangerous Goods	44
4.3.6	United Nations Economic Commission for Europe	44
4.3.7	Aarhus Convention of the United Nations Economic Commission for Europe	45
4.4	Available guidance	45
4.4.1	World Health Organization Guidance	45
4.4.2	The International Waste Management Association	46
4.4.3	ISWA policy document on health-care waste management	47
4.5	National legislation	47
4.6	Technical guidelines	48
4.7	Minimum approach to developing health-care waste-management policy	48
4.8	Desirable improvements to the minimum approach	48
4.9	References and further reading.....	49
5	Health-care waste-management planning.....	51
5.1	The need for planning	51
5.2	National plans	52
5.2.1	Purpose of a national health-care waste-management plan	52
5.2.2	Action plan for developing a national programme	52
5.3	Waste-management plan for a health-care facility	56
5.3.1	Assignment of responsibilities.....	56
5.3.2	Management structure, liaison arrangements and duties.....	57
5.3.3	Assessment of waste generation	61
5.3.4	Development of a hospital waste-management plan	62
5.3.5	Implementation of the waste-management plan	64
5.4	Minimum approach to planning	65
5.5	Desirable improvements to the minimum approach	65
5.6	References and further reading.....	65
6	Health-care waste minimization, reuse and recycling.....	67
6.1	The waste-management hierarchy	67
6.2	Waste minimization	68
6.3	Environmentally preferable purchasing	68
6.4	Green procurement.....	69
6.4.1	Recycling symbols for plastics	69
6.5	Safe reuse.....	70
6.6	Recycling and recovery.....	71
6.7	Environmental management systems	73
6.8	Minimum approach to waste minimization.....	74
6.9	Desirable improvements to the minimum approach	74
6.10	References and further reading.....	75
7	Segregation, storage and transport of health-care waste	77
7.1	Guiding principles	78
7.2	Segregation systems.....	78
7.2.1	Waste containers, colour codes and labels.....	78
7.2.2	Beyond basic segregation	82

	7.2.3	Waste containers: specifications and siting	83
	7.2.4	Setting and maintaining segregation standards	85
7.3		Collection within the health-care facility	86
7.4		Interim storage in medical departments	86
7.5		Onsite transport of waste	87
	7.5.1	General requirements	87
	7.5.2	Transport trolleys	87
	7.5.3	Routing	88
7.6		Central storage inside health-care facilities	89
	7.6.1	General requirements	90
	7.6.2	Hazardous waste storage	91
	7.6.3	Layout of waste-storage areas	94
	7.6.4	Documentation of the operation of storage places	95
7.7		Offsite transport of waste	95
	7.7.1	Logistic staff	95
	7.7.2	Vehicle requirements	96
	7.7.3	Labelling of the transport vehicle	97
	7.7.4	Cleaning of container and vehicle	99
	7.7.5	Transport documentation	99
7.8		Minimum approach to segregation, storage and transport	102
7.9		Desirable improvements to the minimal approach	102
7.10		References and further reading	103
8		Treatment and disposal methods	105
8.1		Selection of treatment methods	105
8.2		Overview of waste-treatment technologies	106
	8.2.1	Thermal processes	106
	8.2.2	Chemical processes	106
	8.2.3	Irradiation technologies	107
	8.2.4	Biological processes	107
	8.2.5	Mechanical processes	107
8.3		Suitability of treatment methods for infectious waste	107
8.4		Steam treatment technologies	108
	8.4.1	Autoclaves	108
	8.4.2	Integrated steam-based treatment systems	111
8.5		Microwave treatment technologies	112
8.6		Dry-heat treatment technologies	113
8.7		Chemical treatment technologies	113
	8.7.1	Internal shredding of waste	114
	8.7.2	Chemical disinfectants	114
	8.7.3	Microbial resistance	115
	8.7.4	Alkaline hydrolysis	116
8.8		Incineration	116
	8.8.1	Combustion	116
	8.8.2	Pyrolysis and gasification	117
	8.8.3	Required waste characteristics	118
	8.8.4	Energy recovery	118
	8.8.5	Types of incinerators for health-care waste	119

	8.8.6	Environmental control of incinerators	121
	8.8.7	Dust removal.....	124
8.9		Encapsulation and inertization	125
8.10		Emerging technologies.....	126
8.11		Applications of treatment and disposal methods to specific waste categories	127
	8.11.1	Sharps.....	127
	8.11.2	Anatomical waste, pathological waste, placenta waste and contaminated animal carcasses	128
	8.11.3	Pharmaceutical waste	129
	8.11.4	Cytotoxic waste	129
	8.11.5	Chemical waste	130
	8.11.6	Waste containing heavy metals.....	131
	8.11.7	Radioactive waste.....	131
8.12		Land disposal	133
	8.12.1	Municipal and other external disposal sites.....	134
8.13		Minimum approach to treatment and disposal.....	136
8.14		Desirable improvements to the minimum approach	137
8.15		References and further reading	138
9		Collection and disposal of wastewater	147
	9.1	Characteristics of health-care wastewater	147
	9.2	Hazards of wastewater from health-care facilities.....	147
	9.2.1	Wastewater-related diseases.....	148
	9.2.2	Hazards from liquid chemicals in wastewater	149
	9.2.3	Hazards from pharmaceuticals in wastewater.....	149
	9.2.4	Hazards from radioactive substances.....	150
	9.2.5	Quantity of wastewater.....	150
	9.2.6	Quality of wastewater by hospital department.....	150
	9.3	Collection and pretreatment of liquid health-care waste.....	151
	9.3.1	Sewerage systems for health-care facilities.....	151
	9.3.2	Pretreatment of hazardous liquids.....	152
	9.4	Discharge into municipal sewage systems.....	153
	9.5	Onsite wastewater treatment	153
	9.5.1	Wastewater-treatment systems	153
	9.5.2	Disinfection of wastewater	155
	9.5.3	Disposal of sludge	155
	9.5.4	Emerging technologies.....	156
	9.5.5	Reuse of wastewater and sludge	156
	9.5.6	Offsite treatment and disposal in specialized facilities.....	157
	9.6	Operation and monitoring of sewerage systems.....	157
	9.6.1	Operation and maintenance of wastewater systems	157
	9.6.2	Monitoring of wastewater systems	157
	9.7	Minimum approach to wastewater management.....	158
	9.7.1	Sanitation system.....	158
	9.7.2	Minimal liquid hazardous waste-management system	158
	9.7.3	Basic wastewater-treatment systems	159
	9.8	Desirable improvements to the minimum approach	162
	9.9	References and further reading	163

10	Economics of health-care waste management	165
10.1	Guiding principles	165
10.2	Cost elements.....	166
10.2.1	Costs at a health-care facility level	166
10.2.2	Costs at a central treatment facility level	167
10.2.3	Costs at a national level.....	168
10.3	Cost estimation.....	168
10.4	Cost and financing.....	174
10.4.1	Methods of financing	174
10.4.2	Costing tools	175
10.4.3	Pricing models for a treatment provider	177
10.5	Recommendations for cost reductions.....	178
10.6	Minimum approach to health-care waste management costing	178
10.7	Desirable improvements to the minimum approach	179
10.8	References and further reading	179
11	Health and safety practices for health-care personnel and waste workers.....	181
11.1	Guiding principles	181
11.2	Occupational health risks	182
11.2.1	Health hazards	182
11.2.2	Cytotoxic safety.....	184
11.3	Exposure prevention and control	184
11.3.1	Hierarchy of controls (applied to bloodborne pathogens)	184
11.3.2	Dealing with spillages	185
11.3.3	Reporting accidents and incidents.....	187
11.3.4	Protective equipment	187
11.3.5	Occupational post-exposure prophylaxis.....	188
11.4	Training.....	189
11.5	Minimum approaches to health and safety practices	189
11.6	Desirable improvements to the minimum approach	189
11.7	References and further reading.....	190
12	Hospital hygiene and infection control	195
12.1	Guiding principles	195
12.2	Chain of infection	195
12.3	Epidemiology of nosocomial infections.....	195
12.3.1	Transition from exposure to infection.....	196
12.3.2	Sources of infection	197
12.3.3	Routes of transmission.....	197
12.4	Prevention of nosocomial infections	198
12.4.1	Standard precautions	198
12.4.2	Isolation of infected patients and standard precautions	200
12.4.3	Cleaning.....	200
12.4.4	Sterilization and disinfection.....	200
12.4.5	Hand hygiene.....	206
12.5	Measures for improving infection control	209
12.6	Minimum approach to hygiene and infection control.....	209
12.7	Desirable improvements to the minimum approach	210
12.8	References and further reading.....	210

13	Training, education and public awareness	213
13.1	Importance of training and education	213
13.2	Education and training of health-care personnel	214
13.2.1	Planning and implementation.....	214
13.2.2	Employees to be trained	216
13.2.3	Content of education programmes	216
13.2.4	Follow-up and refresher courses	217
13.2.5	Training responsibility	217
13.3	Implementation of a training course	217
13.3.1	The training package.....	217
13.3.2	Selection of participants.....	218
13.4	Training health-care waste handlers.....	219
13.4.1	Health-care personnel	219
13.4.2	Cleaning staff.....	219
13.4.3	Staff who transport waste	220
13.4.4	Treatment plant operators	221
13.4.5	Landfill operators	221
13.5	Integrating training with public education on risks of health-care waste	222
13.6	Minimum approach to training, education and public awareness.....	223
13.7	Desirable improvements to the minimum approach	223
13.7.1	Improvements to the minimum approach.....	223
13.7.2	Improvements to more advanced approaches	223
13.8	References and further reading	224
14	Health-care waste management in emergencies	225
14.1	Guiding principles	225
14.2	Phases for the safe management of health-care waste in emergencies	226
14.2.1	Phase one: rapid initial assessment	226
14.2.2	Phase two: emergency response	228
14.2.3	Phase three: recovery phase	233
14.3	Contingency planning and emergency preparedness	233
14.4	References and further reading	234
15	Future issues	237
15.1	Changing patterns of disease.....	237
15.1.1	Emerging diseases and multidrug-resistant organisms.....	237
15.1.2	Pandemics	237
15.2	Environmental issues.....	239
15.2.1	Climate change	239
15.2.2	Other environmental issues	240
15.3	Waste technology	241
15.4	Social, cultural and regulatory changes	242
15.5	References and further reading	243
	Annex 1 Contributors to the first edition	245
	Annex 2 Example training programmes in health-care waste management	247
	Annex 3 Chemical destruction methods for cytostatic drugs.....	253
	Annex 4 Clearance levels for radioactive waste.....	289
	Annex 5 Accidental contamination by mutagenic and carcinogenic products.....	293
	Annex 6 Disposal of pathological waste	297
	Glossary	305

Tables

Table 2.1	Categories of health-care waste.....	4
Table 2.2	Chemical waste from health-care activities.....	7
Table 2.3	Examples of health-care waste from different sources	12
Table 2.4	Daily data-collection form.....	14
Table 2.5	Total and infectious waste generation by type of health-care facility (Pakistan, Tanzania, South Africa).....	17
Table 2.6	Total and infectious waste generation by type of health-care facility: high-income country (United States of America).....	18
Table 2.7	Bulk densities of health-care waste by components.....	18
Table 2.8	Average material composition of health-care waste	19
Table 2.9	Moisture content (%) of health-care waste components.....	19
Table 2.10	Heating value of health-care waste components.....	20
Table 3.1	Potential infections caused by exposure to health-care wastes, causative organisms and transmission vehicles.....	27
Table 3.2	Frequency of procedure that health-care workers were using at the moment of percutaneous injury, selected countries.....	32
Table 3.3	Viral hepatitis B infections caused by occupational injuries from sharps (USA).....	33
Table 5.1	Sample sheet for assessing waste generation.....	62
Table 7.1	WHO-recommended segregation scheme	79
Table 7.2	Advantages and disadvantages of needle cutters/destroyers	83
Table 7.3	Selected United Nations packaging symbols.....	97
Table 8.1	Typical reaction conditions and products from pyrolysis, gasification and incineration processes.....	118
Table 8.2	Emission guidelines for health-care waste incinerators	122
Table 10.1	Estimated capital and operating costs for available treatment methods.....	170
Table 10.2	Investment costs for incinerators in Indonesia	171
Table 10.3	Investment costs for incinerators in Africa.....	171
Table 10.4	Investment costs for large central incinerators that meet international standards	172
Table 10.5	Investment costs for alternative treatment solutions.....	172
Table 10.6	Positive and negative effects of fixed pricing	177
Table 10.7	Positive and negative effects of variable pricing	177
Table 11.1	Risk of transmission of infection following occupational exposure	182
Table 11.2	Hazards to health-care waste workers	183
Table 11.3	Example of a list of items for spillage cleaning	186
Table 12.2	The main forms of hand hygiene.....	206
Table 12.3	Ways to improve infection control.....	209
Table 14.1	Segregation of health-care waste in emergencies.....	229
Table 14.2	Summary of pharmaceutical disposal methods in and after emergencies.....	232
Table A2.1	Programme of the Certificate Programme in Health Care Waste Management.....	248
Table A2.2	Schedule for WHO-Euro's three-day course on health-care waste management	249
Table A2.3	Content of the UNEP health-care waste-management training modules.....	250
Table A3.1	Formulation of reconstituted and administration solutions of cytostatic drugs.....	282
Table A3.2	Efficiency of the degradation methods tested on 32 cytostatic drug formulations	286
Table A4.1	Generic clearance levels for solid waste.....	289
Table A4.2	Liquid discharge rates to sewers, rivers or other large water bodies	290
Table A4.3	Gaseous releases into the open air.....	291

Figures

Figure 2.1	Typical waste compositions in health-care facilities.....	3
Figure 2.2	Total and infectious waste generation in selected hospitals (kg per bed per day).....	15
Figure 2.3	Total and infectious waste generation in selected hospitals (kg per occupied bed per day or kg per patient per day).....	16
Figure 2.4	Total and infectious waste generation in small clinics, health centres and dispensaries (in kg per patient per day).....	16
Figure 5.1	Action plan for national programme of sound health-care waste management.....	54
Figure 5.2	Hospital waste-management structure.....	58
Figure 6.1	The waste-management hierarchy.....	67
Figure 7.1	Biohazard, radiation and chemical hazard symbols.....	79
Figure 7.2	Comparison of common hazardous waste symbols.....	80
Figure 7.3	Cardboard safety boxes.....	84
Figure 7.4	Example of a waste-segregation poster.....	85
Figure 7.5	Examples of interim waste storage places.....	87
Figure 7.6	A selection of onsite transportation trolleys.....	88
Figure 7.7	Example of a health-care facility site plan with waste-collection points (red circles).....	89
Figure 7.8	Example labels outside the storage facility.....	90
Figure 7.9	Example labels inside the storage facility.....	90
Figure 7.10	Label for a pathological waste storage room.....	91
Figure 7.11	Examples of storage places for chemical waste.....	93
Figure 7.12	Sketch of waste-storage area.....	94
Figure 7.14	Example of a vehicle used for transporting health-care waste in the United Kingdom.....	97
Figure 7.15	Specifications for placards (e.g. UN 3291 Infectious [Biomedical] Waste).....	99
Figure 7.16	Example of consignment note for carriage and disposal of infectious waste.....	100
Figure 7.17	Example of an emergency response intervention card.....	101
Figure 8.1	Simplified schematic of a pre-vacuum autoclave.....	109
Figure 8.2	Simplified schematic of batch (left) and semicontinuous (right) microwave technologies.....	113
Figure 8.3	Simplified flow scheme of the incineration process.....	117
Figure 8.4	Rotary kiln.....	120
Figure 8.5	Sample design of a concrete sharps vault.....	128
Figure 8.6	Routes of exposure to hazards caused by open dumping.....	134
Figure 8.7	Example of a low-cost pit cover.....	136
Figure 9.1	Deaths due to improper water and sanitation systems per 1000 population.....	148
Figure 9.2	Improper disposal of photochemicals into the sewerage system.....	152
Figure 9.3	Activated sludge wastewater-treatment system in a hospital in Sonla, Vietnam.....	154
Figure 9.4	Horizontal reed bed system.....	156
Figure 9.5	Basic hospital wastewater-treatment system with two treatment stages.....	159
Figure 9.6	Sample of a septic tank.....	160
Figure 9.7	Basic lagooning system at a hospital.....	162
Figure 11.1	Recommended protective clothing for health-care waste transportation in small hospitals in Thailand.....	188
Figure 12.1	The spread of nosocomial infections.....	199
Figure 12.2	Aide memoir for standard precautions in health care.....	204
Figure 12.3	Hand hygiene technique with alcohol-based formulation.....	207
Figure 12.4	Hand washing technique with soap and water.....	208
Figure 14.1	Construction of a pit for onsite waste burial.....	230
Figure 14.2	Special cells or trenches for disposal of biocontaminated wastes in a municipal dumping site (10 m long, 3 m wide and 2 m deep).....	231
Figure 14.3	Double-chamber incinerator in a health-care centre dumping site.....	231

Figure 15.1	Anticipated extension in the range of malaria in 2050.....	238
Figure A3.1	Schematic representation of procedure for destruction of doxorubicin or daunorubicin.....	256
Figure A3.2	Schematic representation of procedure for destruction of methotrexate or dichloromethotrexate using potassium permanganate/sulfuric acid.....	259
Figure A3.3	Schematic representation of procedure for destruction of methotrexate using aqueous alkaline potassium permanganate.....	261
Figure A3.4	Schematic representation of procedure for destruction of methotrexate using aqueous sodium hypochlorite	263
Figure A3.5	Schematic representation of procedure for destruction of cyclophosphamide and ifosfamide using alkaline hydrolysis in the presence of dimethylformamide.....	265
Figure A3.6	Schematic representation of procedure for destruction of cyclophosphamide using acid hydrolysis followed by addition of sodium thiosulfate and aqueous hydrolysis.....	268
Figure A3.7	Schematic representation of procedure for destruction of vincristine sulfate and vinblastine sulfate.....	271
Figure A3.8	Schematic representation of procedure for destruction of 6-thioguanine and 6-mercaptopurine.....	274
Figure A3.9	Schematic representation of procedure for destruction of cisplatin by reduction with zinc powder.....	276
Figure A3.10	Schematic representation of procedure for destruction of cisplatin by reaction with sodium diethyldithiocarbamate	278
Figure A3.11	Schematic representation of procedure for destruction of procarbazine using potassium permanganate in sulfuric acid	280
Figure A6.1	Example of a placenta pit.....	298
Figure A6.2	A dome biogester.....	301
Figure A6.3	A biogas plant.....	301

Boxes

Box 2.1	Common genotoxic products used in health care ^a	6
Box 2.2	Common recyclable materials from health-care facilities.....	9
Box 2.3	Major sources of health-care waste	9
Box 2.4	Minor sources of health-care waste.....	10
Box 3.1	Chain of infection	26
Box 3.2	Health sector contribution of mercury in the environment.....	29
Box 3.3	Cytotoxic drugs hazardous to eyes and skin	30
Box 3.4	Occupational transmission of HIV in France and the United States of America	33
Box 5.1	Parameters to be monitored by the waste-management officer	60
Box 5.2	Details to include in the waste-management plan.....	63
Box 6.1	Examples of practices that encourage waste minimization.....	68
Box 6.2	Reuse of medical devices in Canada	70
Box 6.3	Examples of sterilization methods for reusable items.....	71
Box 6.4	Recycling at the Heart of England NHS Foundation Trust	72
Box 6.5	Recycling infectious waste in Nepal	72
Box 6.6	Hospital food waste composting	73
Box 7.1	Recommendations for storage facilities for health-care waste.....	89
Box 7.2	Decay storage of radioactive waste – a sample calculation of decay storage time	94
Box 8.1	Characteristics of sodium hypochlorite (NaOCl) as a chemical disinfectant	115
Box 8.2	Essential elements for the design and operation of sanitary landfills	135
Box 10.1	Costs of construction and operation of a health-care waste-treatment plant (incinerator, autoclave, microwave, etc.)	169
Box 10.2	Tools for estimating total costs of health-care waste management	176
Box 11.1	Controls framework	185
Box 11.2	Example of general procedure for dealing with spillages.....	186

Box 12.1	Classification of pathogenic organisms.....	196
Box 13.1	Example of a training set-up.....	215
Box 13.2	Training tools examples (World Health Organization-related).....	218
Box 13.3	Training health-care personnel.....	219
Box 13.4	Training cleaning staff.....	220
Box 13.5	Training waste-transport staff.....	220
Box 13.6	Training treatment plant operators.....	221
Box 13.7	Issues to address when training treatment plant operators.....	222
Box 14.1	Rapid initial assessment.....	226
Box 14.2	Generic terms of reference for conducting a rapid initial assessment	227
Box 14.3	Issues to remember when collecting information in emergencies.....	227
Box 14.4	Key points to address during a recovery phase.....	233
Box 15.1	Key points relating to changing disease patterns.....	237
Box 15.2	Key points relating to climate change.....	239
Box 15.3	Key points relating to environmental issues.....	240
Box 15.4	Key points relating to waste technology	241
Box 15.5	Key points relating to social, cultural and regulatory changes	242

Foreword to the first edition

In pursuing their aims of reducing health problems and eliminating potential risks to people's health, health-care services inevitably create waste that may itself be hazardous to health. The waste produced in the course of health-care activities carries a higher potential for infection and injury than any other type of waste. Wherever waste is generated, safe and reliable methods for its handling are therefore essential.

Inadequate and inappropriate handling of health-care waste may have serious public health consequences and a significant impact on the environment. Sound management of health-care waste is thus a crucial component of environmental health protection.

In both the short term and the long term, the actions involved in implementing effective health-care waste management programmes require multisectoral cooperation and interaction at all levels. Policies should be generated and coordinated globally, with the management practices implemented locally. Establishment of a national policy and a legal framework, training of personnel, and raising public awareness are essential elements of successful health-care waste management.

Improved public awareness of the problem is vital in encouraging community participation in generating and implementing policies and programmes. Management of health-care waste should thus be put into a systematic, multifaceted framework, and should become an integral feature of health-care services.

To achieve this aim, the World Health Organization (WHO), together with WHO's European Centre for Environment and Health in Nancy, France, set up an international working group (in 1995) to produce a practical guide, addressing particularly the problems of health-care waste management in developing countries. The group included representatives of the private sector involved in waste management activities and members of the public.

This handbook, the result of their efforts, is intended to be comprehensive, yet concise, "user-friendly" and oriented towards practical management of health-care waste in local facilities. It provides guidelines for the responsible national and local administrators, and is the first publication to offer globally relevant advice on the management of health-care waste. The guidelines complement and supplement those produced in different regions in the past.

WHO strongly encourages the widespread implementation of these guidelines and is ready to assist users in adapting them to national settings. This handbook has been prepared as a practical response to the need for improved health-care waste management, especially in developing countries. Continuing efforts are being made to refine this response, and feedback from users of the handbook would be appreciated.

Comments and suggestions based on experience of this handbook's use may be sent to:

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The second edition of *Safe management of wastes from health-care activities* is dedicated to our distinguished colleague and dear friend **Yves Chartier (1958–2011)**, Public Health Engineer, who led the development of this work, and inspired involvement in and commitment to health-care waste management. Yves was the co-author of many WHO publications on environmental health in the health sector. It is also dedicated to our colleague **Carib Nelson (1956–2007)**, whose contributions consistently showed us a practical way through sound health-care waste management options.

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