Index

Note: Page references in *italics* refer to figures; those in **bold** refer to tables

access media management 161, 162 route establishment 115 scene assessment 89, 91 action cards 50 hospital staff 181, 183 mobile medical teams 32 active shooter 155 advanced life support 110, 119 medical equipment 55–6, 55	Ambulance Control actions 25 communications from scene 85, 86, 90 initial response to major incident declaration 24, 90 Ambulance Control Point (ACP) 24, 27 Ambulance Equipment Officer 28, 59	command structure 26 communications role 85 hazardous materials incidents 128 key roles 25–8 major incident medical aid 28 plans 13, 14 marauding terrorist attacks (MTAs) 156
aide-memoires 50	Ambulance Incident	medical equipment
airwave 84	Commander 22, 26, 66,	national reserve stock 134
airway	66 , 113	resupply 58–9
burns injury 139, 140	continued assessment of	organisation 22 radios 85
medical equipment,	scene 91 duties 22	
advanced life support 55, 55 first aid 54, 54	initial (first attendant on	responsibilities at scene 25
	scene) 23, 24 , 89	specialist teams 22 tabard labels 48
to support specialist medical teams 57	media interviews 161	
	Ambulance Loading Officer 25, 28,	treatment provision 107, 110 Ambulance Tactical Advisor 27
primary triage 101 treatment at scene 111, 112	116	analytical risk assessment 81
	· · · ·	armed forces 40
alert messages 45 'all-hazards approach' 14, 44, 46	Ambulance Loading Point 28, 77, 111, 113	assessment of casualties 14
ambulance assistant 22, 23	Ambulance Parking Officer 28, 91,	burns injury 139
actions on arrival at scene 24	116	assessment of scene 89–92
ambulance attendant 22, 23	Ambulance Parking Point 47, 76,	continued 91
actions on arrival at scene	116	initial 23, 89–90
24, 89	Ambulance Safety Officer 27, 30,	planning 45
ambulance blue lights 24, 67, 76	47, 81, 91	responsibility 92
ambulance circuit 116, 116	tasks 81	see also HANE; METHANE
Ambulance Command Point 76	ambulance service	avalanches 146
identification lights 76	actions of first crew on	avaiancines 140
Ambulance Communications	scene 23–5	biological incidents 127
Officer 27	casualty transport 119	blood, at-scene supply 59
Officer 27	casualty transport 119	biood, at seeme supply 37

blood and blood products 113	CBRNe incidents 127	personal safety of rescuers 47
boat transportation 120	algorithm 130	solutions for predictable
Body Holding Area 122	personal protective	hazards 48
body language 188	equipment 128	visibility 48
breathing	see also hazardous materials	warmth 49
medical equipment	(HazMat) incidents	weather/waterproofing 49
advanced life support	central casualty bureau 87	see also personal protective
55–6, 55	chemical incidents 127	equipment
first aid 54	chemical-resistant clothing 49	cognitive aids 190
to support specialist medical	child casualties 10, 11	cold zone 69
teams 57	'all-hazards' planning	decontamination command and
primary triage 101	approach 44	control 129, 129
treatment at scene 112, 112	incidents involving large	command 65–74
Bronze Command see Operational	numbers 133–8, 133	chain 71–4, <i>71, 72–3</i>
Command	definitive care 137	decontamination process 132,
burn index 140	medical support 134–7	132
burns	preparation 134	definition 65
incidents involving 11, 11	recovery phase 137	emergency services at scene 15,
multiple casualties 139–40	treatment 137	23, 65–6
capacity 140	medical equipment 56, 134	hospital response 179
patient dispersal 140	physiological values 134, 135	levels 45
specialist care capacity 140	specialist services 134	structured approach to
specialist teams 140	training 134	planning 45
surface area assessment 139	triage 102–3, <i>103</i> , 134–7, <i>135</i>	surge capacity planning 150
burns specialist advice team	circulation	tiers 70, <i>70</i>
(BSAT) 140	medical equipment	commanders 15, 21, 65
burns specialist care team	advanced life support 55	communication 71, 71
(BSCT) 140	first aid 54	decontamination
burns units/dedicated beds 139	to support specialist medical	process 132
business continuity management	teams 57	identifying tabards 65, 66
(BCM) 43,46	primary triage 101	record keeping 165, 166
bystander first aid 108, 110	treatment at scene 112, 112	communication 83–8
	classification	assessment of scene
call-signs 84–5, <i>84</i>	major incidents 4–11	(METHANE) 17, 89–90
cameras 50	natural disasters 145	between incident
cancellation, notifying message to	clinical decontamination 131	commanders 71, 71
hospital 16	clinical staff at scene 31–3	body language and
capillary refill time 102, 103	communication with Medical	hierarchy 188
cardiac arrest 55	Commander 30	confirmation of receipt of
Casualty Clearing Officer 27–8	treatment provision 110	information 84
number of casualties	closing stage safety 82	coordination 84
information 91	clothing	data transmission 88
Casualty Clearing Station 22, 24,	chemical resistance 49	elements of 187–8
27–8, 31, 76–7, 110,	colours 48	feedback loop 187–8
111, 156	comfort 50	initial report of ambulance
advanced life support 55	durability 49	services 24
evacuation decisions 113	equipment storage 49	initial scene assessment 89
layout 77, 77	fire retardancy 50	location of incident 90
triage 96, 100, 103	function 48–50	methods 84–8
Casualty Collection Point 156	identification 48–9	planning 45
casualty documentation team 87	injury protection 49	records (logging messages) 83,
casualty flow 116, 117	minimum requirement 47–50	84, 87

requirements during major	declaration of major incident 16,	responsibilities allocation 44
incident 16–17, 86	23, 90, 151, 176, 183	training exercises 62
at scene	notifying message to	equipment
chain of command 71–4	hospital 16	key area demarcation/control at
treatment of trapped	decontamination 131–2	scene 77
casualties 31, 74	clinical 131	national reserve stock 134
training exercises 14	command and control 132, 132	paediatric 56, 134
type of incident 90	definition 131	preparation 14
compensated incidents 10	emergency services	requirements assessment at
compound incidents 10, 149	responsibilities 128, 131–2	scene 90, 91
computer-based management	hierarchy of categories 131	structured approach to
support systems 51	improvised 132	planning 45
confirmation bias 189	initial response 131–2	see also medical equipment
continued assessment of scene 91	interim 131	equipment containers 56, 57–8
control 65-74	mass 132	Equipment Officer 59, 91
decontamination process 132	Decontamination Officer 132	equipment vehicles 58
definition 65	definition of major incident 3–4	ergonomics 185–9
emergency services at scene 15,	delayed priority (T3) casualties 97,	error, healthcare 186–7
23, 67	98, 104, 111	causes 186
hospital response 179	evacuation 111	extent of 185
structured approach to	demarcation equipment 77	learning from 186–7
planning 45	digital hand-held terminals 85	error chains 186–7
surge capacity planning 150	documentation	Swiss cheese model 186, 186
control room logs 166	before moving dead 122	evacuation
controlled drugs 32	hospital response 183	casualties from scene
cordons 15, 68-9	see also logs of action and events	casualty flow 116, <i>117</i>
hazardous materials	drug supplies 56, 57, 58	decisions 118–19
incidents 128-9, 129	dynamic risk assessment 80, 80	destination 118
inner 68	,	predetermined plans 118
media management 161	ear defenders 49	priority 118
outer 68	earthquakes 145, 146	treatment and packaging 118
access/egress routes 116	education	emergency services from
police responsibilities 35, 36	Major Incident Medical	site 81–2
Coroner 122	Management and	uninjured survivors 36
Covid-19 pandemic 148	Support (MIMMS)	exercises
credit cards 50	principles 61–2, <i>61</i>	levels 62
	training 14	Major Incident Medical
data transmission 88	electronic display boards 88	Management and Support
dead casualties	electronic logs 166	(MIMMS) principles 61, 62
identification 36, 123	email 88	training 14
labelling 104, 122	emergency evacuation signal 81	child casualties 134
moving bodies 122	emergency/incident support	mass gatherings 143
primary triage 101	units 58	expectant category (T4)
responsibility 36, 121–3	emergency services	casualties 97, 98
death	first aid 110	evacuation 116, 117
diagnosis 36, 121	hazardous materials	expenses, of staff 50
pronouncement 121	incidents 128	explosives 127
debit cards 50	local civil authority support 39	eye protection 49
debriefing 18, 190–1	organisation 35–8	eye protection 19
following training exercises 62	requirements, initial scene	face protection 49
psychological aspects 160	assessment 90	families 137
decision making 189	response objectives 43	see also friends and relatives
accision making 102	100000000000000000000000000000000000000	see also menas and relatives

famine 148	treatment at scene 112	hospital coordination team 179
fatigue 190	hand-held radios 85	hospital response 179–83
field telephones 87	hand signals, information	action cards 181, 183
fire and rescue service	transfer 87	casualty documentation 183
aid to health services 38	HANE 18, 45, 91, 92	command and control 179
hazardous materials	hard hats 49	emergency department
incidents 128	Hazardous Area Response Team	staff 183
incident control 67	(HART) 22	key clinical areas 180
initial responsibilities 37	hazardous material (HazMat)	major incident plan
predetermined attendance	incidents 127–32	activation 16
(PDA) 37	ambulance service role 128	media management 163
role at major incident 37–8	cordons and contamination	notifying messages 16
fire commander duties 37	zones 128–30, <i>129</i>	preparation 180
Fire Commander 37–8, 66	decontamination 131–2	staff call-in 180
fire-retardant clothing 50	command and	staff reporting areas 180,
fires 147, 148	control 132, <i>132</i>	182, 183
first aid 109, 110, 111	fire and rescue service role 128	staff responsibilities 183
life-saving medical equipment	management aims 128	team organisation 182
54, 54	safety 130	training exercises 14
floods 147, 147	signs of environmental	treatment 182–3
flu 148	contamination 130	hospitals
football stadia incidents 7,7	treatment 131–2	communications from scene
footwear 49	and monitoring of staff	86, 87
Forward Ambulance Incident	following 82	major incident plans 13
Commander 27	hazards, scene assessment 90, 91	telephone systems 87
Forward Commanders	health and safety legislation 79	hot zone 129, 129
decontamination process 132	health service commanders 14, 18,	human factors 185–9
number of casualties	45, 48, 71, 86	hurricanes 147
information 91	assessment of scene 92, 98	identification of staff EO 60
Forward Control Point (FCP) 76, 156 Forward Incident Operational	health service layout at scene 75–8	identification, of staff 50, 68
Commander 66	control of key areas 77	identification labels, clothing 48 see also triage labels
Forward Medical Advisor/	key locations 75–7, 75 health service structure and	Immediate Care Doctors 139
Commander 30–1	roles 21–33	immediate care boctors 139
friends and relatives	health workers, incidental presence	casualties 97, 98, 104, 111
identification of dead	at scene 33	evacuation 116, 117
casualties 123	healthcare error	trapped children 103
management at scene 36	causes 186	improvised decontamination 132
see also families	extent of 185	Incident Control Point 67
See also farrilles	heatwaves 148	incident management systems 51
geological disasters 145–6	Helicopter Emergency Medical	individual performance,
Glasgow Coma Scale 103	Services (HEMS) 139	improving 190–1
gloves, protective 49	helicopters 119–20	industrial incidents 7, 7
Gold Command see Strategic	helmet torch 49, 50	infrastructure damage 10
Command	helmets 49	'all-hazards' planning
Green Guide, mass gatherings 143	HF (high frequency) radios 85	approach 44
guidance, emergency planning	hierarchy of medical support 95,	uncompensated major
43–4	108, 110–13, 112 , 115	incidents 151, 151
·- ·	high-risk venues 13	initial cordon 128
haemorrhage	high-visibility clothing 48	initial report of ambulance
immediate management 101, 102	hospital-based teams <i>see</i> mobile	services 24
medical equipment 55	medical teams; mobile	initial response, first crew on scene
first aid 54	surgical teams	23–4

initial scene assessment 89–90 Major Incident Triage Tool (MITT) specialist medical teams access/egress 89, 90 107-8, 107 56-7.**57** emergency services support man-made incidents 5-9, 10, 149 triage 54 requirements 89,90 case study 152, 152 medical services at major equipment requirements 89, 90 marauding terrorist attacks (MTAs) incident 28 155-6 hazards 89,90 megaphones 88 location 89,90 meteorological disasters 147-8 maritime and coastquard number of casualties 89, 90 services 67 METHANE 17, 23, 89 type of incident 89, 90 initial responsibilities 38 Mettag labels 105, 105 injury types, 'all-hazards' planning role at major incident 38 military support services 40 minor injuries 95, 96, 98, 111 approach 44 mass casualty attacker 155 inner cordon 68 mobile medical teams 25, 26, 110 mass decontamination 132 hazardous materials mass gatherings 7, 7, 141-3action cards 32 incidents 128 definition 141-3 capacity and provision 32 inquest 121 environment 142 tasks 31 inquiry after event 167 events 142 mobile phones 50, 86-7, 151 interim decontamination 131 local and national mobile surgical teams 32, 33 International Radiotelephony auidelines 143 mobility sieve 101 Spelling Alphabet 172 planning and preparation 143 money 50 internet communications 88 population 143 multiagency exercises 62 risk factors 142 multiagency management Joint Emergency Services Control training 143 plans 43, 44, 45 Centre (JESCC) 70, 76 media 45, 161-3 casualty bureau contact nasopharyngeal airways 113 land lines 87 National Burns Bed Bureau information landslides 146 dissemination 87 (NBBB) 140 laryngeal mask airway (LMA)/ at hospital 163 national equipment stocks 59 iGel 113 incidents involving large national major incident plans 13 leadership 188 numbers of children 137 NATO phonetic alphabet 172 levels of intervention at at scene 161–3 natural incidents 4, 5, 10, 145-8, scene 53-7 media centre 163 149 life-saving intervention 112 media interview checklist 162 case study 153, 153 local civil authority 39 Media Liaison Officer 162 classification 145 location of incident 89 media rendezvous point 161 NHS Major Incident Triage Tool logs of action and events 50, Medical Advisor/Commander 23, (MITT) 107-8, 107 165 - 729-30, 66, 113 notebooks 50 after event 167 duties and competencies 30 nuclear incidents 127 contemporaneous notes 166 equipment 30 number of casualties 3,53 control room 166 media interviews 161 'all-hazards' planning electronic 166 receiving hospital decisions 115 approach 44 record keeping 165-7 tabard label 48 continued scene assessment 91 video evidence 167 Medical Coordinator 181 initial scene assessment 89 voice recordings 166 Medical Emergency Response triage sieve 100 written 166 **Incident Teams** uncompensated incidents 149 (MERIT) 139 see also documentation nursing staff long-term recovery, local civil medical equipment 53-9 media and 163 authority support 39 advanced life support 55–6, **55** teams and 182 containers 56, 57-8 transport, treatment provision Major Incident Medical life-saving first aid 54–5, **54** and 113 Management and Support national stocks 59 (MIMMS) 14, 15, 61-2 organisation 22 Operational Command 45, major incident education packaging for transport 57, 57

resupply 58-9

61-2,61

71, 132

decontamination process 132

organisation	plans activation 17	single frequency simplex 85
ambulance service 22	Police Casualty Bureau 45	radio shorthand 171–3
emergency services 35–8	Police Incident Commander 65	number pronunciation 172–3
medical services 22–3	police service	phonetic alphabet 172
support services 39–40	aid to health services 36	radiological material
transport 115–17	authorisation for moving	incidents 127
oropharyngeal airways 113	dead 122	rail transport 120
outer cordon 68	casualty documentation team 87	record keeping see documentation;
access/egress routes 116	cordons establishment 68	logs of action and events
hazardous materials	dead casualty identification	recovery phase 18
incidents 128	121, 123	incidents involving large
	hazardous materials	numbers of children 137
packaging for transport 113, 118	incidents 128	planning 46
medical equipment 57, 57	incident control 67	regional major incident plans 13
paediatric equipment 56, 134	initial responsibilities 35	remote major incident, case
paediatric sieve 136–7	media management at	study 151–2, <i>151</i>
paediatric triage tape 56, 102–3,	scene 161, 163	Rendezvous Point (RVP) 156
103, 134, 135	roles at major incident 35–8	resources
pain relief equipment/drugs 55	post-mortem 121	surge capacity planning 150
pandemics 148	post-traumatic stress disorder	uncompensated major
personal equipment 47–51, 48	(PTSD) 18, 160	incidents 150–1
personal identification 50, 68	practical exercises without	respiratory rate 101, 103, 108
personal protective equipment 14,	casualties (PEWC) 14, 61	children 134, 135
15, 27, 33, 49, 50, 69, 81	predetermined attendance (PDA)	response
checking at scene 47	ambulance service specialist	health services layout at
hazardous materials/CBRNe	teams 22	scene 75–8
incidents 128	Fire and Rescue Service 37	hospital <i>see</i> hospital response
for Medical Advisor 29	preparation 13–18	objectives of emergency
see also clothing	equipment 14	services 43
personal safety 15	planning 13–14	structured approach 14–18
pests 148	training 14	assessment 17–18
phonetic alphabet 172	protection of property 35	command 15
photographs 50	protracted incidents 17, 31, 71	communication 16–17
place of safety 96, 111, 116	psychological aspects 18, 159–60	safety 15
planning 23, 43–6	public address systems 88	transport 18
'all-hazards' approach 44	public announcements 88	treatment 18
communication systems 83, 87	public relations manager 163	triage 18
general principles 44	pulse rate 102, 103, 108	risk assessment 45, 80, 150
guidance 43	children 134, 135	analytical 81
incidents involving large	Purple Guide, mass gatherings 143	dynamic during incident 80, 80
numbers of children	. a.p.e ea.ae,ass gaegs	runners, information transfer 87
134, 137	radio 16, 84–6, 169–77	
mass gathering incidents	changing battery 170	safety 79–82, 80
141, 143	use 169–70	1-2-3 code 15, 79–82
multiagency approach 43,	working parts 86, 170	closing stage of incident 82
44, 45	see also voice procedure	hazardous material
public relations manager 163	radio broadcasts 88	incidents 130
recovery 46	radio check 176	incidents involving large
surge capacity in health	radio net (traditional analogue	numbers of children 137
system 150	system) 84–5, <i>84</i>	scene 81–2
temporary mortuary 122	duplex 85	self 80–1

structured approach to planning 45 survivor 82 triggers for emergency personnel (STEP 1-2-3) 80 , 130 sectors of activity/operational areas 66, 70 sharps disposal 56 Silver Command see Tactical Command simple incidents 10 situational awareness 189–90 SMART triage tag 106 snatch rescue 156 social media 88	hospital staff 183 incident commander identification 65, 66 Tactical Command 45, 66, 70, 132 talk-through 85 team performance, improving 190–1 telemedicine 88 telephones 86–7 television broadcasts 88 temporary mortuary 36, 122–3 tents 77 terrorist incidents 8, 8 , 155–6 case study 152 texts 88 torch 50	health service staff competence 112, 113, 113 hospital 182–3 location 111 planning 45 surge capacity 150 providers 109–10 at scene 109–10, 111, 112 levels of intervention 53–7 triage 18, 54, 95–108, 109 aims 96 child casualties 102–3, 134–7, 135 dynamic nature 96, 101 hazardous material incidents
speaking up principle 188	traffic management 36	128, 131
Special Operations Response	training 14, 61–2	history 95
Teams (SORTs) 22	education 14	marauding terrorist attacks
specialist children's services 134 specialist medical teams <i>see</i>	personal protective equipment 49, 50	(MTAs) 156 methods 99–104
mobile medical teams	treatment at scene 45	personnel 107
specialist treatment units,	triage skills 45	physiological versus anatomical
direct transport	see also exercises	98, 100
of casualties 118	transport 18, 115–20	planning 45
spinal immobilisation 55 , 56, 112 ,	chain 115–16, <i>116</i>	primary 30, 96, 97, 99–100,
113, 152	destination 118	101, 108
standby, notifying message to	methods 119–20	priorities 97–8, 97 , 100
hospital 16 STEP 1-2-3 tool 80	for mobile medical teams 31, 32	secondary 30, 96, 99, 108 site 96, <i>97</i>
hazardous material	organisation 115–17	systems 98–9
incidents 130	packaging 113, 118	timing 96
Strategic Command 70	medical equipment 57, 57	training exercises 14
treatment aims alteration	planning 45, 150	triage labels 54, 104–7, 183
decisions 153	transport incidents 5, 6	folding card 104, 106–7, 106
stress response, emergency service	trapped casualties 27, 31, 55, 56, 74	Mettag 105, 105
personnel 18	children 103	record of death 122
stretchers, vehicles for	treatment 111	single card 104, 105–6, <i>105</i>
transport 119 structured approach to major	trauma score 103–4 see also Triage Revised Trauma	Triage Revised Trauma Score (TRTS) 103, 103
incidents 13–18, 45	Score (TRTS)	triage priorities assignation
support for staff 18, 160	treat and leave 156	104, 104
support services 39–40	treat and take 156	triage sieve 98–101, 99, 106, 121
supraglottic airways 113	treatment 14, 18, 109–14	child casualties 103, 134–5, 138
surge capacity planning 150	aims 109, 111	evacuation priorities 118
Survivor Reception Centre 36, 96,	uncompensated major	modified 101-3, 108
111, 116	incidents 153–4	triage sort 99–100, 103–4
survivor safety 82	child casualties 137	evacuation priorities 118
systolic blood pressure 103	clinical responsibility 113	at Survivor Reception
tabards 48	first aid 109–10 hazardous material	Centre 116 tropical cyclones 147
Ambulance Safety Officer 81	incidents 131–2	tropical cyclones 147 tsunamis 146
Announce surety officer of	IIICIACITO 131 Z	CATAITIS 170

type of incident, communication 89 typhoons 147

UHF (ultra high frequency)
radios 85
uncompensated incidents 10,
149–54
altered treatment aims 153–4
case studies 151–3
compounding factors
151, **151**contributing factors 150–1
fixed resources 150–1
uninjured survivor
management 36

urgent priority (T2) casualties 97, 98, 102, 104 children 103 evacuation 116, 117

vehicles for transport 119–20
VHF (very high frequency)
radios 85
video downlink 88
video evidence 167
vital signs 100
child casualty triage 102–3, 135, 135
voice procedure 86, 170–7
advanced message
handling 170, 174–6

basic message handling 170, 173–4 principles 171 radio check and signal strength 170, 176–7 radio shorthand 170, 171–3 voice records 166 volcanic eruptions 146 voluntary aid societies 33, 39, 40 voluntary ambulance services 40

warm zone 129, 129 whistles 50, 88 witness statements 36

zones, contamination 128-9, 129