AIDS and HIV infection 18
air pollution, forest fires 31–32
air travel x
Andean Health Organization, partnership network 61
Angola, Marburg haemorrhagic fever 21
animal husbandry and feed processing 24–25
anthrax
  accidental release 27
  economic impact 40
  in letters/mail 35–37
  vaccination programmes 36
antibiotics, resistance 22–23
antigenic drift 45
antiviral drugs, oseltamivir 51
arboviruses, Rift Valley fever models 26
avian influenza A/(H5N1) 46–50
  global stockpiles of A/(H5N1) vaccine 50
  human cases since 2003 (map) 48
  relay transmission 49
  vaccine production and manufacture 50, 51
Azerbaijan, avian influenza A/(H5N1) 48

B
bacterial evolution and disease 22–23
Bhopal, India, methyl isocyanate gas explosion 29
biological agents (and bioterrorism) 27, 35–37
bovine spongiform encephalopathy (BSE), human form 24
  economic impact 40
bubonic plague 2–3
  history of spread in Europe (map) 3
  India, economic impact 40
  and quarantine 2–3

C
Cambodia, avian influenza A/(H5N1) 48
Cameroon, Lake Nyos CO₂ gas release 31
Canada, Quarantine Act (2005) 61
Chan, Margaret (Director-General, WHO), message 2007 vi–vii
Chemical Incident Alert and Response System 10
ChemiNet 10
chemical and radioactive events 27–29
  chemical incidents 1974–2006 28
  emergencies 10–11
  harmful use of chemicals and biological agents 27
  industrial accidents 29–31
  toxic chemical dumping 40–43
Chernobyl, nuclear explosion xi, 29–31
China, avian influenza A/(H5N1) 46, 48
  cholera 4
  Democratic Republic of Congo 21–22
  Peru 40
  Tanzania 40
communication, non-state information xv
conclusions of Report 66–67
conflicts, consequences 21–22
Côte d’Ivoire, toxic chemical dumping 40–43
CO₂ gas release, Lake Nyos, Cameroon 31
Creutzfeldt-Jacob disease (variant CJD) 24
D
decisions in public health security, instrument IHR (2005) 58–65
Democratic Republic of Congo, cholera outbreak 21–22
dengue 18, 26
Djibouti, avian influenza A/(H5N1) 48
doctors/nurses, shortages in 57 countries 57
drug resistance, and malaria 23

E
early warning systems 26
East Africa, Rift Valley fever 25–26
Egypt, avian influenza A/(H5N1) 48
El Niño Southern Oscillation phenomenon
forest fires 32
and Rift Valley fever 25–26
emergencies in public health 45–55
chemical and radioactive events 10–11
defined xv, 12
infectious diseases 7, 12–13, 45–55
other than infectious diseases 13
surveillance and notification, IHR (2005) 59, 63–64
verified events 2003–2006 63
encephalitis
Nipah virus 24–25
Rift Valley fever 25–26
encephalopathy, human form of BSE 24
environmental disasters xii
epidemic response 8–9
examples (map) 8
extreme environments 9
Escherichia coli 0157, USA, economic impact 39, 40
Europe
food-borne disease xi
heatwave (2003) xii

F
food processing, animal feeds 24–25
food-borne disease xi
forest fires, Indonesia 31–32
future issues in public health security 57–67

G
Global Influenza Surveillance Network 46
global network, national health systems 10
Global Outbreak Alert and Response Network (GOARN) xiv,
8–9, 37
Global Public Health Intelligence Network (GPHIN) 13

H
hazardous waste, toxic chemical dumping 40–43
health workers, shortages in 57 countries 57
historical landmarks in public health 2–6
HIV infection and AIDS 18–20
and tuberculosis susceptibility 52–53
Hong Kong SAR, avian influenza A/(H5N1) 46
human causes of public health insecurity 17–25
consequences of conflicts 21–22
late reporting/response to global outbreaks 19
unexpected policy changes 20
human spongiform encephalopathy (BSE) 24

I
immunization
avian influenza A/(H5N1) 50–51
smallpox 5–6
India
Bhopal, methyl isocyanate gas explosion 29
bubonic/pneumonic plague 2–3, 40
Indonesia
avian influenza A/(H5N1) 48
forest fires 31–32
industrial accidents, chemical emergencies 10–11
infectious diseases
animal husbandry and feed processing 24–25
bacterial evolution 22–23
control xv, 13
concealment xv, 13
economic impact 1990–2003 (map) 40
emerging and re-emerging (map) 12
global outbreaks 19
notification 12–13
public health emergencies 7, 12–13
urbanization xvi
vector-borne 18–19
weather-related events 25–26
influenza, pandemic 45–52
avian influenza A/(H5N1) 46–50
economic impact 39
FluNet Internet-based geographical system 46
influenza surveillance network (map) 46
mortality in America and Europe (1918–19) 47
strategic action plan 52
types A/B 45
United Nations System Information Coordination (UNSIC) 52
International Health Regulations, IHR (2005) 8, 11–14, 57
aims/purpose ix, 11
as decision instrument 58–65
flowchart 59
international cooperation 13–14
legal issues and monitoring 60, 64–65
national capacity, early implementation 61
non-state information xv
origins 7
resource limitations (core capacity) 58
strategic actions for implementation (table) 60
strengthening national capacity 61–63
surveillance, emergencies and notification 59, 63–64
WHO Member States resource (core capacity) limitations 58, 61
international health security code (GOARN) 8–9, 37
International Sanitary Conferences (1851–1900) 7
International Sanitary Regulations (1951) xiv, 7
investment, inadequate 18–20
Iraq
avian influenza A/(H5N1) 48
poison gas use against civilians 27
Ivory Coast, toxic chemical dumping 40–43

J
Jenner, Edward, immunization 5–6

L
Latin America
Andean Health Organization 61
cholera outbreak 4
legal issues 60, 64–65

M
mail services security, biological/chemical agents 36–37
malaria, and drug resistance 23
Marburg haemorrhagic fever 21
mass media, and risk perceptions 41
methyl isocyanate gas explosion, India (Bhopal) 29
microbial evolution and antibiotic resistance 22–23
Morocco, national capacity building for IHR (2005) 61
mosquitoes, Rift Valley fever 25–26

N
natural phenomena 31–32
new health threats 35–43
Nigeria
avian influenza A/(H5N1) 48
poliovirus, immunization suspension 20
Nipah virus 24–25
economic impact 40
nuclear power, Chernobyl explosion xi, 29–31

O
oseltamivir 51

P
penicillin resistance 23
Peru
cholera, economic impact 40
cholera outbreak 4
plague, see bubonic plague
poison gases
against civilians 27
CO₂ gas release, Cameroon 31
industrial/accidental releases 28–29
terrorist use 27
warfare 27
poliovirus 54–55
designation in IHR (2005) 55
Global Polio Eradication Initiative 9
immunization, suspension xvi, 20
importations 2003–2006 54
management 54–55
surveillance 54
public health
emergencies, potential 45–55
defined 12
infectious diseases 7, 12–13, 45–55
other than infectious diseases 13
surveillance and notification, IHR (2005) 59, 63–64
verified events 2003–2006 63
inadequate investment 18–20
international cooperation 6–14
national health systems and technical partners 10
new health regulations 11–14
security 2–14
defined 1
international health security code 8–9, 37
security threats 17–32
chemical and radioactive events 27–29
human causes 17–25
natural phenomena 31–32
new health threats 35–43
weather-related disease 25–26
unexpected policy changes 20

Q
quarantine 2–3
legislation 61, 64

R
radioactive events 27, 29–31
recommendations of Report 66–67
Rift Valley fever 25–26
risks, perceptions, mass media 41

S
sanitation, and cholera 4
sarin gas 27
SARS (severe acute respiratory syndrome) 37–40
economic impact 38–39
international cooperation 13–14
surveillance 39
transmission by aircraft passengers 38
sexual behaviour 19–20
smallpox 5–6, 37
bioterrorism 37
eradication certified 6
immunization 5
Snow, John, water pollution theories 4
South Africa, HIV infection and tuberculosis susceptibility 52–53
Soviet Union (former), accidental release of anthrax 27
Staphylococcus aureus, penicillin resistance 23
Strategic Advisory Group of Experts on Immunization (SAGE) 50
surveillance 18
early warning systems 26
events detected by national systems 59
pandemic influenza 46
polio 54
SARS 39

T
Tanzania, cholera 40
Thailand, avian influenza A/(H5N1) 48
tuberculosis 52–53
drug resistance, XDR-TB and MDR-TB 52–53
and HIV infection 52–53
Turkey, avian influenza A/(H5N1) 48

U
Ukraine, Chernobyl nuclear explosion xi, 29–31

V
vaccines
influenza/avian influenza A/(H5N1) 50, 51
smallpox 5–6
variant Creutzfeldt-Jacob disease (vCJD) 24
vector-borne diseases 18–19
Viet Nam, avian influenza A/(H5N1) 47, 48

W
warfare
consequences of conflicts 21–22
poison gas 27
water, safe provision 4
weather-related events and disease 25–26
Rift Valley fever 25–26

Y
yellow fever x