Communicable Disease Control Handbook

About the authors

Dr Jeremy Hawker is Deputy Director of the Local and Regional Services Division of the Health Protection Agency, England. He has previously worked as Regional Epidemiologist in the West Midlands region of England and as Consultant in Communicable Disease Control in Birmingham, UK. He holds an honorary academic appointment at the University of Birmingham. His particular interests are training in health protection and effective public health practice.

Dr Norman Begg is the former head of the Immunisation Division of the Public Health Laboratory Service (now the Health Protection Agency) and has served as Deputy Director of the Communicable Disease Surveillance Centre. He has published extensively in the field of immunisation, including co-editing 'Immunisation Against Infectious Disease', the book that describes immunisation policy in the UK. He is also a former chair of the WHO European Advisory Group on Immunisation. He is now Director of Medical Affairs at GlaxoSmithKline.

Dr Iain Blair is a Consultant for Communicable Disease Control (CCDC) and Director of the Hampshire and Isle of Wight Health Protection Unit (UK). He has served as CCDC in three other areas and as a Regional Infectious Disease Epidemiologist. He is an honorary senior lecturer at Birmingham University and, having originally trained as a general practitioner, has worked in Canada and the Middle East.

Professor Ralf Reintjes has worked in many European countries as a consultant for WHO and the EU. He was a Fellow of the 'European Programme for Intervention Epidemiology Training (EPIET)' at the National Institute of Public Health and the Environment (RIVM) in the Netherlands and is the former head of the Department of Hygiene, Infectious Disease Epidemiology, and Vaccinations in North Rhine-Westphalia, Germany. He is now Professor for Epidemiology and Public Health Surveillance in Hamburg, Germany, and visiting lecturer in Tampere, Finland. He has published extensively in the field of Communicable Disease Epidemiology and Surveillance.

Professor Julius Weinberg trained as an Infectious Disease Physician, and then in Public Health. He has worked in Zimbabwe and Eastern Europe as well as the UK. He was a Consultant Epidemiologist and Head of Epidemiological Programmes at the PHLS/CDSC and was involved in the development of International Infectious Disease Surveillance collaborations. He is currently involved in the development of the UK National Electronic Library for Infection and acted as expert advisor to a House of Lords Select Committee inquiry into infectious disease services. He is Pro-Vice Chancellor for Research and Director of the Institute for Health Sciences at City University in London.

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Dr Jeremy Hawker *Deputy Director, Local and Regional Services, Health Protection Agency, UK*

Dr Norman Begg *Director of Medical Affairs, GlaxoSmithKline, Uxbridge, UK*

Dr Iain Blair *Consultant in Communicable Disease, Health Protection Agency, Hampshire, UK*

Professor Ralf Reintjes *Professor for Epidemiology and Public Health Surveillance, Hamburg University of Applied Science, Germany*

Professor Julius Weinberg *Pro-Vice Chancellor, City University, London, UK*

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Foreword

In the mid 1960s, a belief began to grow that communicable diseases might soon be confined to the history books, as a major health problem of past centuries. Events over the last two decades have shown how misguided such ideas were. Infection continues to present fresh challenges, both here in this country and worldwide.

Events such as the severe acute respiratory syndrome (SARS) outbreak in 2003 demonstrate very clearly that natural threats are ever present. Worldwide, HIV and AIDS continue to cause devastating loss of life, economic ruin and poverty. Collectively, political leaders as well as the international scientific and medical community have yet to find an effective means of prevention and control. Closer to home, tuberculosis and antimicrobial resistance, including the spread of infections such as methicillin-resistant *Staphylococcus aureus* (MRSA), challenge the population's health and the safety of healthcare. The emergence of diseases like West Nile virus in hitherto unaffected parts of the world (the USA and Canada) are a warning of the ever present threat of new and emerging infectious diseases. In 2003, the identification of two incidents associated with European bat lyssa virus (a rabies virus), in England and in Scotland was just another example of how we need to expect the unexpected.

The spread in the last one to two years of avian influenza in Eastern Asia presents a real and present danger to public health worldwide. Those countries that have the responsibility for dealing with potential infection in humans, who have contact with infected poultry, need to be able to respond appropriately. The global community generally must prepare for the possibility of the emergence of a pandemic influenza strain. Influenza pandemics occur in regular cycles over the years and we need to be constantly vigilant, with the help of the World Health Organization (WHO) and its surveillance mechanisms, to ensure early detection of such an event.

Added to these conventional threats, the spectre of bioterrorism now looms large. This brings consequences for identifying and managing previously rare diseases such as anthrax or plague, or an eliminated disease like smallpox. It underlines the need for international co-operation. SARS, although a naturally occurring disease, demonstrated how international medical and scientific networks can respond really effectively to meet the challenges posed by significant global threats. Learning, constantly updating our knowledge and experience are key components of effective disease control. Consequently, I am very pleased to see the emphasis given in this edition of the handbook to international health.

In 2002, in recognition of these various wide ranging and ongoing needs I published my strategy for Infectious Diseases *Getting Ahead of the Curve*. To make sure the UK was well placed to maintain and extend existing arrangements for protecting the public, this recommended the establishment of a new Health Protection Agency. The agency came into force in 2003 and brings expertise in infection (and toxicology and radiology) together with emergency preparedness. It builds on previously strong arrangements provided by the former Public Health Laboratory Service. The agency's aims are to develop and integrate the surveillance of disease, and also co-ordinate the response, linking in to hospitals, communities and other organisations. Veterinary surveillance networks are being aligned with health systems. Consultants in communicable disease control remain at the forefront of delivery of local infection services, together with many others – infectious disease doctors and nurses, microbiologists, community and hospital infection control nurses immunisation co-ordinators.

Today, infection is everyone's business – citizens, political leaders, doctors, scientists and other health professionals alike. It is no longer a quiet backwater of interest only to the specialist. This comprehensive and practical handbook will provide a very accessible source of detailed information for everyone in the field of communicable disease control.

Sir Liam Donaldson
Chief Medical Officer
England

Abbreviations

ACDP	Advisory Committee on Dangerous Pathogens
AIDS	Acquired immunodeficiency syndrome
BCG	Bacille Calmette–Guérin (vaccine against TB)
CCDC	Consultant in Communicable Disease Control (local public health doctor with executive responsibilities for CDC)
CDC	Communicable disease control
CDR	Communicable disease report
CDSC	HPA Communicable Disease Surveillance Centre
CICN	Community infection control nurse
CJD	Creutzfeldt–Jakob disease
CNS	Central nervous system
CSF	Cerebrospinal fluid
DNA	Deoxyribonucleic acid
DTP	Diphtheria, tetanus and pertussis
ECDC	European Centre for Disease Prevention and Control
EHO	Environmental health officer
ELISA	Enzyme-linked immunosorbent assay
EM	Electron microscopy
EU	European Union
GI	Gastrointestinal
GP	General practitioner (primary care physician)
GUM	Genitourinary medicine
HA	Health Authority
HAI	Hospital-acquired infection
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HCW	Health Care Worker
Hib	*Haemophilus influenzae* type b
HIV	Human immunodeficiency virus
HNIG	Human normal immunoglobulin
HP	Health Protection
HPA	Health Protection Agency
HUS	Haemolytic uraemic syndrome
ICD	Infection control doctor (hospital)
ICN	Infection control nurse
ICT	Infection control team (hospital)
IDU	Intravenous drug user
IFA	Indirect immunofluorescent antibody test
IgG	Immunoglobulin class G
IgM	Immunoglobulin class M
IPV	Inactivated poliovirus vaccine
LA	Local Authority
MMR	Measles, mumps and rubella vaccine
MRSA	Methicillin-resistant *Staphylococcus aureus*
NCJDSU	National CJD Surveillance Unit
OPV	Oral poliovirus vaccine
Pa	Pertussis vaccine (acellular)
PCR	Polymerase chain reaction
PHLS	Public Health Laboratory Service (now part of HPA)
PT	Phage type
RCGP	Royal College of General Practitioners
RNA	Ribonucleic acid
RSV	Respiratory syncytial virus
SARS	Severe Acute Respiratory Syndrome
SCIEH	Scottish Centre for Infection and Environmental Health
sp.	Species
STI	Sexually transmitted infection
TB	Tuberculosis
TSE	Transmissable spongiform encephalopathy
UK	United Kingdom of Great Britain and Northern Ireland
VHF	Viral haemorrhagic fever
VRE	Vancomycin resistant *Enterococcus*
VTEC	Verocytotoxin producing *Escherichia coli*
VZIG	Varicella-zoster immunoglobulin
WHO	World Health Organization (OMS)