

# **Practical Guide for Medical Officers for Environmental Health**

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# CONTENTS

Acknowledgements	x
PART I. INTRODUCTION	1
PART II. THE MOEH AS PROPER OFFICER	7
1. The control of notifiable diseases and food poisoning	7
1. Information	9
2. Management of outbreak	11
(a) <i>Diagnosis</i>	11
(b) <i>Isolation</i>	12
(c) <i>Removal</i>	12
(d) <i>Disinfection</i>	12
(e) <i>Contacts</i>	13
(f) <i>Carriers</i>	14
(g) <i>Prophylaxis</i>	15
(h) <i>Communication</i>	17
2. International aspects (including port and airport health)	21
3. Reference documents for Part II	22
APPENDIX	25
<i>Outline of principal legislative provisions relating to the control of notifiable diseases and food poisoning</i>	26
<i>Particular diseases to which different parts of legislation apply</i>	32

PART III. THE MOEH AS MEDICAL ADVISER ON ENVIRONMENTAL HEALTH MATTERS	35
1. Introduction	35
2. Air	40
A. COMMON CONTAMINANTS OF AIR	41
(a) <i>Smoke and sulphur dioxide</i>	42
(b) <i>Oxides of nitrogen</i>	42
(c) <i>Carbon monoxide</i>	42
(d) <i>Hydrocarbons</i>	43
(e) <i>Ozone and photo-oxidants</i>	43
(f) <i>Asbestos</i>	43
B. NOISE	44
C. ODOURS	45
3. Water	45
A. ROUTINE TREATMENT AND MONITORING SUPPLIES	45
B. COMMON COMPLAINTS ABOUT SUPPLIES	46
(a) <i>Diarrhoea and vomiting</i>	46
(b) <i>Unpleasant tastes</i>	47
(c) <i>Sediments</i>	47
(d) <i>Living creatures</i>	47
C. CHEMICAL POLLUTION OF SUPPLIES	47
(a) <i>Nitrates</i>	47
(b) <i>Other substances</i>	48
D. SWIMMING BATHS	49
4. Soil	49
<i>Redevelopment of contaminated land</i>	50
5. Control of wastes	50
A. SOLID WASTES	50
B. LIQUID WASTES	51

<b>6. Radiation</b>	<b>52</b>
<b>7. Heavy metals</b>	<b>52</b>
A. LEAD	52
B. CADMIUM	54
C. MERCURY	55
<b>8. Toxic accidents</b>	<b>55</b>
<b>9. Reference documents to Part III</b>	<b>59</b>

**PART IV. THE MOEH AS GENERAL MEDICAL  
OFFICER TO THE LOCAL AUTHORITY** . 63

<b>1. Compulsory removal under section 47 of the National Assistance Act, 1948, as amended</b>	<b>63</b>
<b>2. Rehousing of individuals on medical grounds</b>	<b>64</b>
<b>3. Occupational Health Service for local authority staff</b>	<b>65</b>
<b>4. Cremation : medical referees</b>	<b>67</b>
<b>5. Reference documents to Part IV</b>	<b>67</b>

**PART V. DIRECTORY OF USEFUL ADDRESSES  
AND TELEPHONE NUMBERS** 69

**INDEX** 77

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## PART I

### *Introduction*

The Liverpool Sanitary Act of 1846 gave authority for the appointment of the first Medical Officer of Health. He was Dr William Henry Duncan, and his job description, briefly stated, was:

To inspect and report periodically on the sanitary condition of the borough; to point out conditions likely to affect injuriously the health of the inhabitants; to ascertain the existence of diseases; and to recommend the most efficacious modes for checking or preventing the spread of such diseases.

Subsequently, and until the reorganization of the NHS and local government that became effective in England and Wales on 1 April 1974, the responsibility for the organization and administration of public health control and services came to be laid on certain local authorities, each of which was statutorily required to appoint a Medical Officer of Health for these purposes. Responsibility for some of the public health functions was placed by statute on the MOH himself, and for the remainder his position was that of medical adviser to his authority. In addition to his public health duties, the MOH generally performed for his authority other duties, usually of an advisory nature, that were not covered by the Public Health Acts and related legislation; the range of these non-public health duties varied from one authority to another.

From the outset the MOH's role was specifically positive. He had to ascertain and recommend. Prevention involved control not only of disease but of those factors prejudicial to the public health which was paramount to the quality of life, especially for the poorer members of society.

Public health arrangements were changed very considerably by the 1972 Local Government Act and the 1973 National Health Service Reorganization Act. The office of MOH was discontinued. Some of the functions for which he and the local authority had been responsible were transferred to the new health authorities. Environ-

mental health functions remained with local authorities, some as the responsibility of the authorities themselves—and for these purposes they were statutorily required to appoint such staff as they thought necessary—and some as the responsibility of officers of authorities, designated as ‘proper officer’ for this purpose. There was no longer any statutory duty placed on the local authority to appoint medically-qualified staff with special training and experience in environmental health to undertake these functions.

In circulars issued by the Department of Health and Social Security in connection with the 1974 reorganization of the local government and health services it was made clear, as a matter of Government policy as distinct from statutory requirement:

(1) That the whole-time employment of medical staff by the new local authorities was to be avoided.

(2) That the local authority\* should appoint as its medical adviser on environmental health a community physician working within the NHS.

(3) That this officer should be designated as the local authority’s ‘proper officer’ for the control of notifiable diseases and food poisoning.

(4) That the local authority’s ‘proper officer’ for other environmental health functions should ordinarily be the Chief Environmental Health Officer.

The non-statutory designation ‘Medical Officer for Environmental Health’ was adopted in respect of the persons referred to at (2) and (3) above.

Arrangements on these lines are now in force generally throughout England and Wales. The nature of the responsibilities of the MOEH are not altogether clearly defined and they no doubt vary from place to place, but his actual or potential environmental health responsibilities will fall into three categories:

(i) As ‘proper officer’, his duties may be confined to the control of notifiable diseases and food poisoning. Most authorities have appointed as ‘proper officer’ for these functions the DCP or an SCM (Environmental Health) in accordance with paras 17 and 18, HSC(73)34.

\* I.e. Metropolitan and non-metropolitan districts, London Boroughs, the Common Council of the City of London, and Port Health Authorities.



(ii) As medical adviser on other environmental health functions, either (a) to the Chief Environmental Health Officer as the 'proper officer' for these functions; or (b) to the local authority itself. In theory a clear distinction can be drawn between functions falling into these two sub-sections, and where that is done the MOEH's line of responsibility will be equally clear. More generally, however, the MOEH will be regarded as medical adviser to the authority, although for most matters his working relationship will be with the CEHO.

(iii) As the local authority's medical officer for matters other than environmental health.

It would be consistent with the guidance given by the DHSS in HRC(74)13 for duties in this last category to be undertaken by the MOEH, but they are not inherent in his title, and it would be preferable, where such duties are required by the local authority, for specific provision to be made for them in the arrangements made for his appointment between his health authority and the local authority.

One important instance of these functions is that the MOEH will normally, as recommended in LASS L(74)14, be the proper officer for the removal of people to hospital in certain circumstances, appointed by the local authority under Section 47 of the National Assistance Act, 1948, as amended. In this capacity the MOEH will be exercising an executive function, just as he does in his other 'proper officer' capacity; but the two capacities differ, not only in their statutory origin, but also in the nature of the function authorized. The Section 47 duties are dealt with in Part IV below.

The three categories of responsibility outlined above are considered in detail in Parts II, III, and IV below, but it may be well to emphasize here the suggestion made in the introductory paragraph of Part IV, that where the MOEH's function is advisory, he should clarify with the Chief Executive of the local authority where the initiative in the provision of that advice is to lie: with the authority, with the responsible executive officer, or with the MOEH himself. Agreement on the procedure to be followed will help in avoiding misunderstanding.

In some respects the MOEH is the professional successor to the Medical Officer of Health, but he has inherited a greatly transformed range of responsibilities and he exercises a more limited authority.

The MOEH differs from the MOH in some significant respects: his appointment is not in the same way a statutory one; he serves the local authority as an officer seconded by the health authority, not as a directly employed officer; for most of his duties his function is advisory and not executive. With these differences the new post may seem to carry less prestige than the old one, but the duties entailed may nevertheless be more difficult to undertake successfully. The new relationships involved, whether between authorities or between officers, are much less clearly defined, if they are defined at all, and accordingly they give rise to new problems and new difficulties.

It is the purpose of this Guide to assist the MOEH, especially those without previous public health experience, in dealing with these problems and difficulties. The Guide does not purport in any way to be a textbook on environmental health, nor does it attempt to cover every type of problem that may arise in that field. It is intended to serve only as an aid in the more common problems that the MOEH may encounter, to identify the wide range of authorities and officers with whom he needs to establish effective communication, and to provide him with key sources of information, both organizations from which it can be obtained and publications in which it can be found.

It is essential to the success of the MOEH that he should enjoy the co-operation and respect of his local authority colleagues in other professional disciplines, notably the Chief Environmental Health Officer. The functions of the CEHO and of the MOEH are complementary; each has his own sphere of responsibility but each is dependent on help from the other. It will be of vital importance for the new MOEH to familiarize himself quickly with his district, the physical features, epidemiological record, and probable environmental health hazards and problems, and the CEHO and his staff can be helpful guides on these matters.

The success and credibility of the MOEH will depend not only on the establishment of a harmonious working partnership with the CEHO and his staff, but on his readiness to be associated with the work of many other officers at both local and national level.

Within the Health Service the MOEH will, of course, have a particularly close association with community physician colleagues in his own area and in the region, since a combined approach is essential in the control of epidemics. Similarly, he will need to

have contact from time to time with consultants in communicable diseases and with general practitioners in his own district, especially the Secretary of the local Medical Committee. Wherever practicable he should be a member of Hospital Control of Infection Committees within his district, but at least he should know the Secretaries of such Committees, see their agendas, and attend their meetings when matters affecting his interests are to be considered.

Among local officers of national organizations the MOEH might expect to have most frequent contact with the Director of his local Public Health Laboratory, who will not only be a valuable source of information and advice but also a reliable support in the MOEH's 'proper officer' responsibility. He will, in addition, however, have a close working relationship with the Divisional Veterinary Officer of the Ministry of Agriculture, Food, and Fisheries, with local inspectors of the Health and Safety Executive, and with district officers of the Employment Medical Advisory Service.

In local government, in addition to the environmental health services, he will want to have continuing liaison with the housing and planning departments, the Police and the Fire Service (in connection with toxic accidents), the Public Analyst and, of course, the Chief Executive of his own local authority and his staff. He will also need to be in regular touch with the technical officers of the Regional Water Authority.

The MOEH's working contacts at national level will probably not be many, but they will be important: most notably the Communicable Disease Surveillance Centre of the Public Health Laboratory Service, the Poisons Information Service and the medical divisions of the Department of Health and Social Security concerned with communicable diseases and with chemical contamination of the environment. In addition, the Office of Population Censuses and Surveys can be a valuable source of information.

The more the MOEH becomes acquainted with individual officers in these other fields of community activities with a public health input, the more effective will he become in his role. It is not possible to give a comprehensive list of contacts appropriate for every MOEH since local circumstances vary quite considerably, but the following chart shows the various departments and individuals with whom the MOEH may expect to have a working relationship in his various capacities.

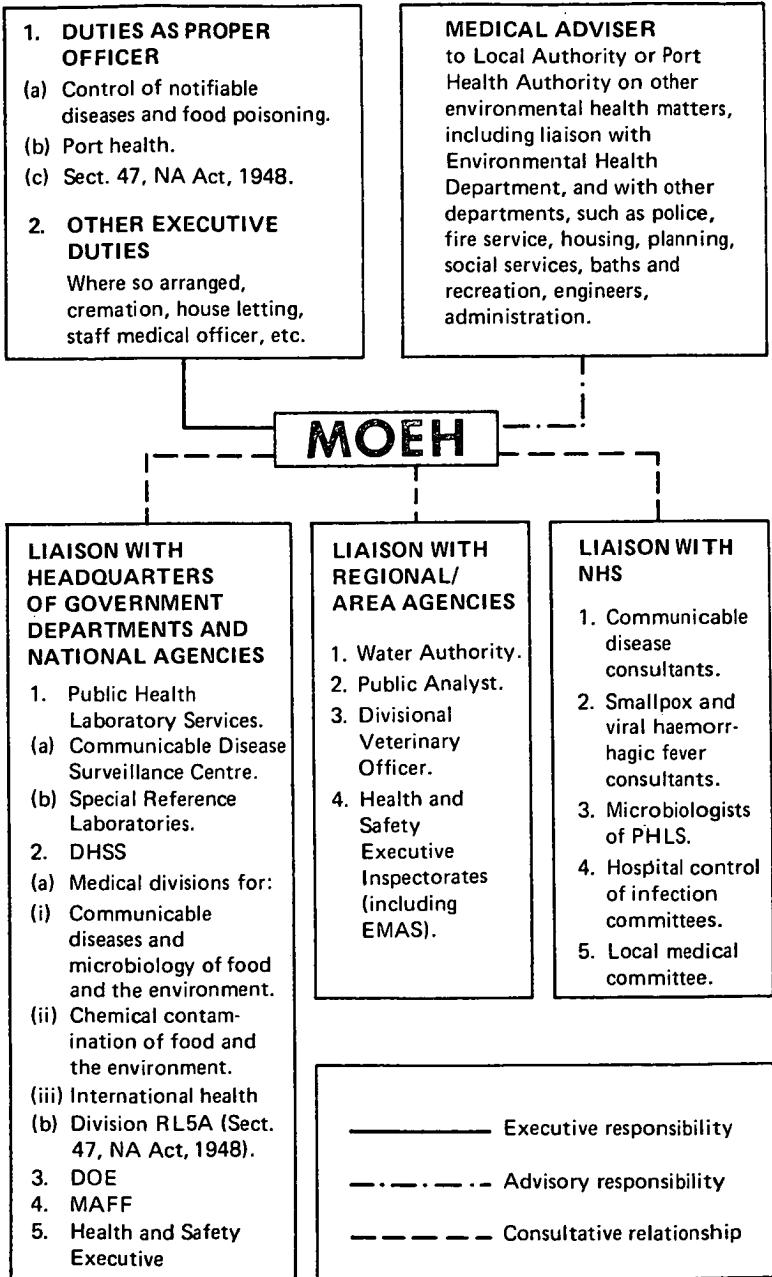


FIGURE 1. Illustration of responsibilities and relationships of MOEH.

## PART II

### *The MOEH as proper officer*

#### **1. The control of notifiable diseases and food poisoning**

Under the National Health Service Act it is the responsibility of area health authorities to make provision for the prevention and treatment of illness, including the prevention and treatment of notifiable and other communicable diseases. It is, however, the responsibility of local authorities to deal with the control of notifiable diseases, including the zoonotic diseases, under the Public Health Acts, and of food poisoning. The subject is covered in DHSS Circular HRC(73)34, which, among other things, advises the local authority to appoint as 'proper officer' for these functions a doctor who is a community physician on the staff of the area health authority.

The MOEH will find it essential to familiarize himself with the detailed provisions of the relevant DHSS circulars, etc., in particular HRC(73)34 dealing with notifiable diseases and the revised Memorandum 188/Med on food poisoning to be issued in 1979, and with the public health legislation referred to in them. For convenience that legislation is summarized in Appendix I on pp. 25 et seq.

The legislative provisions in Appendix I deal specifically with those diseases that are for the time being defined as notifiable diseases, either in Section 47 of the Public Health Act, 1968, as extended by the Public Health (Infectious Diseases) Regulations of 1968 and 1976, or in special orders made by local authorities under Section 52 of the 1968 Act. But notifiable diseases are only one group in the wider field of communicable diseases, and some of the procedures essential for notifiable diseases may be equally relevant in the prevention and control of other communicable diseases. The fact that these two functions are split between the local authority and the health authority could be a handicap were it not for the dual role of the MOEH as an officer of both authorities, and it falls to him more than anyone else, to ensure that, in case of need, any

measures necessary for protection of the public health are brought into operation, without too much concern in the first place as to whether ultimate responsibility lies with the local authority or the health authority.

The immediate action to be taken in dealing with outbreaks of specified diseases is described in a useful handbook recently published by the Centre for Extension Training in Community Medicine at the London School of Hygiene and Tropical Medicine: *A Guide to Infectious Diseases in an Emergency*. The more general advice offered in the present Handbook supplements the detailed guidance given in the Centre's publication.

In January 1977 the Communicable Disease Surveillance Centre (CDSC) was set up by the PHLs to assist and support community physicians in communicable disease control. The main functions of the CDSC are:

(1) To maintain surveillance of communicable disease in England and Wales and to make this information readily available to those working in this field.

(2) To make available to community physicians and others advice and assistance in the investigation and control of communicable disease.

(3) To contribute to teaching of the epidemiology and control of communicable disease.

The role of the CDSC is described in a DHSS circular likely to be issued in 1979. The events leading up to its creation and its initial functions are described by Galbraith (Galbraith, N. S., *Proceedings of the Royal Society of Medicine*, 70, 889).

As 'proper officer' of the local authority for notifiable diseases and food poisoning the MOEH has certain official requirements placed on him:

(1) He must submit to the Office of Population Censuses and Surveys (OPCS) each week, on the appropriate form, the number of notifications of notifiable disease and food poisoning received.

(2) He must immediately notify the CDSC of any serious outbreak of any disease (including food poisoning) occurring in his area and he must also inform the Chief Medical Officer (CMO) of the DHSS. Outside working hours both the CDSC and DHSS have a 24-hour duty officer service. Telephone calls to the CDSC should be confirmed by explanatory letter, or by telex if available.

The further functions of the MOEH in the control of infectious

diseases require more detailed consideration, and the review of the statutory requirements by Galbraith and Berrie (*Health Trends*, 10 (1978), 32) provides a valuable guide to the present position. In an outbreak of communicable disease there are two main fields of action:

- (1) Information.
- (2) Management of the outbreak.

### **1. Information**

This is fundamental to any system of control. Cases of notifiable disease have to be notified to the MOEH on the prescribed form, but unfortunately the law regarding notification, and its value as community protection, is not well understood by the medical profession.

Section 48 of the Health Services and Public Health Act, 1968, places a legal duty on every doctor, once he becomes aware, *or suspects*, that a patient is suffering from a notifiable disease, to ensure that it is reported to the 'proper officer' of the local authority. This should always be done on the form provided for the purpose by the local authority but in the case of a serious communicable disease (for example, an outbreak of food poisoning in a residential home) it is helpful for the doctor to telephone the MOEH. The mechanism and objectives of notification are set out more fully in the paper by Galbraith and Berrie referred to above.

Hospitals are often offenders in failing to use the notification procedure, and particulars of it should be included in some detail in the hospital handbooks provided for new medical officers on taking up their appointment. Registrars and consultants should be well aware of the importance of notification.

Other sources of information, both local and national, are also available. Copies of laboratory reports from the PHLS are sent to the appropriate MOEH: arrangements with the local hospital laboratories for notification of isolation of certain pathogens can be invaluable. All physicians dealing with communicable diseases should be encouraged to share information with the MOEH; collaboration of this kind is an important aid to control. The ambulance service can also be a source of information, as it has early information on patients transported to infectious disease hospitals. Last, but by no means least, the general practitioner can often clear

up a confusing clinical history, among other things, and is always worth consulting by telephone as he can give details of the domestic situation. GPs may be hesitant about disclosing information on patients to non-medical personnel on the telephone and it will generally be preferable for the MOEH to make these calls himself.

Nationally, information is available through the OPCS 'Monitors' which are weekly and quarterly statistical publications, and from the Communicable Disease Report of the CDSC, a weekly document sent to microbiologists, community physicians, and others. CDR is a confidential document based on a voluntary reporting system by microbiologists in hospital and public health laboratories, but it also includes information derived from other sources and contains brief accounts of topical incidents and problems in communicable disease.

The medical staff of the CDSC, some of whom are based in regional public health laboratories, are community physicians with special experience in the epidemiology and control of communicable disease and are always very willing to discuss problems on the telephone with any MOEH who wishes to call them. The MOEH can also obtain from the CDSC information on current communicable disease problems in the United Kingdom and abroad relevant to the United Kingdom.

The Royal College of General Practitioners also publishes a weekly report on certain diseases, which is circulated to members. The World Health Organization produces a Weekly Epidemiological Report which reviews the incidence of major communicable disease throughout the world and includes epidemiological news items of topical interest. These Reports are particularly useful for MOEHs who are Port Medical Officers. Relevant information from them is often included in CDR.

It is useful to institute a daily routine for keeping in touch with all the sources of information, and it should include special arrangements for obtaining information about influenza, which is not a notifiable disease. The CDR give details on influenza based on OPCS data, sickness absence, RCGP reports, and laboratory data, but some local information system is also desirable. It would be useful to obtain the co-operation of a number of GPs who would agree to be telephoned when influenza is known to be about and who would provide the MOEH with clinical information and would send specimens to the Public Health Laboratory. Since other GPs may



also be sending specimens, the Director of the Laboratory often has early warning of the presence of influenza. Another useful arrangement is to establish contacts with the Education Authority, transport services, and other large industrial undertakings for the purpose of obtaining regular information on absenteeism attributed to illness, while information on changes in the incidence of sickness benefit claims can be obtained from the local Social Security Office.

In this general connection the MOEH's collaboration with the Director of the PHLS and other microbiologists, his 'proper officer' colleagues in neighbouring areas, the consultants in infectious diseases, and the community physicians of the CDSC, is most important. In some areas regular meetings are held of the doctors with an interest in communicable diseases, as well as special meetings called at short notice when there is an emergency. Established measures of this kind can be helpful both in stimulating the exchange of information and facilitating the management of an outbreak.

## 2. Management of outbreak

There are several factors that the MOEH will have to bear in mind, and some on which action will be needed in exercising management control of an outbreak.

### (a) *Diagnosis*

In the early stages, the diagnosis will be a clinical one, and to delay action awaiting laboratory confirmation is to court disaster. It is wiser to institute control measures and later find them unnecessary than to do nothing while waiting for the laboratory report, which could be equivocal. The DHSS have special panels of experts in smallpox and leprosy to assist MOEHs in the diagnosis of these diseases, and details of these panels have been sent to all NHS and Port Health Authorities. Guidance on the diagnosis of Lassa fever and similar diseases is contained in the Memorandum on Lassa Fever (para. 26). Where a medical practitioner suspects that a patient may be suffering from a viral haemorrhagic fever, he should contact the MOEH who may seek the advice of an expert on tropical medicine or a consultant in infectious diseases.

*(b) Isolation*

It may be beneficial to the patient to remove him to an infectious diseases unit or hospital, where expert treatment is available, but removal will not necessarily prevent the spread of infection. The question of isolation is not always as simple as it might appear; the two principal factors to be considered are the prevention of spread of infection and the provision of the best medical and nursing care for the patient, and with these in mind the MOEH should be able to discourage any clinical colleagues (and there are occasionally some) who want to retain an infectious patient in a general hospital for teaching purposes or as a matter of professional prestige.

*(c) Removal*

For most communicable diseases the ambulance service have an agreed procedure, the outcome of years of experience. In the case of smallpox and the viral haemorrhagic fevers, a special procedure has been recommended in the DHSS memoranda dealing with these diseases, HSC(IS)210, HC(76)45, and HC(76)57.

Occasionally, a patient suffering from a communicable disease will, in opposition to medical advice, refuse to go to an infectious disease hospital. If there is a risk of spread of infection, then the compulsory powers contained in Section 169 of the Public Health Act, 1961, may have to be used. The MOEH will have to certify that there is a risk of spread of infection and that the sufferer should be detained in an isolation unit until he is certified as no longer likely to spread his disease. This legal removal procedure is a responsibility of the local authority, and it must be handled with care. Fortunately, it is seldom necessary.

*(d) Disinfection*

The premises, contents of the sick room, and other articles will require disinfection in accordance with the Public Health Acts. The memoranda mentioned above give useful guidance, but the PHLS Division of Hospital Infection is also a valuable source of reference on disinfection problems. The disinfection arrangements will be subject to the mutual agreement of the MOEH and the CEHO.

*(e) Contacts*

The MOEH may find it useful to prepare an epidemiological model of any outbreak. This should take two forms, first, the geographical location and distribution of the cases, and second, the list of contacts. The former can be achieved by means of a 'spot map' which can be easily kept up to date. The vital tracing, recording, and checking of contacts can be a formidable task. The best source of information is usually the patient, but very considerable difficulties can arise if he has already been admitted to hospital and is in isolation. The cooperation of the clinician in charge of the case will be needed to overcome these difficulties. Wherever possible, the MOEH should visit the patient and obtain a history of his contacts and possible sources of infection, having regard to the nature of the disease and its incubation period.

Next, it is necessary to arrange for domiciliary investigations to be made by environmental health officers and, if necessary, by the MOEH himself or other medical officers under his direction, in order that a list of contacts can be prepared. In certain diseases (for example, typhoid fever) it will be necessary to inquire about and record sources of foodstuffs, milk supply, and water supply, together with schools attended by children, occupations and recreational activities of families and contacts. All this will allow the MOEH to build up a composite model of the outbreak on which further action can be based.

Once immediate contacts are known, they must be visited and checked, as they may also be ill. In the past, difficulties and misunderstandings have arisen in relation to contact follow-up. It may not be possible for the MOEH to visit all contacts personally, and this task may have to be delegated to a medical colleague, an environmental health officer, or a health visitor. It is essential that the person visiting a contact is well briefed beforehand and that the arrangements for the interview, inspection, or the examination of the contact, where that is considered necessary, are agreed with and understood by him.

The DHSS memoranda on smallpox and Lassa fever gives precise advice on the follow-up procedure for contacts. In outbreaks of gastro-intestinal infections, the environmental health officer can carry out the contact tracing and follow-up but the health visitor is better suited to the task in more serious infections where the

contact's condition has to be assessed, his temperature taken, and a superficial examination carried out. Medical support for the contact visitors must always be readily available. The Cox Committee on the smallpox outbreak in London in 1973 emphasized the essential medical role in all contact tracing and epidemiological investigations. The Public Health Act, 1961, as amended by the Health Services and Public Health Act, 1968, provides legal powers for medical examinations of contacts, including the power to require microbiological specimens, where a communicable disease has occurred or is believed to exist. Efficient contact tracing and surveillance is the most important means of control in most outbreaks.

(f) *Carriers*

Symptomless hosts of pathogenic organisms raise special problems for the MOEH. In alimentary tract infections the carrier state is common and may be persistent. Formerly local authorities kept a register of known carriers of *Salmonella typhi* and *S. paratyphi* and checked them periodically. This is a monitoring practice which has lapsed, but it is worthy of reconsideration, especially in urban areas with a large immigrant population. Although the PHLS Division of Enteric Pathogens keeps a check on known sources of infection, a local knowledge of chronic enteric carriers is valuable. The 1961 Act medical examination powers were extended to carriers or suspected carriers by the Health Services and Public Health Act, 1968, while special powers for the medical examination of suspected cases amongst food handlers were provided in the Public Health (Infectious Diseases) Regulations, 1968.

One difficult problem is how to deal with an intestinal carrier who works in the food trade. If he is a food handler he may have to be dissuaded from continuing his employment. Legal powers are available to prevent a person who may infect food from being employed as a food handler. The DHSS revised Memorandum 188/Med on food poisoning to be issued in 1979 and the PHLS/Society of MOH's report on 'Dysentery and Salmonella infections' (*Publ. Hlth, London*, 84 (1970), 197-9), both give excellent advice on this subject. One particularly difficult condition in which chronic carriers are involved is Hepatitis type B (serum hepatitis). Tests for HB<sub>s</sub> AG have made it possible for carriers of the hepatitis B virus to be identified. Once a person is infected, and whether he develops

a clinical illness or not, he may remain a carrier and can infect others who come into contact with his blood. Severe outbreaks of hepatitis B occurred some years ago in several renal dialysis units involving both patients and staff. As a result, this disease has been the subject of considerable epidemiological investigation. A useful account is given in the WHO Technical Report No. 570. Health care workers (nurses, pathologists, haematologists, dentists, laboratory workers, and others) who are liable to come in contact with the blood of chronic carriers, are at risk. Reports of this form of hepatitis being transmitted to sexual partners, both heterosexual and homosexual, have been published.

### *(g) Prophylaxis*

When an outbreak of certain infectious diseases occurs, it is possible to offer some protection to susceptible persons at risk, using passive immunizing sera. Immunoglobulin can be used to protect contacts in smallpox, measles, tetanus, and other diseases. Prompt vaccination of smallpox contacts should be carried out, although vaccination after the first few days is of doubtful value. In smallpox methisazone (Marborane) has been given with success to contacts, and antibiotics have been used for chemoprophylaxis in other diseases.

In poliomyelitis the widespread use of the oral Sabin vaccine is considered good practice owing to the large number of symptomless excretors of the virus in the community when paralytic cases appear. The use of the Sabin vaccine in the face of an outbreak is to block the spread of the pathogenic virus by infecting as many people as possible with the modified vaccine strain, which competes and tends to exclude infection of the gut by the wild strain. This does not avoid the necessity to trace and investigate close contacts and to keep them under surveillance. Early diagnosis and prompt care can modify the course of this disease.

This is the exception to the general rule that emergency mass immunization measures are rarely indicated and may have to be actively resisted. They have been known to cause panic, which can overwhelm the control organization, cause unnecessary suffering and waste both material and the time of professional personnel.

In the DHSS memorandum HC(76)57 already referred to (p.12) it is indicated that the viral haemorrhagic fevers are not as infectious by direct spread from person to person as was first thought. There-

fore, apart from close contacts as defined in the memorandum, strict isolation of other contacts is not usually necessary.

The control of smallpox is set out in detail in the *Memorandum on the Control of Outbreaks of Smallpox* (HSC(IS)210) as revised. This document has had a wide circulation and provides a first-class reference. Fortunately, owing to the success of the WHO smallpox eradication programme, this disease has almost been eradicated. However, it is too soon to be certain that the disease will not appear in Britain again, so the MOEH must still be prepared. In this connection he should be familiar with the arrangements made following the Godber Report\* and the setting up of the Dangerous Pathogens Advisory Group for the handling of very dangerous pathogens (Category A) to be restricted to a small number of specified laboratories. If such a laboratory is located in his area, the MOEH should be acquainted with its Director and with the work undertaken in it.

In a number of diseases human immunoglobulin will give some passive protection to contacts. The two types of immunoglobulin available are normal human immunoglobulin and human specific immunoglobulin. Normal human immunoglobulin is useful in giving protection against:

(1) Infectious hepatitis (Hepatitis A). Contacts in certain circumstances, for example pregnant women, also travellers to endemic areas.

(2) Measles. Institutional outbreaks or immunosuppressed children, etc.

(3) Rubella. Immunoglobulin may be used for contacts in early pregnancy.

Specific immunoglobulins are available for use to protect against particular virus infection risks. They are:

Anti-vaccinal immunoglobulin for smallpox contacts after first few days of incubation period; also for severe reactions to smallpox vaccination.

Anti-varicella zoster immunoglobulin, anti-mumps immunoglobulin and anti-HB<sub>s</sub> AG immunoglobulin are available in very limited supply.

All these immunoglobulins are obtainable through the PHLS. Certain anti-sera are also available from the PHLS, for example,

\**Report of Working Party on the Laboratory Use of Dangerous Pathogens*, HMSO (1975).

botulism antitoxin, but these are more of therapeutic than prophylactic value. More detailed information is available in the PHLS Year Book (p. 28).

*(h) Communication*

When an outbreak of a communicable disease occurs a decision has to be taken on who should be informed and what information should be given. The MOEH must satisfy himself on three questions. First, is the disease serious enough to require community participation for its control? Second, are there perhaps other cases either locally or nationally as yet unknown? Third, is the infection likely to spread to contacts or others? As this is an aspect of responsibility which can involve the MOEH in criticism both by the media, by his medical colleagues and by the local authority, it may be useful to consider it in some detail in relation to those likely to be most closely affected.

*(i) Local authority and health authority colleagues.* The community physicians and certain other doctors in the employment of the area health authority will all be involved in the control measures and should be kept fully informed. The Area Medical Officer will wish to report the incident to his authority and the Chief Executive of the local authority will want to keep his council informed. The CEHO and his staff will be involved in contact tracing, follow-up, disinfection, and the environmental aspects of the outbreak. Communication, co-operation, and a combined effort, with each exercising his expertise in the community interest, is the goal.

*(ii) Director of the Public Health Laboratory.* Because of the increased work load that may fall on the laboratory, the Director should be informed of any possible outbreak at the earliest possible moment so that he can undertake any special arrangements that may be necessary.

*(iii) General practitioners.* It is important that GPs should be informed as soon as an outbreak occurs so that they can deal knowledgeably with such matters as patients claiming to be contacts or requesting immunization, having heard something about the outbreak on the local radio. In addition the GP may know of other suspected cases.

Communication with GPs can be simplified by making use of the sets of addressed envelopes kept by each Family Practitioner Committee for all practitioners on its list, and the MOEH will find it helpful to have sets of these envelopes readily available. In addition to relevant details of the outbreak, the GPs will need to know of any special arrangements made for telephone communication, *especially outside normal working hours.*

(iv) *Hospital doctors.* In bringing the existence of an outbreak to the notice of hospital medical staff, advantage can be taken of the medical staff's own internal communication system by sending a copy of the letter to GPs to the Chairman of the Medical Executive Committee (i.e. Cogwheel or corresponding committee) with a request that all hospital medical staff be informed, and particularly those working in accident and emergency and pathology departments. Copies of the letter to GPs should also be sent to the Control of Infection Officers at all hospitals in the district.

(v) *CDSC and DHSS (for CMO).* The CDSC should be informed of the outbreak by telephone if it is likely to be serious and this should be confirmed by letter, or by telex if it is available. The CMO should also be informed by a telephone call to the DHSS, confirmed in writing.

(vi) *Other MOEHs.* As contacts and cases may occur in surrounding districts, it is important to send a copy of the letter to GPs and to 'proper officers' in those districts. MOEHs further afield may have to be notified when a suspect or confirmed case arrives by aircraft or ship, depending on the place of residence of contacts on board.

If the outbreak involves a major infectious disease or in some other way is likely to prove serious, it may prove useful to call a meeting of all the community physicians who could be involved, together with the Public Health Laboratory Director and the consultants in infectious diseases, so that an agreed course of action can be devised. Regular meetings of that group may be necessary if an epidemic develops.

(vii) *EMAS.* If there is likely to be an occupational involvement, EMAS should be informed.



(viii) *Divisional Veterinary Officer, MAFF.* In terms of the Zoonoses Order, 1975, the Divisional Veterinary Officer of the Ministry of Agriculture, Fisheries, and Food has to be informed when notification is received of any zoonotic disease, such as anthrax or rabies, and he should also be advised of any outbreak of food poisoning involving animal products, because of the possible link with infection in live animals or poultry.

(ix) *The media.* Reporters from press, radio, and television are going to be interested in any serious or unusual outbreak of communicable disease or food poisoning. They can be a great handicap if effective means of keeping them informed are not instituted at the outset; but given such arrangements, they can be of great assistance, for balanced, well-informed journalism can allay panic and dispel alarm and it can help to avoid the biased and sensational accounts of an outbreak that sometimes appear.

It would be useful for the MOEH to have a provisional plan prepared for dealing with publicity in anticipation of an outbreak, for this will help to relieve pressure and avoid confusion at a critical time when the need actually arises. Such a plan might, among other things, cover the following points:

(1) Serious outbreaks are likely to involve both the local authority and the health authority. It will normally be desirable for a single spokesman to act for both, but this should be agreed beforehand as a matter of standard practice.

(2) There should be agreement as to whom that spokesman is to be. Where the local authority or the health authority has its own Press Officer, he will be involved, but there is much to be said for the MOEH himself undertaking the task of spokesman to the media. Being an officer of both authorities, and an expert in communicable diseases, he appears to be the most appropriate person, but account will have to be taken of any general publicity procedure established by the authorities. If, for this or any other reason, the spokesman is to be someone else then the MOEH should ensure that the plan provides for his being consulted before official statements are issued and for his attendance at any press conferences.

(3) There will be circumstances in which it will be necessary to withhold information from the media on grounds of confidentiality, for example, the identity of an individual patient who does not wish publicity, or of an industrial or commercial undertaking which is a

suspected source of infection. A provisional plan cannot provide for all such circumstances, but it can prescribe the means for determining any conflict of interest that may arise in a particular case between the public interest and the rights of individuals. This is a matter on which the advice and guidance of the legal staff of the local authority or the health authority will be helpful.

When a provisional plan of this kind is made, it should be brought to the attention of all those who may have a significant role in dealing with an outbreak, so that they will know what to do if approached by reporters.

A plan prepared in advance can deal with the procedures to be followed in dealing with the media but it cannot prescribe what is to be said for each case is likely to have its own peculiar features. It has been demonstrated on several occasions that the best results are obtained when there is a firm basis of trust and understanding between the media and the authorities, and this promotes confidence in the community. That trust and understanding are most likely to be established if the arrangements for the provision of information are made clear to reporters and take reasonable account of their special needs (for example, meeting publication deadlines), if information is given in official statements that are clear and concise and in terms that are comprehensible to the man in the street, and if it is evident that no relevant information is being withheld except for strong reasons.

If an outbreak is widespread, the national news media will be involved as well as the local ones, and it will be necessary for the MOEH to keep his medical colleagues at the CDSC and the DHSS informed of new developments in the course of the outbreak to ensure consistency in the information issued at all levels.

Working with the news media can be difficult, particularly as so much of it has to be done on the telephone. The greatest teacher is experience, and there will be times when the MOEH will be appalled at statements attributed to him. This kind of thing may not be avoidable, but it will at least be minimized if he makes it a rule to stick rigidly to the facts and not to be drawn into pronouncements on hypothetical situations—and if he remembers at all times that silence can be as big a pitfall as loquacity.

## 2. International aspects (including port and airport health)

In the United Kingdom, the control of disease from other countries is based on the *International Health Regulations* (second amended edition), as approved by the World Health Organization, with effect from 1 January 1974. These regulations have been incorporated in the Public Health (Ships) and Public Health (Aircraft) Regulations of 1970, as subsequently amended in 1974 and 1978. Among other things these regulations require port health authorities to appoint or authorize medical and other qualified officers to perform duties in relation to ships and aircraft (Circular HRC(74)13).

In the event of some exotic disease arriving in this country, the relevant information is sent to all local authorities, health authorities, port health authorities and MOEHs by the Chief Medical Officer (CMO). This is usually done by circular letter, but if there is urgency it may be done by telegram or telephone.

If the MOEH as medical officer for port health becomes aware that a major infectious disease has occurred in the port, he must immediately notify the CDSC and the DHSS in accordance with the Public Health (Infectious Diseases) Regulations, 1968. Also, if he receives a notification of a case of leprosy or of malaria acquired naturally in this country, he must send a copy to the CMO at the DHSS. There are also weekly and quarterly returns that the MOEH with responsibility for the port has to send to the OPCS.

The procedure for the surveillance of contacts is set out in the *Memoranda on Smallpox and Lassa Fever* which will provide a general guide for surveillance of contacts in all outbreaks of serious infectious disease. Obviously, contacts cannot be detained at a port or airport, and the surveillance will require to be arranged at the passenger's destination. This requires the ascertainment of the address of the passenger in the United Kingdom, which is often difficult, and writing or telephoning the MOEH in that district to ensure surveillance. With a passenger liner, or, more often today, a large aircraft, this procedure is time-consuming and passengers resent being held up; but if care is not taken before the passengers are allowed to continue their journeys, an infected contact can easily evade the surveillance screen.

The World Health Organization Weekly Epidemiological Record gives topical information on communicable diseases throughout the

world and publishes a list of 'Infected Areas'. An MOEH wishing information about an infectious disease in a foreign country can get it from the CDSC. When any information is not already available in the CDSC, the latter can arrange for it to be obtained quickly through the International Relations Division of the DHSS. For example, if a child returns from a winter sports holiday having been bitten by a dog, it will be important to ascertain if rabies is enzootic in his holiday location, and the CDSS can advise on tracing the source and vaccination.

From time to time medical problems may arise in connection with imported foodstuffs, environmental conditions in ships, or protection in connection with nuclear-powered ships using the port. The CEHO will be the 'proper officer' for these matters, but he will no doubt look to the MOEH as medical officer for port health for advice when medical problems arise.

International travellers are required to have certain approved certificates of vaccination when going to certain countries. The MOEH will be asked for information on what certificates are required. The WHO publish a *Vaccination Certificate Requirements for International Travel* annually, and any changes are printed in the Weekly Epidemiological Report. Current information can also be obtained from the DHSS.

### 3. Reference documents for Part II

#### A. ACTS AND REGULATIONS

Public Health Acts, 1936 and 1961.

Health Service and Public Health Act, 1968.

Public Health (Infectious Diseases) Regulations 1968, as amended: Public Health (Infectious Diseases) (Amendment) Regulations, 1974; Public Health (Infectious Diseases) (Amendment) Regulations, 1976; and Public Health (Infectious Diseases) (Amendment) (No. 2) Regulations, 1976.

Public Health (Aircraft) (Amendment) Regulations, 1974, as amended in 1974 and 1978.

Public Health (Ships) (Amendment) Regulations, 1974, as amended in 1974 and 1978.

Food and Drugs Act, 1955.

Food Hygiene (General) Regulations, 1970.

Food Hygiene (Markets, Stalls and Delivery Vehicles) Regulations, 1966 with amendment regulations, also in 1966.

Food Hygiene (Docks, Carriers, etc.) Regulations, 1960.

Milk and Dairy (General) Regulations, 1959.

- Liquid Egg Pasteurisation Regulations, 1963.
- The Ice Cream (Heat Treatment, etc.) Regulations, 1959 and 1963.
- Public Health (Shellfish) Regulations, 1934.
- Slaughterhouse (Hygiene) Regulations, 1977.
- National Health Service Reorganization Act, 1973.
- Local Government Act, 1972.

B. MEMORANDA, CIRCULARS, ETC., ISSUED BY THE DEPARTMENT OF HEALTH AND SOCIAL SECURITY

(a) *Memoranda and circulars*

- Anthrax in Dairy Herds, Milk Supplies in Relation to*, LAC(77)12.
- Environmental Health*, HRC(74)3.
- Food Poisoning, Investigation and Control of*, Memorandum 188/Med. (under revision).
- Lassa Fever, Memorandum on*, HC(76)45.
- Leprosy, Memorandum on*, HC(77)7.
- Notifiable Diseases and Food Poisoning, Control of*, HRC (73)34.
- Prophylactic and Therapeutic Agents, Supply of*, HM(71)64.
- Rabies, Memorandum on*, HC(77)31.
- Slaughterhouse, Medical Examination of Staff*, Letter of 1 October 1971.
- Smallpox: Hospital Provision for*, HM(56)79; *Hospital Provision for, in Thames Region*, CMO 7/75; *Control of Outbreaks of*, HSC(IS)210; *Diagnosis of*, Medical memorandum revised 1977; *Vaccination against*, HSC(IS)33.
- Vaccination and Immunisation: Arrangements for*, HRC(74)17; *Vaccination against Anthrax*, Circulars 19/65 and 17/70; *Rabies*, HG(77)29; *Smallpox*, HSC(IS)33; *Whooping Cough*, ML3/72 and memo; *Tetanus, Measles, Polio, Diphtheria, Rubella*, ML3/72.

(b) *Booklets*

- BCG Vaccination*, Circular 19/64.
- Immunisation against Infectious Disease*, 1972.
- Communicable Disease contacted outside Great Britain*, 1972.
- Memorandum on the Ascertainment and Control of Outbreaks of Infantile Gastroenteritis*, 1972.
- Tuberculosis and Epidemiology and Control*, 1973.
- Typhoid and Paratyphoid Fevers*, 1972.
- Scabies*, 1970
- Notice to Travellers: Health Protection* (reprinted annually).
- Control of Communicable Diseases in Schools*, 1977.

(c) *Documents on food hygiene*

- Advisory Memorandum on the Processing of Pasteurised Large Canned Hams*, 1972 (DHSS).
- Ten Point Codes for Food Trade Workers and for Housewives* (Health Education Council).
- Hygiene in the Retail Fish Trade*.

*The Hygienic Transport and Handling of Fish.*

*Hygiene in the Bakery Trade and Industry.*

*Hygiene in the Operation of Coin-operated Food Vending Machines.*

*Hygiene in the Meat Trades.*

*Hygiene in Microwave Cooking.*

*Clean Catering, 1972.*

(Note: All the publications in (a) and (b) above are obtainable from the DHSS; those in (c) from HMSO, except where otherwise shown.)

#### C. OTHER PUBLICATIONS

*Control of Communicable Diseases in Man*, A. S. Beneson (12th edition) (American Public Health Association, 1975).

'Statutory notification and surveillance of infectious diseases', Galbraith, N. S., and Berrie, J. R. H., *Health Trends*, 10 (1978), 32-34.

'Dysentery and salmonella infections', PHLS/Soc. MOHs, *Public Health*, London, 84 (1970), 197-9.

*A Guide to Infectious Diseases in an Emergency* (London, Centre for Extension Training in Community Medicine, 1978).

*Public Health Laboratory Service Year Book.*

*Viral Hepatitis in Great Britain*, OHE Briefing no. 5 (January 1977).

*Viral Hepatitis*, Technical Report no. 570 (WHO, 1975).

*Code of Practice for the Prevention of Infection in Clinical Laboratories and Post Mortem Rooms* (Howie Report) (London, HMSO, 1978).

*International Health Regulations* (Geneva, WHO, 1969, 1978).

*Weekly Epidemiological Record* (Geneva, WHO).

## APPENDIX

*Outline of principal legislative provisions relating to the control of notifiable diseases and food poisoning*

The information given below describes the main made to the Local Government Act, 1972 (Schedule statutory provisions with which the MOEH should be 29, para. 4) for the definition of the legal status of the conversant. The phraseology used is not necessarily MOEH as proper officer. The particular diseases to which the enactments that used in the Act or Regulation, which should themselves be consulted to avoid any possibility of misrepresentation or misunderstanding. Reference should be specified below apply are detailed in the table which follows.

<i>Nature of power or duty and by whom exercisable</i>	<i>Circumstances in which power/duty applicable</i>	<i>Statutory authority</i>
<b>I. NOTIFICATION OF DISEASE TO MOEH (OR, WHERE STATED, TO LA)</b>		
Duty to notify placed on:		
(a) Registered medical practitioner	To notify cases or suspected cases for which responsible	Health Services and Public Health Act, 1968, S. 48
(b) Person carrying on a food business	To notify cases or carriers within the business	Food Hygiene (General) Regulations 1970, Reg. 13
(c) Manufacturer of or dealer in ice cream to notify LA	To notify occurrence of disease in persons working or living in or about the premises	Food and Drugs Act, 1955, S. 23(1); Local Government Act, 1972, S. 199(1)
(d) Occupier of premises	To supply information on request when a case has occurred on the premises	Public Health Act, 1961, S. 39
(e) Manager of slaughterhouse	To notify cases or carriers among workers handling meat or blood intended for human consumption	Slaughterhouse (Hygiene) Regulations, 1977, Reg. 38
(f) Occupier of registered milk premises	To notify occurrence of disease in a person having access to milk, churns or other receptacles, or in a member of such a person's household	Milk and Dairies (General) Regulations, 1959, Reg. 18(1)



## 2. NOTIFICATION BY MOEH

### (a) To CMO

- (i) Special notification to be sent in cases of: Public Health (Infectious Diseases) Regulations, 1968, Para. 6 (as amended)
- (1) Any disease or suspected case subject to the International Health Regulations
- (2) Any serious outbreak of any disease (including food poisoning)
- (ii) Copy of notification certificate to be sent in respect of:
- (1) Cases in (i) above
  - (2) Leprosy
  - (3) Malaria contracted naturally in Great Britain
  - (4) Lassa Fever
  - (5) Viral Haemorrhagic Fever
  - (6) Marburg Disease

(Note: The parallel and equally important duty to notify the CDSC in the same circumstances rests at present on administrative requirements, not statutory provisions.)

(b) Duty owed to occupier of registered milk To notify if suspected person having access to Milk and Dairies (General) Regulations, 1959, premises milk, churns, or other receptacles suffers from, Reg. 18(2) or has been in contact with, disease

## 3. COMPULSORY MEDICAL EXAMINATION

- (a) On order of JP following certificate of MOEH Suspected cases, contacts, or carriers Public Health Act, 1961, Sec. 38, as amended by Health Services and Public Health Act, 1968, SS. 53 and 55
- (b) On order of JP following certificate of MOEH Group of persons, if suspected that one or more may be carriers Health Services and Public Health Act, 1968, SS. 54 and 55
- (c) At instance of MOEH Any or all persons in registered milk premises if suspected case or contact among them Milk and Dairies (General) Regulations, 1959, Reg. 19(1)
- (d) At instance of L.A following report from MOEH Suspected carrier engaged in any trade or business connected with food (Power is given to notify the manager that the L.A considers medical examination necessary) Public Health (Infectious Diseases) Regulations, 1968, S. 8(2), Schedule 5

*Nature of power or duty and by whom exercisable*

*Circumstances in which power/duty applicable*

*Statutory authority*

4. COMPULSORY REMOVAL TO HOSPITAL

Local authority on advice of MOEH

Cases or suspected cases

Public Health Act, 1936, S. 169

5. COMPULSORY DETENTION IN HOSPITAL

Local authorities on advice of MOEH

Infected persons

Public Health Act, 1936, S. 170

6. PROHIBITION ON SPECIFIED ACTIVITIES (of which patients should be warned)  
Duty placed on infected person to refrain from activities specified

(i) Not to expose others to risk of infection

Public Health Act, 1936, S. 148

(ii) Not to engage in trade or occupation involving risk to others

Public Health Act, 1936, S. 149

(iii) Not to attend school

Public Health Act, 1936, S. 150

(iv) Not to send infected articles to laundry

Public Health Act, 1936, S. 152

(v) Not to engage in work in premises where notifiable disease has occurred until premises disinfected

Public Health Act, 1936, S. 153

(vi) Not to place infectious matter in dustbins

Public Health Act, 1936, S. 156

(vii) Not to let accommodation

Public Health Act, 1936, S. 157

(Note: Surveillance and Isolation: Except for the power provided in the Public Health (Infectious Diseases) Regulations, 1968, Schedule 4 (as amended), to isolate the inmates of a building in which there has been a case of typhus or relapsing fever pending disinfection of the building, the MOEH has no statutory power to place people under surveillance or in isolation. Where such action is considered desirable he is dependent on the willing co-operation of the people concerned. Failure on their part to observe the duties specified above, particularly the general duty under S. 148, would be an offence, and this can be of some legal assistance to the MOEH.)

7. DISINFECTION OF PREMISES

(a) Landlord: at instance of MOEH

To have house or part thereof disinfected to satisfaction of MOEH

Public Health Act, 1936, S. 157

(b) Former occupant of premises: at instance of MOEH

To have house disinfected to satisfaction of MOEH

Public Health Act, 1936, S. 158

(c) LA: at instance of MOEH

To disinfect any premises or articles

Public Health Act, 1936, S. 167

**8. DISCONTINUATION OF EMPLOYMENT**

(a) At instance of MOEH

Persons may be requested to discontinue employment in order to prevent spread of disease

Public Health Act, 1961, S. 41

(b) At instance of LA following report from MOEH

Employment of case or carrier may be required to be discontinued if occupation connected with food

Public Health Act (Infectious Diseases) Regulations, 1968, Reg. 8(2), Schedule 5

(c) At instance of MOEH

Employment of any person may be required to be discontinued to prevent spread of disease if occupation involves specific processes connected with milk

Milk and Dairies (General) Regulations, 1959, Reg. 19(2)

**9. COMPENSATION FOR LOSS OF EMPLOYMENT**

(a) By LA

Payable to person suffering loss or damage because of discontinuation of employment

Public Health Act, 1961, S. 41(2)  
Public Health (Infectious Diseases) Regulations, 1968, Reg. 12

(b) By LA

Payable to person suffering loss or damage because of discontinuation of employment connected with milk, if person not himself at fault

Milk and Dairies (General) Regulations, 1959, Reg. 19(4)

**10. EXCLUSION OF CHILDREN FROM PLACES OF ENTERTAINMENT**

By LA on advice of MOEH

Prohibition or restriction of admission of persons *under* prescribed age to place of entertainment or assembly, with a view to preventing spread of disease

Public Health Act, 1961, S. 40

*Nature of power or duty and by whom exercisable*

*Circumstances in which power/duty applicable*

*Statutory authority*

**11. DETENTION AND EXAMINATION OF FOOD**

- |   |  |   |
|---|--|---|
| <p><b>(a)</b> By authorized officer</p>                                       | <p>Power at all times to seize, remove, and examine food intended for human consumption if thought to be unfit</p>   | <p>Food and Drugs Act, 1955, S.9</p>  |
| <p><b>(b)</b> Registered medical practitioner on staff of local authority</p> | <p>May be authorized by L.A to act in seizure and examination of meat</p>  | <p>Food and Drugs Act, 1955, S. 86(4); Local Government Act, 1972, S. 199(6); Authorized Officers (Meat Inspection) Regulations, 1978</p> |
| <p><b>(c)</b> MOEH</p>  | <p>If food suspected of causing food poisoning, may prohibit use for human consumption or removal pending investigation</p>  | <p>Food and Drugs Act, 1955, S. 27</p>  |
| <p><b>(d)</b> MOEH</p>  | <p>If ice cream or substance used in its manufacture suspected of causing disease communicable to humans, may prohibit use for human consumption or removal. Food may be destroyed on order of MOEH</p>  | <p>Food and Drugs Act, 1955, S. 23(3)</p>   |
| <p><b>(e)</b> MOEH</p>  | <p>If milk thought to be infected with disease communicable to humans, may prohibit sale for human consumption of milk from premises concerned</p>   | <p>Milk and Dairies (General) Regulations, 1959, Reg. 20(1)</p>   |
| <p><b>(f)</b> MOEH</p>  | <p>If consumption of shellfish exposed for sale suspected of causing danger to public health:<br/>(i) May require fishmonger to disclose source of supply.<br/>(ii) May advise L.A to prohibit or to require treatment before distribution for human consumption of shellfish from layings concerned</p> | <p>Public Health (Shellfish) Regulations, 1934, Regs. 4 and 5</p>   |

12. COMPENSATION FOR DETENTION OR CONDEMNATION OF FOOD

(a) By LA

Payable in certain circumstances for food seized or detained under S. 9 or S. 27 of Food and Drugs Act, 1955, if MOEH's notice is withdrawn or JP refuses condemnation

Food and Drugs Act, 1955, S. 9(4) and S. 27(3)

(b) By LA

Payable in certain circumstances for ice-cream or other substance detained under S. 23(3, 4) of Food and Drugs Act, 1955, if MOEH's notice is withdrawn, or if ice cream in some circumstances has to be destroyed

Food and Drugs Act, 1955, S. 23(5)

(c) By LA

Payable in certain circumstances for loss or damage sustained following prohibition of sale of milk for human consumption or requirement to treat milk before sale

Milk and Dairies (General) Regulations, 1959, Reg. 20(6)

*Particular diseases to which different parts of legislation apply*

List	Disease	Health Service and										Slaughter-house (Hygiene)	
		Public Health Act, 1936, Sections (as amended)	Public Health Act, 1961, Sections (as amended)	Public Health Act, 1968 Sections (as amended)	Public Health (Infectious Diseases) Regulations, 1968 (as amended)	Food Hygiene (General) Regulations, 1970	Food Drugs Act, 1955	Milk and Dairies (General) Regulations, 1959	1977				
148 153 156 169 170 38 39 40 41 48 53 54 Schedule Schedule Reg. 13 S. 23(1) Reg. 18, 19, 20 and 20													
1	Cholera (IF)	*	*	*	*	*	*	*	*	*	*	*	
	Plague (IF)	*	*	*	*	*	*	*	*	*	*	*	
	Relapsing fever	*	*	*	*	*	*	*	*	*	*	*	
	Smallpox (I)	*	*	*	*	*	*	*	*	*	*	*	
	Typhus	*	*	*	*	*	*	*	*	*	*	*	
2	Dysentery (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Typhoid fever (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Paratyphoid fever (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Scarlet fever (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Diphtheria (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Infective jaundice (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Acute encephalitis	*	*	*	*	*	*	*	*	*	*	*	*
	Acute meningitis	*	*	*	*	*	*	*	*	*	*	*	*
	Acute poliomyelitis (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Tuberculosis (F)	*	*	*	*	*	*	*	*	*	*	*	*
	Lassa fever	*	*	*	*	*	*	*	*	*	*	*	*
	Rabies	*	*	*	*	*	*	*	*	*	*	*	*
	Marburg disease	*	*	*	*	*	*	*	*	*	*	*	*
	Viral haemorrhage	*	*	*	*	*	*	*	*	*	*	*	*

See note below

Anthrax	* * * * *	* * * * *	* * * * *	
Leptospirosis	* * * * *	* * * * *	* * * * *	
Measles	* * * * *	* * * * *	* * * * *	
Whooping cough	* * * * *	* * * * *	* * * * *	
Malaria	* * * * *	* * * * *	* * * * *	
Tetanus	* * * * *	* * * * *	* * * * *	
Yellow fever	* * * * *	* * * * *	* * * * *	
Leprosy	* * * * *	* * * * *	* * * * *	
Ophthalm. neonatorum	* * * * *	* * * * *	* * * * *	
3	Salmonella and other staphylococcal infections likely to cause food poisoning (F)			* * * * *
4	Gastro-enteritis (F)			* * * * *
	Undulant fever (F)			* * * * *
	Acute inflammation of throat (F)			* * * * *
5	Food poisoning (F)			* * * * *

F—Food-borne disease I—Diseases subject to International Health Regulations.

List: 1. Diseases listed in Section 47 of the Health Services and Public Health Act, 1968.

2. Diseases listed in Schedule 2 of the Public Health (Infectious Diseases) Regulations, 1968.

3. Other diseases included in Schedule 5 of the Public Health (Infectious Diseases) Regulations, 1968 (as amended), Regulation 13 of the Food Hygiene (General) Regulations, 1970 (and companion sets of food hygiene regulations), and in the Slaughterhouse (Hygiene) Regulations, 1977.

4. Diseases other than those in (1) and (2) listed in Schedule 1 of the Food and Drugs Act, 1955.

NOTE: Milk and Dairies (General) Regulations, 1959. The 'notifiable diseases' referred to in Regulations 18-20 are food poisoning, gastro-enteritis and, in relation to London, any disease notifiable under the Public Health (London) Act, 1936, and, in relation to any area outside London, a disease notifiable under the Public Health Act, 1936. Other references in the regulations are to any disease liable to cause infection of milk or liable to be spread by employment in a dairy.

## PART III

### *The MOEH as medical adviser on environmental health matters*

#### **1. Introduction**

The environmental health matters on which the MOEH will be expected to give advice are outlined in paras 15-21 of HRC(74)13, and they fall into two main categories: (1) general planning and advice and (2) matters concerned with pollution of the environment. In both cases the executive responsibility will lie with some other officer of the local authority; and in both cases the advice tendered by the MOEH will be medical advice, based on the MOEH's knowledge and experience of environmental and community medicine. The range of specialist interests covered by the two categories is extremely wide, involving a large number of Government departments and other central authorities, certain regional authorities, regional and area offices of central authorities, as well as the various departments of the local authority itself. The complex web of relationships flowing from this situation can cause confusion if it is not clearly understood, as much by the MOEH in his medical advisory capacity as by the officer charged with executive responsibility, generally the CEHO for the pollution functions.

The relationship problem can best be considered in connection with the pollution functions, for it is the combined influence of these functions that will in the main determine the advice to be given by the MOEH on general planning questions.

Table 1 below lists the Government departments or other central authorities which have some responsibility for control of pollution.

All the authorities mentioned in Table 1 are Government departments except the Health and Safety Executive (HSE), set up under the Health and Safety at Work, etc., Act, 1974, as the principal operative arm of the Health and Safety Commission. The Health and Safety Commission is charged with taking appropriate steps to secure the health, safety, and welfare of people at work, to protect



TABLE 1. *Pollution control responsibilities of Government departments and central authorities\**

<i>Form of pollution</i>	<i>Government department concerned</i>	<i>Controlling directorate within department or executive authority</i>	<i>Problem or area of responsibility</i>
Air pollution	DoE	Noise, Clean Air and Coast Protection Division Central Unit on Environmental Pollution HSE (HM Alkali and Clean Air Inspectorate)	Policy on smoke control and clean air Advice on long-range transport of air pollutants, pollutants in the stratosphere, and air pollution generally Air pollution from registered premises Advice to LAs on processes and operations outside the scope of the Alkali Acts
	DTP	Directorate of Vehicle Engineering and Inspection	Emissions from motor vehicles
Freshwater pollution	DoE	Directorate of Water Directorate General of Water Engineering I, II, and III (WE I-III)	Policy on Water Management Advice on the conservation and proper use of water resources, the provision of water supplies and sewerage facilities, the treatment and disposal of sewage and trade effluents and the protection of health and the quality of water
	MAFF	Fisheries Division	Effect of river pollution on fish
Marine pollution	MAFF	Fisheries Division	Over-all control of marine pollution and dumping at sea, in order to safeguard fishery interests
	DEn	Petroleum Production Inspectorate	Pollution from off-shore oil operations
	DT	Marine Division	Control of oil pollution at sea
	DoE	Noise, Clean Air, and Coast Protection Division Directorate of Water	Policy on control of oil and chemicals on beaches Policy on pollution of coastal water from land-based services

Waste	DoE	Waste Disposal Division	Policy on waste disposal
Radioactivity	DoE	Waste Division (Part of WE II)	Advice on methods of collection and disposal of solid and toxic wastes
	DEn	Atomic Energy Division	General responsibility for atomic energy policy
	DEn	HSE (Nuclear Installations Inspectorate)	Safety of nuclear power plants, licensing and inspection of some nuclear installations
	MAFF	Fisheries Radiobiological Branch and Atomic Energy Branch	Advice on all aspects of radioactive discharge in relation to marine food and agricultural interests
	DoE	Wastes Division	Policy on radioactive waste management
	DoE	Radiochemicals Inspectorate (Nuclear Waste Management Division)	Technical advice on the disposal of radioactive wastes and on radioactive discharges
	DoE	HSE (Alkali Inspectorate)	Discharges to the atmosphere
	DTp	Dangerous Goods Division	Transport of radioactive materials
	DoE	HM Industrial Pollution Inspectorate	Control of pollution arising from use of radioactive substances
	Pesticides	MAFF	Environmental Pollution, Pesticides, and Infestation Control Division
Noise	DoE	Noise, Clean Air and Coast Protection Division	Co-ordination of noise policy
	DTp	Directorate of Vehicle Engineering and Inspection	Control of traffic noise
	DT	Civil Aviation Policy Division	General responsibility for aircraft noise
	DE	HSE (Factory Inspectorate)	Noise within work places

\* In all pollution matters having a bearing on human health the departments listed look to the Division on Chemical Contamination of the Environment and Food of the DHSS for medical advice.

the public generally against risks to health and safety arising out of the work situation, to give general direction to the HSE and guidance to Local Authorities on the enforcement provisions of the Act, to assist and encourage persons with duties under the Act, and to make suitable arrangements for research and the provision of information.

The HSE includes six inspectorates: Alkali and Clean Air, Factories, Mines, and Quarries, Nuclear Installations, Explosives and Agriculture. It also includes the Employment Medical Advisory Service (EMAS) under the direction of the Director of Medical Services. EMAS is an organization of doctors and nurses whose job it is to give advice about occupational health and to examine suspected health hazards at work.

The responsibilities of the HSE are wide ranging. Section 3 of the HSW Act, 1974, for example, imposes general duties on employers and the self-employed to conduct their undertakings in such a way as to ensure, so far as is reasonably practicable, that other persons not in their employment are not thereby exposed to risks to their health or safety. This, and other broad-based provisions, might be interpreted as giving the HSE extensive interests and responsibilities beyond the confines of the place of work. However, it is health and safety at work that is the primary interest of the HSE.

The Executive operates through regional or area offices, each including representatives of EMAS, and it is with these regional or area offices that contact should be made by local authority officers. Where a problem of health and safety at work has repercussions for the wider community any exact delineation of responsibilities between, for example, the MOEH and the Senior Employment Medical Adviser of EMAS, will prove difficult. This is not of importance so long as there is close contact and co-operation, a point that is worth stressing.

The related functions of the HSE and local authorities in environmental health can be identified most particularly as follows:

(1) In air pollution, where the Alkali and Clean Air Inspectorate has responsibilities for emissions from certain registered premises; and

(2) hazardous substances, for which a data bank has been set up by the Executive.

The environmental health functions which fall to local authorities and their officers are described in HRC(74)13, which, among other things, identifies the statutes in which these functions are defined.

The responsible authorities are in the main District Councils and London Borough Councils, but County Councils also have some responsibilities in this field, for example, refuse disposal, consumer protection, and certain planning responsibilities.

Table 2 below gives a list of officers of various authorities based at local level with whom the MOEH will need to have contact in the performance of his duties.

TABLE 2

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<i>Health and Safety Executive</i>	
Local area	Alkali Inspector Factory Inspector Agricultural Safety Officer EMAS doctors for his area and region
<i>Regional Water Authority</i>	
Water Division	Area Manager Area Scientific Officer
Rivers Division	Pollution Control Officer Medical Officer
<i>County Council</i>	
Director of Consumer Protection	
Director of Waste Disposal	
Diseases of Animals Inspectors	
<i>Ministry of Agriculture, Fisheries, and Food</i>	
Divisional Veterinary Officer	
Director of Animal Health Laboratory	
<i>Public Health Laboratory Service</i>	
Director of Area or Regional Laboratory	

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The MOEH will seldom have to make contact with the national headquarters of the Government departments but, if the need does arise, the DHSS will generally be the most appropriate first point of contact and will be able to advise on which divisions of other departments hold the information sought. Such inquiries regarding chemical pollutants should be made to the Division of Chemical Contamination and Food (01 703 6380, Extensions 4331 or 4344). With local services, on the other hand, the MOEH is advised to meet all officers who have some environmental health function to perform with a view to establishing a good working relationship with them based on an understanding of mutual responsibilities.

In this section a chapter has been devoted to each of the principal components of the environment and these are followed by chapters on radiation and heavy metals which are best treated separately; the section concludes with a chapter on major toxic accidents. These accounts are not comprehensive, being intended only to assist the MOEH in the enlargement of his knowledge. It is only by experience, knowledge, and continuing study that the MOEH will be able to provide the best advice on the environmental health problems that will come his way.

In dealing with these matters, the MOEH will find it useful to have familiarized himself with those 'Pollution Papers' published by the Department of the Environment, which are listed among the 'Reference Documents' on p. 59. Among these, attention is drawn particularly to Pollution Paper no. 9, *Pollution Control in Great Britain: How it Works*. This paper, which has recently been revised and updated, gives a concise exposition of the legislative provisions, statutory authorities, central government advice, etc., connected with each of the areas or sources of pollution covered in the remainder of this section. The MOEH will find it useful to have this paper readily available.

## 2. Air

All air contains some contaminants such as spores of plants, moulds, pollen dust, bacteria, as well as inorganic particles in the form of dust, but the most widespread health hazard arises from pollution of the air with the products of combustion. The severe London fog in December 1952 which caused an estimated excess mortality of around 4,000 alerted the public to the danger from both industrial furnaces and domestic fireplaces. Following this, the Report of the Beaver Committee on Air Pollution made recommendations for the control of both industrial and domestic smoke emissions which are embodied in the Clean Air Act, 1956.

The responsibility for the presentation of a policy based on the Clean Air Act to the local authority rests with the CEHO, who may want the advice of the MOEH in assessing the health benefits of establishing smoke control areas. In addition to the Beaver Committee Report, the MOEH can refer to publications from such bodies as the National Society for Clean Air and the World Health Organization (see p. 59). Local monitoring of air pollution may

provide a helpful guide to the need for control and the MOEH will need to be familiar with any such work in his area.

At the present time there is considerable public interest in the harmful effects of air pollutants arising from transport and industry but it should be remembered that smoking habits and indoor air pollution (especially from homes supplied with gas if adequate ventilation is not provided) may in fact be more important contributors to the effects of air pollution on health.

In the United Kingdom, emissions from certain chemical and industrial processes considered to be particularly dangerous or offensive are subject to special control under the Alkali, etc., Works Regulations Act, 1906, which is enforced by HM Alkali and Clean Air Inspectorate in England and Wales and HM Industrial Pollution Inspectorates in Scotland. Noxious or offensive emissions not covered by the Alkali Works Act are dealt with in several Public Health Acts which are enforced by local authorities.

The principal statutes and statutory regulations governing the control of air pollution in the United Kingdom are:

- (1) Alkali, etc., Works Regulations Act, 1906.
- (2) Health and Safety at Work, etc., Act, 1974.
- (3) Public Health Act, 1936; Public Health (Recurring Nuisances) Act, 1969.
- (4) Clean Air Acts, 1956 and 1968.
- (5) Radioactive Substances Act, 1960.
- (6) Control of Pollution Act, 1974.
- (7) Road Traffic Acts, 1972 and 1974.

Most of the legislation applies equally to the whole of Great Britain. Further details can be found in Pollution Paper no. 9.

#### A. COMMON CONTAMINANTS OF AIR

The commoner potentially toxic substances which may be present in the atmosphere, and on which the advice of the MOEH may be sought, are considered briefly in the following paragraphs. Obviously the mere presence of a pollutant in the atmosphere is not a justification for the institution of expensive control measures; the degree of control of a pollutant to be established is a complex balance between reasons for its presence, the costs of control, and the amount of damage likely to occur at different levels of pollution.

*(a) Smoke and sulphur dioxide*

In its inquiry into the 1952 London 'smog' the Beaver Committee, although identifying smoke and oxides of sulphur as the most important constituents, were unable to state whether the excess mortalities were attributable to one or the other. The WHO comes to the same conclusion.

Sulphur dioxide arises almost entirely from the combustion of fossil fuels in static sources (power stations, industrial boilers, domestic heating, etc.). Smoke arises from static and mobile sources. Motor vehicles can often be the major contributor to smoke levels in city areas with high traffic density. The effects on health attributed to  $\text{SO}_2$  and smoke have been predominantly respiratory or cardio-respiratory including both short-term effects such as the exacerbation of established chronic disease, increases in the incidence of minor infections or changes in respiratory function, and long-term ones such as the development of chronic non-specific lung disease. In general present levels of  $\text{SO}_2$  and smoke give little cause for concern; the United Kingdom already meets the air quality standards suggested in a draft EEC Directive except in a few city centres.

*(b) Oxides of nitrogen*

The main human health effects of exposure to oxides of nitrogen are respiratory by increasing inspiratory and expiratory flow resistance. At high concentrations, likely to be found only under accident conditions, bronchitis and pneumonia may ensue and very high concentrations may result in fatal pulmonary oedema or asphyxia. The major source of man-made emissions of oxides of nitrogen is the combustion of fossil fuels, and a significant proportion is generated by mobile sources.

*(c) Carbon monoxide*

The main source of carbon monoxide in air is from motor vehicle emissions and the toxicity of carbon monoxide in exhaust fumes in unventilated areas is well known. Fortunately, even in congested traffic conditions, it rarely rises to toxic levels.

(d) *Hydrocarbons*

Hydrocarbons in air from industrial processes and vehicles can create unpleasant smells and are precursors of ozone and photo-oxidants etc.

(e) *Ozone and photo-oxidants*

If oxides of nitrogen and hydrocarbons occur together in the presence of bright sunlight, they can react to give ozone and photo-oxidants such as peroxyacetyl nitrate (PAN). Elevated levels of ozone and PAN were found in the United Kingdom in 1976 but no adverse medical effects appear to have occurred. Lachrymatory and respiratory effects are regularly reported in the United States where levels are locally much higher than in the United Kingdom.

(f) *Asbestos*

Inhaled asbestos is known to cause diffuse pulmonary fibrosis in asbestos workers (asbestosis), an increased incidence of lung cancer, and pleural and peritoneal mesothelioma. While the occupational hazards of asbestos dust have been known for many years, in recent years some instances of disease in members of the families of workers and those living in the neighbourhood of factories have been recognized. In general the form of asbestos known as blue asbestos (crocidolite) is regarded as the most dangerous, and its import in the raw state was abandoned in 1970 when a lower occupational hygiene standard was introduced. White asbestos (chrysotile) is not considered quite as hazardous but it must still be handled with care; amosite, which has replaced crocidolite in some applications, is considered somewhere between crocidolite and chrysotile in order of hazard.

Since asbestos has been widely used in the past in the construction industry and much of it is still present in buildings in loose form as insulation, great care must be taken when older buildings are being demolished or refurbished. Even limited amounts of asbestos dust in the environment at such times must be considered a potential hazard to exposed persons. Asbestos dust diseases are scheduled under the Industrial Injuries Act, and sufferers are eligible for compensation.

Recently the Health and Safety Commission has set up an Advisory Committee on Asbestos which has already issued three



interim reports. The first can provide the MOEH with a balanced assessment of the risks as they are understood at present. The later reports are more technical and deal with the use of asbestos in thermal insulation and with monitoring. A series of 'Guidance Notes' giving further information on the handling of asbestos is published by the HSE.

In any asbestos problem the local officers of HM Inspectorate of Factories (HSE) can be called on for advice.

#### B. NOISE

The powerful transport systems and large-scale production processes of the present day have led to an increasing number of people being exposed to high noise levels. It is very difficult to assess the extent to which noise in the general environment may impair health but there is no doubt about its distressing effects. The MOEH may well be asked to advise on these.

The various sources of noise are controlled under a number of different legislative provisions. Noise from road vehicles, the most frequent cause of complaint, is governed by Road Traffic Acts administered by the Department of Transport, whose provisions relating to vehicles in use are enforced by the police. Present noise limits, measured at a distance of not less than 5.2 metres (17 ft), are: motor-cycles under 50 cc, 80 dB(A); 50-125 cc, 85 dB(A); over 125 cc 89 dB(A); cars, 87 dB(A); light commercial vehicles, 88 dB(A); heavy commercial vehicles, 92 dB(A). Measurement of the noise levels of individual vehicles is extremely difficult and proving an offence may be impossible. Aircraft noise comes under Civil Aviation Acts administered by the Department of Trade.

Noise in the general environment, that is, excluding traffic and industrial noise, is governed by the Control of Pollution Act, 1974, which strengthened the power of the local authorities to deal with noise. They may now, if the Environmental Health Department is satisfied that a nuisance exists, serve a noise abatement notice and, if this is not complied with, can proceed against an offender in the courts. The Act introduced new controls over construction and demolition sites and powers to set up noise abatement zones. Noise within places of employment is of course the responsibility of the HSE under the Health and Safety at Work, etc., Act, 1974.

The planning legislation contains various provisions relating to noise, such as the fitting of double glazing to houses affected by

noise from new or improved roads, and Planning Departments will often seek the advice of Environmental Health Departments on such matters.

### C. ODOURS

Unpleasant smells from industrial or agricultural activities are a frequent cause of public complaint. Special provisions are made in the Public Health Acts for the registration and control of designated offensive trades, but many other industries emit unpleasant smells which can cause distress to residents living nearby. Notable examples are odours from broilerhouses and from sewage spread as fertilizer on agricultural land.

It is not easy to deal with smells as a public health nuisance as they are difficult to measure and it is almost impossible to establish that they are prejudicial to health. Here, the best approach is for the CEHO, together with the MOEH, to appeal to the industry concerned to adopt measures to control the emission.

Advice and assistance on odour measurement and control is readily available from the Warren Spring Laboratory (Air Pollution Division) of the Department of Industry. Also, most large industrial concerns, for example, the oil industry, have experts who are only too willing to help with advice.

## 3. Water

The Water Act of 1973 transferred the statutory duty to provide an adequate supply of pure and wholesome water to the new Regional Water Authorities which also took over the responsibilities of the former local authorities for sewage disposal. Public water companies were not taken over. In addition to public supplies there are still many private supplies, and no liability for these was vested in the water authorities. Local authorities remain responsible for ascertaining that both public and private potable water supplies to their district are adequate and wholesome and for this purpose they may require the advice of the MOEH.

### A. ROUTINE TREATMENT AND MONITORING OF SUPPLIES

Water authorities employ their own scientific staff, and sometimes medical staff, and run their own laboratories. They monitor their water supply by bacteriological and chemical tests. Bacteriological

samples taken on behalf of the CEHO are tested at the PHLS laboratory and a copy of the results will be sent to the MOEH for scrutiny and action if necessary. Water samples for chemical analysis will regularly be sent to the appropriate public analyst and a copy of his reports should be sent to the MOEH. The supply may be fluoridated by the Regional Water Authority (or by a water company as its agent) at the request of the Area Health Authority. The cost of treatment and monitoring is borne by the AHA.

As a result of the almost universal chlorination of public water supplies and the high standards required, bacterial contamination is extremely uncommon. Regular sampling, as described above, ensures early warning of any increase in the bacterial content of the supply, which should be maintained within the limits laid down in the DHSS publication *Bacterial Examination of Drinking Water*. Storage in reservoirs alone cannot now be considered sufficient treatment because of dangers of contamination from, water fowl, especially gulls which often frequent refuse 'tips' by day and reservoirs by night. Chlorination or other disinfection is required. The chlorination of water probably also inactivates most pathogenic viruses, although virological examination is not usually undertaken routinely.

## B. COMMON COMPLAINTS ABOUT SUPPLIES

### (a) *Diarrhoea and vomiting*

Although water is often blamed, food poisoning from mains water is extremely rare. It must, however, be investigated, first epidemiologically and also bacteriologically and chemically. This is obviously a combined operation but preparation of the epidemiological model will be the sole responsibility of the MOEH and he will require the help of the PHLS, EHOs, medical practitioners, and others to identify all the cases, their contacts and the probable sources of infection. A particular point to consider is whether water from a tap fed by a storage cistern is used for drinking or cooking. Most water bye-laws insist that storage cisterns must have well-fitting covers but, even so, it is not unknown for such cisterns to contain bacterial or fungal growths and, where the covers have been disturbed, dead birds or rodents have been found. Another possible source of contamination is the small volume of water often trapped under the lock shields of taps which can be drawn through the

gland into the water flowing from the tap. The water can become contaminated by splashes when fouled clothes or utensils have been washed in the sink.

*(b) Unpleasant tastes*

Especially in hot weather, members of the public may complain that their water has an unpleasant taste. This may be due to excessive chlorination, especially after work on the mains which are almost always disinfected after any works or repairs, or a number of other causes well known to WAs. The MOEH will have to investigate the complaint and give an agreed and reassuring answer.

*(c) Sediments*

These tend to occur in summer, usually due to difficulties arising in the distribution mains. The abnormal demands on the supply (often the use of a hydrant for filling a gulley flushing machine or by the Fire Service) will disturb chalk or rust deposits. These sediments are harmless and the local water undertaking will usually know the cause.

*(d) Living creatures*

From time to time fresh-water shrimps, the water louse, and larvae of gnats, etc., penetrate the filters and appear in drinking water. They are quite harmless but can cause considerable dismay.

### C. CHEMICAL POLLUTION OF SUPPLIES

Water supplies vary according to their source in their liability to chemical pollution. River supplies are at special risk from spillages, etc., but the pollution is usually of short duration. Surface waters may also be affected by salt used in de-icing roads and urea on air-field runways. Where there is adequate storage, a polluted source can always be shut off until the pollution has been cleared.

*(a) Nitrates*

Nitrate pollution of surface and ground waters has been increasing due to the purification of sewage effluent to a high standard before its discharge to watercourses and to changes in agricultural policy leading to better drainage of land and increased use of artificial fertilizers. Particularly where rainfall is low and the land low-lying, as in eastern and south-eastern England, underground supplies can

contain nitrate levels in excess of 50 mg/l (the recommended WHO level) and may even exceed the maximum acceptable level of 100 mg/l. In the case of surface sources, high nitrate concentrations occur with the run-off from land after heavy rains. Nitrate is usually kept to acceptable levels by mixing water from different sources.

The risk from nitrate is that it can cause infantile methaemoglobinemia in bottle-fed babies under six months old due to nitrite produced by bacterial action, either in the bottle or in the infant's intestinal tract. In this country few seriously affected babies have been reported, and these where the water is very high in nitrates usually from a private source.

If water with a nitrate content of 50 mg/l or more has to be supplied at any time, the Water Authority will notify the Health Authority. Infants below six months should always be supplied with alternative low nitrate water if the nitrate content of the supply is above 100 mg/l. Between 50 and 100 mg/l action may be determined by local circumstances and medical opinion. Some areas have contingency plans to supply bottled water should the need arise.

It has been postulated that if nitrosamines (formed by the interaction of nitrites and amines present in water) are formed in man, as they are in animals, they will be carcinogenic. There is, however, no conclusive epidemiological or clinical evidence for this at present.

#### *(b) Other substances*

Other inorganic substances have been thought to predispose to disease. Sodium in water used for mixing infant feeds is now under suspicion as a contributory factor in cot deaths. A high salt intake is also thought by some to be a factor in causing hypertension. In general drinking water makes only a minor contribution to total intake. There is evidence which indicates that residents in 'soft' water areas may suffer higher mortality rates from cardiovascular disease than those living in hard water areas. Although the precise factor has not been defined, Water Authorities have been asked to bear this work in mind when considering the softening of public water supplies. It is probably wise for domestic softeners to include a by-pass to supply unsoftened water for cooking and drinking.

Lead in drinking water is dealt with under 'Heavy Metals' (p. 53).

#### D. SWIMMING BATHS

The importance of disinfection in swimming baths is well appreciated and, in the main, they have elaborately designed filtration systems for removing particulate matter, chemical treatments, and carefully adjusted chlorination to ensure safety from pathogenic micro-organisms. It has been proposed that the supply of chlorine gas to swimming pools should cease by 1 January 1985 on the grounds that there is too great a risk of accidental release. Guidelines will be prepared by the DOE for local authorities and other baths managers on the conversion to sodium hypochlorite or other disinfectants (see DOE Circular 72/78).

From time to time, a severe form of meningo-encephalitis has occurred in connection with swimming pools, and two genera of amoeba have been implicated, *Naegleria* and *Acanthamoeba*. This condition is commonly associated with bathing in stagnant water and unchlorinated pools, especially in hot weather. It has caused public alarm because it is an unfamiliar disease and there is difficulty in investigating outbreaks epidemiologically.

Minor infection problems may arise in connection with swimming pools. Verruca is due to a virus and often occurs in small circumscribed outbreaks; and athlete's foot, a fungal infection, occurs in similar circumstances. It is now generally accepted that stopping children with these conditions from using the pool has no real benefit. When there is an outbreak of infectious disease, especially poliomyelitis, the advice of the MOEH may be sought on whether school and other swimming baths should be closed. Legal provision for this is made in the Public Health Act, 1936, but it should seldom be necessary to use this power.

## 4. Soil

The chemical composition of soil varies widely, and the extent to which these variations influence the health of human populations is unknown. Information on natural levels of substances in soils in various parts of the country can be obtained from regional offices of the Agricultural Development and Advisory Service (ADAS), from the Institute of Geological Sciences, or from the Applied Geochemistry Research Group at the Imperial College of Science and Technology, London.

Pollution of soil with noxious agents may present difficult problems. Spillages of quantities of agricultural or industrial chemicals present special difficulties depending upon their degree of solubility, the nature of the subsoil and deeper strata and the direction of flow and ultimate rate of water draining from the area.

Recently there has been evidence of increasing public concern over the fouling of public parks and other public places by dogs and other animals. An up-to-date account of this problem is given in the Report of the Working Party on Dogs (HMSO, 1976).

#### *Redevelopment of contaminated land*

Particular problems can arise in connection with the redevelopment of land which has been contaminated with potentially toxic materials to such an extent that some hazard may exist to construction workers, subsequent residents or users of the site or to a wider population (for example, through pollution of water supplies). Attention has to be paid both to hazards associated with short-term exposure and those which might arise from a life-time's contact, for example, from eating vegetables which have accumulated toxic metals such as cadmium, or from handling contaminated soils. Most sites used for industrial purposes or the disposal of wastes are suspect but particular problems can arise on former sewage works or farms (from toxic metals); in scrapyards and vehicle demolition sites, gas, tar, or coke works (a variety of chemicals are likely to be present including cyanides, phenols, coal tar chemicals); and chemical works, toxic waste tips, etc. The increasing importance of these problems is underlined by the fact that the Department of the Environment has set up an Inter-Departmental Committee on Redevelopment of Contaminated Land as a source of technical advice to local authorities encountering such problems. Enquiries can be sent to the Secretary of the Committee, 2 Marsham Street, London SW1P 3EB.

## 5. Control of wastes

### A. SOLID WASTES

The collection of household refuse is a responsibility of the local district council, which also has power to collect trade wastes for an appropriate charge. Responsibility for the disposal of refuse has now been transferred to the County Councils in England (District

Councils in Wales). County Councils are also responsible for controlling the disposal of toxic wastes.

Nuisances such as smell or flies, blown paper, and rat infestation arising from inadequately controlled tipping are usually adequately dealt with by the Environmental Health Inspectors. Very occasionally medical or veterinary advice may be required where domestic animals or wildlife are affected and there are fears that toxic materials may have been deposited or suspicion that some zoonotic infection may be involved. MAFF Veterinary Officers and Animal Health Laboratories will usually undertake the necessary investigations in these circumstances.

Local authorities, through the notification and site licensing provisions of the Deposit of Poisonous Waste Act, 1972, and the Control of Pollution Act, 1974, respectively, and the Health and Safety Executive through the Alkali, Factory and Mines and Quarries Inspectorates have extensive powers and duties to ensure the safe disposal of industrial waste on land. It is an offence to deposit waste except at a licensed site. In the event of the illicit disposal of a toxic waste, the waste disposal authority, in instituting legal proceedings, may wish the supporting opinion of the MOEH on the risk to public health.

If a strike of refuse collectors occurs, the local authority concerned should put into operation an emergency plan including the provision of sacks for refuse storage and the setting up of controlled dumping areas (lay-bys, parks, etc.) for householders to deposit their waste during the emergency. Depending on factors such as the weather, the type of waste, the public response and the duration of the strike, these dumping areas can become potential health hazards because of smell and the presence of flies and possibly rats. The MOEH should visit and inspect these dumps together with the Environmental Health Officer.

## B. LIQUID WASTES

Local authorities are responsible for dealing with household drains and with nuisance, but in some cases they also act as agents, within towns, for the RWA in respect of sewerage and sewage disposal, which are the statutory responsibility of the RWA, along with surface drainage and the licensing of discharges of liquid trade wastes. Most incidents arising in connection with sewage or trade effluents are adequately dealt with by the technical officers of the



RWA or by the Environmental Health Officers, who may, however, seek the advice of the MOEH when unusual situations arise. The MOEH may be consulted on the possibility of a health hazard to local populations when questions arise in connection with planning consent for the disposal of hazardous or noxious waste.

The incidence of Weil's Disease among sewer men has declined, but it has become more noticeable as a problem at landfill sites.

## 6. Radiation

There are stringent legislative controls on the transport, keeping and use of radioactive sources and materials and on the disposal of radioactive wastes. Premises on which such sources and materials are kept are required to be registered by the Secretary of State for the Environment under the Radioactive Substances Act, 1960, and the use of sources is controlled by the Ionising Radiation Regulations, 1968 and 1969. Local authorities are issued with copies of registration certificates for premises within their areas in which radioactive sources or materials are kept.

Health hazards to the community from materials held in industrial, research, or educational premises are unlikely. There could be a hazard if a fire occurred in a large radioactive source and gases escaped to atmosphere or contaminated water was washed into the drains, but there are well-defined emergency procedures to be followed by the responsible authorities in such an event. If the MOEH needs advice in such circumstances, he should contact the Radiochemical Inspectorate of the Department of the Environment. Local advice may also be obtainable from the radiological protection staff in hospitals, universities, or nuclear power stations.

## 7. Heavy metals

Heavy metals such as lead, cadmium, and mercury can be considered as essentially cross-sectoral pollutants, and they are treated briefly as such in this chapter. Further information can be found in the relevant 'Pollution Papers'.

### A. LEAD

Lead poisoning is probably the best-known chemical cause of environmental danger. Lead is a heavy metal with a variety of

uses and in the past it has been widely used for water pipes, cisterns, and other domestic and industrial equipment. Unfortunately, it is a cumulative poison.

For those not occupationally exposed, food is the major contributor to lead intake, although in some parts of the country lead in water may be very significant. The commonest sources implicated in cases of poisoning, which are now rare, are domestic and occupational. In the former, old lead water pipes, lead cisterns and, in the case of children, eating old lead paint, have all caused cases of lead poisoning. One outbreak arose from ice lolly moulds coated with tin containing a high percentage of lead. Environmental pollution near lead battery works and lead scrap works is well known. Workers in the lead industry and others exposed to lead in carrying out their jobs (painters, oxyacetylene welders, printers, and others), are known to carry the metal home in their clothing. The industrial toxicology of lead has been investigated in depth and in addition to the DOE publications the occupational health textbooks deal with the subject at length, both environmentally and clinically. Recently considerable attention has been focused on the possibility that children's development may be impaired by exposure to levels of lead previously thought to be safe. Research to investigate this proposition is in progress in the United Kingdom. Public pressure has largely concentrated on calls to remove lead from petrol which, apart from areas near lead works, is responsible for most airborne lead. Lead in petrol is not a major direct contributor to lead in man, although it can contribute indirectly through contamination of food and water. Administratively, it is relatively easy, although costly to control, and the amount permitted has already been nearly halved since 1971.

Ideally the aim should be to remove the potential for human exposure by permitting the use of lead only when no less hazardous material can be used instead. As things are, it is usually possible to balance intake and excretion.

In the case of water supplies, high lead content is associated with the use of lead in the plumbing system. This may be due to lead pipes and storage tanks, but also to lead released from soldered joints in copper pipes. However, the water undertaking can reduce this and the similar effect on lead piping by controlling the pH of the water supply to above 7.5. Limits for lead in water are recommended in *European Standards for Drinking Water* (Geneva, WHO,

1970) and proposals for maximum admissible concentration are made in the Directive on the Quality of Water for Human Consumption.

The MOEH should be familiar with typical blood lead concentrations as he may have to discuss an individual case or an environmental problem with clinicians and chemical pathologists. The best guidance on this is contained in the 'Lead in Birmingham' study done by a working party on lead pollution around Gravelly Hill (Pollution Paper no. 14). The typical range for non-occupational exposure is quoted in this publication as: females: 3-35  $\mu\text{g}/100\text{ ml}$ ; schoolchildren: 3-35  $\mu\text{g}/100\text{ ml}$ ; males: 9-46  $\mu\text{g}/100\text{ ml}$ .

This report also contains a conversion scale for blood/lead concentrations from traditional to SI Units. Further information will be available following an extensive survey of the blood/leads of selected populations which will begin early in 1979 under an EEC Directive on the Biological Screening of the Population for Lead. This Directive lays down a monitoring programme and gives guidance on reference levels.

#### B. CADMIUM

The hazards of occupational exposure to high levels of this metal are well known. A second problem arises from the kidney's inability to excrete significant amounts of cadmium and the consequent tendency to long-term accumulation, even where environmental concentrations are very low. The resulting high metal levels may lead to kidney disfunction and have been alleged to cause hypertension. In Japan serious disturbances of calcium metabolism and of the skeletal system have been noted during an outbreak of cadmium-related 'Itai-Itai' disease.

The metal and its compounds are widely used although generally in small quantities. The most important applications are plating, yellow and red pigments, stabilizers for plastics, nickel cadmium batteries, and various solders. Cadmium is also found in low-grade zinc, which until recently was used in galvanizing. It can occur in sewage sludge, and if the sludge is used as a fertilizer, the cadmium may appear in vegetable crops and give rise to a theoretical health hazard.

Levels of the metal found in air are low even close to non-ferrous metal factories, provided adequate controls are enforced. Levels in water are also generally low, although significant contamination

from pipework and soldered or plated fittings has occasionally been noted. The European Standards for Drinking Water include limits for cadmium (10 mg/l) as does the EEC Directive on the Quality of Water for Human Consumption (5 mg/l). Much the most important source of the metal for most individuals is through food, with even average diets containing roughly one-third of the level currently considered tolerable (WHO Technical Report no. 505, 1972). Shellfish, kidneys, and some vegetables grown on soils fertilized with large quantities of contaminated sewage sludge may be expected to contain higher than usual amounts of cadmium. Smoking of cigarettes is the second major source of uptake.

As cadmium is a potentially dangerous cumulative poison every effort should be made to reduce exposure levels wherever possible.

### C. MERCURY

The average person in the United Kingdom is at no appreciable risk from exposure to mercury and, where individuals are exposed occupationally to mercury, their conditions of work are governed by regulations which set permitted exposure levels. Medical screening may also be carried out. Nevertheless, there are some local areas where mercury pollution may be a problem, for example, because industrial discharges to rivers or estuaries have led to elevated amounts in fish caught for human consumption or because wild birds are eaten which may have fed on mercury treated seeds.

## 8. Toxic accidents

The accidental emission or escape of toxic substances into the environment is not a new health hazard, but following the development of the modern chemical industry and the manifold purposes to which its products are put, accidents involving the release of toxic substances have become an increasingly serious source of danger to life and health. Many of these products are transported in bulk containers or tankers by road, by rail, and by water involving risks to populations en route as well as those in the vicinity of the factories. The explosion at a chemical factory in Seveso, Italy, in 1976 disseminated the highly toxic chemical 2, 3, 7, 8—tetrachlorodibenzo-p-dioxin (TCDD) over the neighbouring urban area. In this instance the entire population of the worst contaminated area had to be evacuated.

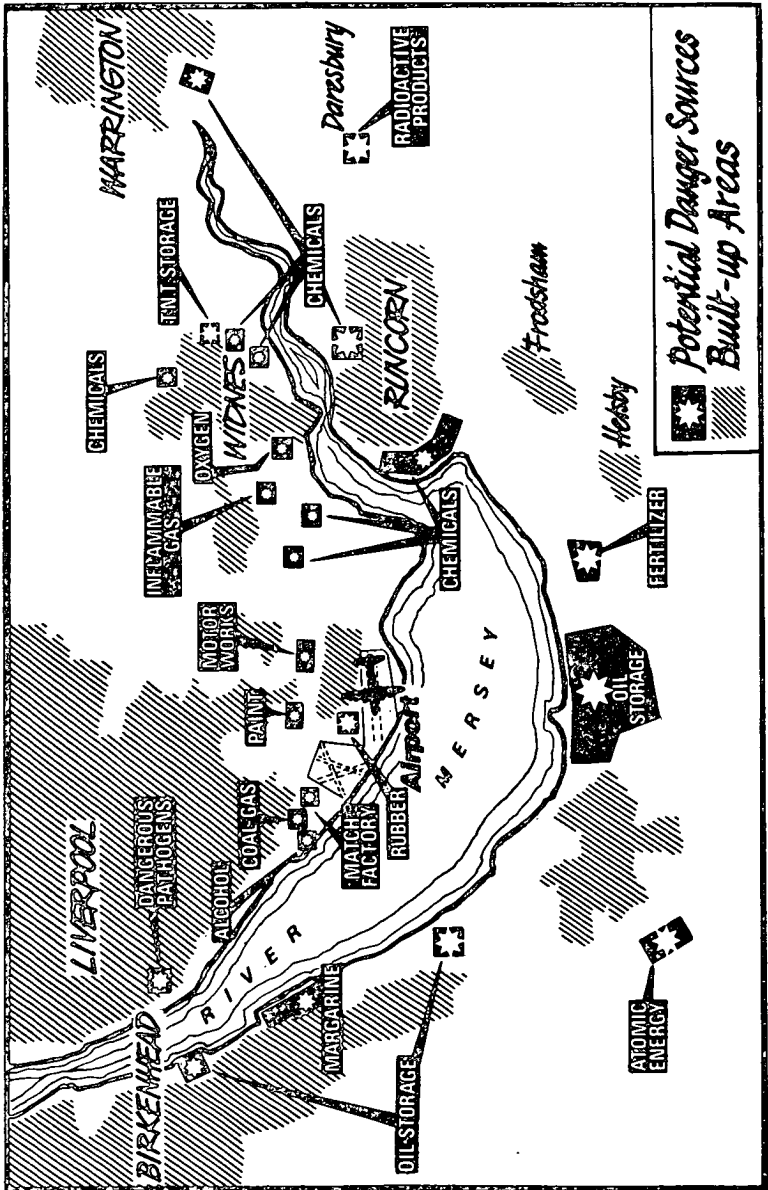


FIGURE 2. Courtesy *Liverpool Echo*.

Industrial accidents can, however, just as readily occur with toxic chemicals in every day use, such as carbon tetrachloride and trichlorethylene, both widely used as cleaning and degreasing agents. Over-exposure, especially in a confined space, can cause collapse or, in small doses over a period, may result in mental depression or insomnia. The range of chemicals that might be involved when a toxic accident occurs is so wide that the CEHO and the MOEH may well have to seek expert advice and guidance. The most useful sources will be:

(1) The DHSS Division on Chemical Contamination of the Environment and Food (Med SM<sub>3</sub>), which can provide information both on poisons that may be taken by individuals and on toxic substances which may contaminate the environment.

(2) The National Poisons Information Service, New Cross Hospital, London (tel. 01 639 4380), which can provide urgent advice on diagnosis and treatment.

(3) The regional office of EMAS.

(4) The firms using or producing the toxic substances involved, most of which have their own emergency plans and can provide help with advice and the services of expert staff.

The over-all responsibility for dealing with such toxic accidents in the United Kingdom rests with the HSE. But at the local level the prime responsibility will rest with the emergency services, the police, the fire service, and the NHS ambulance and hospital services with various departments of the local authority, including the Environmental Health Department, also being involved. In terms of the Home Office Circular 7/1975, all local authorities have had to prepare plans for dealing with major civilian emergencies, which should include toxic accidents. The MOEH should be familiar with the emergency plan for his district. It would be useful for the CEHO and the MOEH, together with the appropriate local officers of the HSE Inspectorates, to make a comprehensive survey of the industries in the district, identifying those in which a toxic hazard of any kind exists; and plans based on this information could form the basis of the relevant section of the LA Emergency Plan. The map reproduced in Figure 2, is a graphic representation of such a survey in Merseyside.

Accidents arising in the course of transport of toxic substances, particularly by road, can give rise to special difficulties in identifying the substance(s) involved. In this connection the MOEH should be

familiar with the Hazardous Substances (Labelling of Road Tankers) Regulations 1978, which require road tankers conveying prescribed hazardous substances to display hazard warning panels. The purpose of these panels is to warn the general public of a potential hazard and to inform the emergency services by means of an emergency action code of the appropriate initial action in the event of a fire or spillage. The interpretation of the emergency action codes is reproduced on a pocket-sized card, a copy of which is shown below. Copies of the card can be obtained from HMSO (ref. ISBN 1 11 340752 1) and the MOEH should always have one in his possession. The Health and Safety Executive are at present in course of preparing draft general regulations controlling the conveyance by road of dangerous substances. It is intended that these regulations will incorporate the tanker marking regulations and extend their provisions to other types of vehicles carrying dangerous goods.

These statutory provisions replace or supplement voluntary arrangements which have existed for sometime under the aegis of the Chemical Industry Association. The Association has produced useful literature in this field and has developed the 'Chemsafe' scheme for assistance in freight emergencies. Normally such assistance is provided by this industry itself, but there is a 'long-stop procedure' available to the Emergency Services through the National Chemical Emergencies Centre at Harwell.

The National Radiological Protection Board co-ordinates the National Arrangements for Incidents involving Radioactivity (NAIR). NAIR is designed to provide rapid and expert advice to the police at the scene of transport accidents involving radioactive materials and incidents such as the finding of radioactive sources, etc. Fire Brigades, who may also attend at accidents, are aware of the NAIR scheme. The scheme is not intended to apply to incidents at nuclear establishments, where detailed plans for dealing with emergencies have been prepared, nor in the case of incidents, such as loss or breakage of sources, fire or spillage of radioactive substances, etc., at premises where sources are regularly held and where trained staff should be available to deal with such emergencies. The NRPB provides a technical handbook for participants in the NAIR scheme.

Toxic accidents can occur outside office hours as readily as within them. To cover such contingencies the MOEH must ensure :

<b>Hazchem Scale</b>		Hazchem	Issue No 1	<b>Notes for Guidance</b>
FOR FIRE OR SPILLAGE		UN No		
1	JETS			
2	FOG			
3	FOAM			
4	DRY AGENT			
P	V	FULL	DILUTE	
R				
S	V	BA		
S	V	BA for FIRE only		
T		BA	DILUTE	
T		BA for FIRE only		
W	V	FULL	CONTAIN	
X				
Y	V	BA		
Y	V	BA for FIRE only		
Z		BA	CONTAIN	
Z		BA for FIRE only		
E	CONSIDER EVACUATION			
<b>Notes for Guidance</b> <b>FOG</b> In the absence of fog equipment a fine spray may be used. <b>DRY AGENT</b> Water <b>must not</b> be allowed to come into contact with the substance at risk. V Can be violently or even explosively reactive. <b>FULL</b> Full body protective clothing with BA. <b>BA</b> Breathing apparatus plus protective gloves. <b>DILUTE</b> May be washed to drain with large quantities of water. <b>CONTAIN</b> Prevent, by any means available, spillage from entering drains or water course.				

FIGURE 3.

(1) That an alternative officer is available when he himself is not, and that the name and telephone number of the alternative officer is known to the CEHO.

(2) That he and the alternative officer both have available at home all information and material necessary to enable them to provide relevant advice at the scene of an accident.

## 9. Reference documents for Part III

### A. DEPARTMENT OF ENVIRONMENT POLLUTION PAPERS

- No. 1: *The Monitoring of the Environment in the United Kingdom.*
- No. 2: *Lead in the Environment and its Significance to Man.*
- No. 9: *Pollution Control in Great Britain. How it Works.*
- No. 10: *Environmental Mercury and Man.*
- No. 11: *Environmental Standards: A Description of United Kingdom Practice.*
- No. 12: *Lead in Drinking Water: A Survey in Great Britain, 1975-76.*
- No. 14: *Lead Pollution in Birmingham.*
- No. 15: *Environmental Cadmium and Man* (in press).



B. AIR

*Final Report of the Beaver Committee* (HMSO, 1954).

Royal Commission on Environmental Pollution, Fifth Report 1976: *Air Pollution: An Integrated Approach*.

*National Society for Clean Air Yearbook* (published annually).

*Air Quality Criteria and Guides for Urban Air Pollutants* (Geneva, WHO, 1972).

C. ASBESTOS

*Interim Report of the Advisory Committee on Asbestos Health and Safety Commission* (HMSO, May 1977).

*Work on Thermal Insulation and Sprayed Coatings*. First Report of the Advisory Committee on Asbestos Health and Safety Commission (1978).

*Measurement and Monitoring of Asbestos in Air*. Second Report of the Advisory Committee on Asbestos Health and Safety Commission (1978).

*Asbestos—Hygiene Standards and Measurement of Airborne Dust Concentrations*. Health and Safety Executive Environmental Hygiene no. 10 (HMSO).

*Asbestos*. Health and Safety Executive Medical Series no. 13 (HMSO).

D. WATER

*Directive on the Quality of Water for Human Consumption*, Official Journal of European Community, no. C214/2 (18 September 1975).

*Nitrates in Water Supplies*, Report of International Standing Committee on Water Quality and Treatment (WHO, 1974).

*Report of Working Group on Inorganic Substances in Drinking Water* (Copenhagen, WHO, 1972).

*Bacterial Examination of Water Supplies*, Reports on Public Health and Medical Subjects no. 71 (HMSO, 1969).

*European Standards for Drinking Water* (Geneva, WHO, 1970).

'Modern problems in water supply', Kenny, A. W., *J. R. Soc. Hlth.*, 98 (1978), 116-21.

'Relationship between water supply and human health—Medical aspects', Windle-Taylor, E., *J. R. Soc. Hlth.*, 98 (1978), 121-9.

*Purification of Swimming Pools* (HMSO, 1975).

*Statement on the Use of Chlorine Gas in the Treatment of Water of Swimming Pools* (DOE Circular 72/78).

E. SOIL

*Redevelopment of Contaminated Land* (DOE Circular 49/77).

*Report on the Working Party on Dogs* (HMSO, 1976).

F. RADIATION

*Protection of the Public in the Event of Radiation Accidents* (Geneva, WHO, 1965).

*Health Legislation; Protection against Ionising Radiation—a Summary* (Geneva, WHO).

G. HEAVY METALS

*Directive on Biological Screening of the Population for Lead (77/312/EEC).*  
*Official Journal of the European Community*, no. L105/10 (28 April).

H. TRANSPORT OF TOXIC AND DANGEROUS SUBSTANCES

'Chemsafe'. *A Manual of the Chemical Industry Scheme for Assistance in Freight Emergencies* (2nd edition) (Chemical Industry Association, 1976).

I. GENERAL

*Health Hazards in the Human Environment* (Geneva, WHO, 1972).

*The Social Audit Pollution Handbook*, Maurice Frankel (MacMillan, 1978).

*Note:* The enactments relating to pollution of the environment are summarized in Pollution Paper no. 9, to which reference should be made for this information.

## PART IV

### *The MOEH as general medical officer to the local authority*

Local authorities require medical help on a continuing basis on matters other than environmental health. These should be a matter for agreement between the local authority and the health authority, and it will help to avoid confusion and misunderstanding if the agreement is in specific terms, setting out clearly the functions in respect of which a service is to be provided. It will also be desirable for the MOEH to clarify with the Chief Executive whether medical advice is to be provided only when requested or on the doctor's own initiative. In either case, the MOEH should arrange with the Chief Executive to be sent Council minutes and papers for meetings of the Council and its committees, so that he can keep himself informed on local developments and be able to play his part as a medical adviser when the need arises.

The more common duties in this category likely to be performed by the MOEH are described in the following four sections.

#### **1. Compulsory removal under section 47 of the National Assistance Act, 1948, as amended**

In terms of DHSS Circular LASSL(74)14, the MOEH will in most cases be the 'proper officer' to whom application is to be made when it is necessary to institute proceedings for compulsory removal of aged and certain other persons to hospital or some other appropriate institution.

The legal powers are contained in Section 47 of the National Assistance Act, 1948, as amended by the National Assistance (Amendment) Act, 1951. The amendments simplified the arrangements by enabling the local authority to delegate responsibility to a medical officer to act in cases of emergency. As most requests made are urgent, this has become the usual procedure.

The requirements are that persons who are to be compulsorily removed must be:

(1) Suffering from grave chronic disease, or, being aged, infirm, or physically incapacitated, living in insanitary conditions.

(2) Unable to devote to themselves, and not receiving from other persons, proper care and attention.

The application for removal is almost invariably initiated by the person's general practitioner or by a consultant geriatrician. If, following a visit by himself or a designated medical colleague, the MOEH and the medical practitioner agree that removal is necessary and should be effected *without delay*, they can issue the required certificate, on the basis of which an application can be made to a magistrate for an order for removal of a person to a hospital or other appropriate place, which must be arranged beforehand and named in the application. The magistrate may visit the case and may wish to have a discussion with the certifying medical officer. Once the order has been made, arrangements can be made for the removal, usually by the Ambulance Service.

In a few cases, where the Secretary of State has specifically approved the allocation of section 47 function to the authority's Social Services Committee, the administrative arrangements for the operation of this procedure will be undertaken by the Social Services Department. In other cases the local authority's Legal Department will probably be involved, but the MOEH will have to ascertain exactly what procedure is to be followed in the case of his own authority.

This procedure is not often necessary, as most elderly persons can be persuaded by their GPs and others to go to hospital voluntarily, but when these powers have to be used it can be distressing for all concerned. As cases tend to occur outside normal working hours, it is necessary for the MOEH to ensure adequate cover for these duties at all times.

## 2. Rehousing of individuals on medical grounds

This problem varies in different places and can be time-consuming. For example, in Liverpool, for many years, over 10,000 applications for rehousing on medical grounds have been received annually. All housing departments get requests for urgent rehousing on medical grounds. Many such requests are genuine, but unfortunately many

have few or no medical reasons to support the claim. It would appear that some citizens think a certificate from their doctor is a prescription for a new house. It is not. It is merely a request for consideration by the housing authority.

Most urban authorities have a medical housing points scheme (Hodgson, *Public Health*, 90 (1975), 15-2). If the MOEH is the medical adviser to the Housing Department, he should ensure that whatever scheme is adopted, it is discussed with and has the approval of the local Medical Committee.

One such scheme requires the housing applicant to obtain a form from the Housing Department, and to enter in it his reasons for claiming priority on medical grounds. He then takes the form to his GP, who can sign the form as a correct statement, and add any relevant information he thinks fit in support of the claim. This claim form is then sent by the applicant to the MOEH, or is handed in to the Housing Department.

The MOEH can then consider the request and, if necessary, can ask for additional information from the Environmental Health Department, or the Social Services Department, or the GP etc. agency. When he has mustered all his information, he can then recommend a measure of priority for housing or rehousing which he considers medically justified. The sole criteria on which he should base his recommendation are the medical facts.

In urban areas, where there is a housing shortage, the MOEH will be under pressure by elected representatives and others, and his credibility in this difficult task will depend on his ability to adhere to the known medical needs for priority, and to assess them without bias.

### **3. Occupational Health Service for local authority staff**

In the past, local authorities looked to their MOH to organize this service, and often to provide it through his medical staff. This varied over the country from a scrutiny of medical questionnaires from prospective employees, to a fully organized occupational health service with pre-employment medical examinations and some monitoring of sickness absences. In several larger urban authorities a highly developed occupational health service evolved, covering the Police and Fire Services, in accordance with Home Office require-

ments, social services, schoolteachers, and others, in addition to the local authority manual and office staffs.

After the 1974 reorganization, no unified system was instituted for the provision of this service, although it has been recognized that where it was previously provided by the MOH, the NHS is obliged to continue to provide this service free of charge, if so requested. In practice the clinical responsibility is sometimes borne by the MOEH and sometimes by another NHS doctor specifically appointed; but in most cases the local authority will look to the MOEH as their general adviser and supervisor for this responsibility. In recent years, the Employment Protection Act, 1972, and the Health and Safety at Work Act, 1974, have considerably increased the onerous nature of this work, and the MOEH where responsible will have to make himself thoroughly familiar with this legislation. He would also be well advised to have a series of meetings with the legal and personnel officers of the local authority and the medical officers working in the occupational health unit. They should prepare guidance for the occupational health care of the various groups of staff they will be asked to deal with. These guidelines should have the agreement of the Chief Executive, who will no doubt wish to consult other chief officers, so that, as far as possible, the practitioners manning the service will be clear on what is required of them. This is especially important in relation to retirement or dismissal on medical grounds, as the employee has a right of appeal to an Industrial Tribunal.

In certain instances, the assistance of an independent consultant may be necessary, or some information from hospital records, and suitable arrangements should be made for payment, when necessary. It may be necessary for the MOEH to attend a committee of the council, and explain some medical matter in relation to an employee. Industrial Tribunals have affirmed that when an employee is being recommended for retirement or dismissal on medical grounds, he must be informed of the precise nature of the medical opinion. Whilst the examining doctor may tell him his opinion, if there is likely to be an appeal, this should be sent in writing to the employee by an appropriate council official, such as the personnel officer.

#### **4. Cremation: medical referees**

Cremation is becoming the favoured method of disposal of the dead in this country, and under the Cremation Acts, 1902 and 1952, any local authority may provide and operate a crematorium. A medical referee must be appointed and is responsible for authorizing cremations in accordance with the legislation. The cremation authority may request the MOEH, or some other registered medical practitioner of not less than five years' standing, to act as the medical referee to the cremation authority. This is an entirely separate appointment made by the Secretary of State for the Home Department on the recommendation of the cremation authority. Medical referees receive an agreed fee for each certificate authorizing cremation.

If the MOEH undertakes this work, he must study and keep available for reference, the Acts and the associated regulations of 1930, 1952, and 1965, which set out his duties and the legal formalities which must be correctly complied with before he signs the certificate of authority for the cremation to take place. In practical terms the application forms for cremation and necessary certificates are submitted by local undertakers. Coroners issue certificates for cases referred to them for investigation. Whilst a clerk can scrutinize the forms to ensure that they are completed correctly and keep a register of applications received, the medical referee has the final responsibility for authorizing cremation. He has power to make any inquiries he thinks necessary in relation to an application, can ask for a post-mortem examination to be carried out in certain circumstances, and is required to decline to allow cremation to take place without a coroner's certificate if it appears that death was due to poison, to violence, to any illegal operation or to privation or neglect, or if there is any suspicious circumstance whatsoever.

#### **5. Reference documents for Part IV**

Health and Safety at Work, etc., Act, 1974.

Employment Protection Act, 1975.

Cremation Acts, 1902 and 1952; Cremation Regulations, 1930, 1952, and 1965.

# INDEX

A = Appendix, between pages 26 and 33

- Acanthamoeba*, 49  
Agricultural Development and  
Advisory Service (ADAS), 49  
alimentary tract infections, 14  
ambulance service, 12, 57, 64  
anthrax, 19, 33  
Applied Geochemistry Research  
Group, 49  
Area Health Authority, 19, 46  
Area Medical Officer, 17  
asbestos, 43-4, 60
- Beaver Committee, 40, see also  
pollution, air  
botulism antitoxin, 17, see also  
immunization
- cadmium, 50, 54  
carbon monoxide, 42  
carriers, see under notifiable diseases  
Centre for Extension Training in  
Community Medicine, 8  
Chemical Industry Association, 58  
chemoprophylaxis, 15  
Chief Environmental Health Officer  
(CEHO), 2, 3, 4, 12, 17, 22, 35, 40,  
46, 51, 52, 57, 59  
Chief Medical Officer (CMO), 8, 18,  
21  
cholera, A32  
Civil Aviation Acts, 44
- Clean Air Act, 40  
communicable diseases, A26-33  
communication, 17  
control, 7, 9, 15, 24  
prevention of, 7  
procedures, 8, 9, 12, 14, 19  
Surveillance Centre (CDSC), 5, 8, 9,  
11, 18, 20, 21, 22, see also Public  
Health Laboratory Service  
function of, 8  
report, 9-10  
contacts, see under notifiable diseases  
Control of Infection Officers, 18  
Control of Pollution Act, 44, 51  
County Councils, 39, 50  
Cox Committee, 14  
cremation, 67  
Act, 67  
medical referees, 67  
cyanide, 50
- Department of Employment, 37  
Department of Energy, 36-7  
Department of the Environment, 36-7,  
49, 50, 52  
industrial noise control, 44  
Pollution Papers, 40  
Radiochemical Inspectorate, 52  
Department of Health and Social  
Security (DHSS), 1, 20, 21, 22,  
39  
circulars and memoranda, etc., 2, 3,  
7, 8, 12, 13, 14, 15, 16, 23, 35, 38,  
46, 63



- Department of Health and Social Security (DHSS)—*cont.*  
 Division of Chemical Contamination, 37, 57  
 Division of Contamination and Food, 37, 39  
 experts, 11  
 International Relations Division, 22  
 liaison with, 5  
 local officers, 11  
 Department of Trade, 36-7, 44  
 Department of Transport, 36-7, 44  
 diarrhoea and vomiting, 46  
 diphtheria, A32  
 Directory of useful addresses, 69-75  
 disinfection, see under notifiable diseases  
 District Community Physician (DCP), 2  
 Divisional Veterinary Officers, 5, 19  
 Duncan, Dr William Henry, 1  
 dysentery, A32
- Employment Medical Advisory Service (EMAS), 5, 18, 38, 57  
 Employment Protection Act, 66, 67  
 encephalitis, A32  
 Environmental Health Officer (EHO), 46, 51, 52
- Family Practitioner Committee, 18  
 fire service, liaison with, 5, 57, 58  
 Food and Drugs Act, 22, A26-33  
 Food Hygiene Regulations, A26-33  
 General, 22  
 Docks, Carriers, etc., 22  
 documents on, 23-4  
 Ice Cream, 23  
 Liquid Egg Pasteurization, 23  
 Market, Stalls and Delivery Vehicles, 22
- Galbraith, N. S.  
*Proceedings of the Royal Society of Medicine*, 8  
 and Berrie, J. R. H., 9, 24  
 gastro-intestinal infections, 13-14, 33  
 Godber Report, 16  
*Guide to Infectious Diseases in an Emergency*, 8
- Health and Safety  
 Act, 35, 44, 66, 67  
 Commission, 35  
 Executive (HSE), 35, 38, 51, 57, 58  
 Inspectorates of, 5, 38-9, 41, 44, 51, 57  
 heavy metals, 40, 52, 61, see also under pollution  
 hepatitis, 14-15  
 infectious, 16  
 viral, 24  
 HM Alkali and Clean Air Inspectorate, 41  
 HM Industrial Pollution Inspectorate, 41  
 Hospital Control of Infection Committees, 5  
 hydrocarbons, 43
- immunization, 17, see also under notifiable diseases  
 immunoglobulin, 15, 16  
 anti-HB<sub>s</sub> AG, 16  
 anti-mumps, 16  
 anti-vaccinal, 16  
 anti-varicella zoster, 16  
 botulism antitoxin, 17  
 Imperial College of Science and Technology, 49  
 infectious diseases, see communicable and notifiable diseases  
 inflammation of the throat, acute, 33  
 influenza, reporting, 9-10  
*International Health Regulations*, 21, 24, see also WHO  
 isolation, see under notifiable diseases

- Ionizing Radiation Regulations, 52  
 'Itai-Itai' disease, 54
- jaundice, infective, A32
- Lassa fever, 11, 13, A32  
   *Memorandum*, 11, 21
- lead poisoning, 52-3
- leprosy, 11, 33
- leptospirosis, 33
- Liverpool Sanitary Act, 1
- local government, 5, 19  
   Act, 1, 23, 26, 38, 51  
   administrative arrangements, 1, 3,  
     39, 40, 52
- Chief Executive, 3, 5, 17, 63, 66
- environmental health  
   department, 59  
   inspectors, 51  
   officers, 46, 51, 52
- housing and planning departments,  
   5, 64-5
- legal department, 64
- occupational health service, 65-6
- refuse collection, 50-51
- reorganization of, 2, 66
- social services committee, 64-5
- London School of Hygiene and Tropical  
   Medicine, 8
- Marburg disease, A32
- malaria, 33
- measles, 15, 33  
   institutional outbreaks, 16
- Medical Officer for Environmental  
   Health,  
   appointment of, 2, 3  
   duties, 2, 3, 4, 5, 7-8, 9, 10, 11, 12,  
     13, 14, 15, 16, 17, 18, 19, 20, 21,  
     22, 26, 35, 38, 39, 40, 41, 44, 45,  
     46, 49, 51, 52, 54, 57, 58, 63, 64,  
     65, 66, 67
- Medical Officer of Health (MOH), 3,  
   65  
   appointment of, 1  
   duties, 1, 4  
   Society of, Reports, 14
- Medical Executive Committee,  
   Chairman of, 18
- meningitis, A32
- mercury, 52, 55
- methisazone (Marborane), 15, see also  
   under smallpox
- Milk and Dairy (general) regulations,  
   1959, 22
- Ministry of Agriculture, Food, and  
   Fisheries, 5, 19, 36-7, 51
- mumps, 16, see under immunization
- Naegleria*, 49
- National Arrangements for Incidents  
   Involving Radioactivity (NAIR),  
   58
- National Assistance Act, 3  
   compulsory removal, 63-4
- National Chemical Emergencies  
   Centre, 58
- National Health Service (NHS), 11,  
   22  
   Act, 1, 7, 9, 23, A26-33  
   reorganization of, 1
- National Poisons Information  
   Service, 57
- National Radiological Protection  
   Board, 58
- National Society for Clean Air, 40
- nitrates, pollution, 47-8
- nitrogen, oxides of, 42
- noise, 44
- notifiable diseases  
   control of, 7-20  
   see Appendix, 26-33, also communi-  
   cable diseases
- carriers, 14-15
- communication, 17
- contacts, 13-14, 21
- diagnosis, 11
- disinfection, 12, 17

- notifiable diseases—*cont.*  
   immunization, 15, 17  
   infectious diseases, 8, 15–16, 17, 18  
   isolation, 12, 13  
   legislation, 26  
   management of, 11, 13  
   media, 19–20  
   procedures, 7–8  
   removal, 12  
   reporting of, 7, 9
- occupational health service for local  
   authority staff, 65–6
- odours, 45
- Office of Population Censuses and  
   Surveys (OPCS), 5, 8, 10, 21
- Ophth. neonatorum, 33
- ozone, 43
- pathogens  
   dangerous, Advisory Group, 16  
   enteric, PHLS Division of, 14
- phenols, 50
- photo-oxidants, 43
- plague, A32
- Poisonous Waste Act, 51
- Poisons Information Service, 5, 57
- police  
   liaison with MOEH, 5  
   toxic accidents, 57
- poliomyelitis, 15, A32, 49, see also  
   under notifiable diseases and  
   Sabin vaccine
- pollution  
   air, 40, 60  
   contaminants, 40, 42–4  
   H.M. Inspectorates, 41  
   noise, 44  
   Statutes and principal Regulations,  
     41  
   control of, 35  
   Government Departments, 37, 41  
   heavy metals, 52–5  
     cadmium, 54  
     lead, 52  
     mercury, 55  
   'Papers', 40, 59  
   radiation, 52, 60  
   legislation, 52  
   reference documents, 59–60  
   soil, 49–50, 60  
     chemical pollution, 50  
     redevelopment, 50  
   toxic accidents, 55  
   waste materials,  
     solids, 50–51  
     liquid, 51–2  
   water, 45, 60  
     chemical pollution, 47–51  
     common complaints, 46  
     monitoring supplies, 45–6
- Port Health Authorities, 11, 21  
   Medical Officers, 10
- prophylaxis, 15, see also under  
   notifiable diseases  
   chemoprophylaxis, 15
- proper officer, 2, 3, 22, 26, 63  
   appointment of, 2, 7  
   duties, 2, 3, 5, 7, 8, 11
- Public Analyst, 5
- Public Health Acts, 5, 9, 12, 22,  
   A26–33  
   Infectious Diseases Regulations, 7,  
     14, 21, 22, A26–33  
   Aircraft, 21, 22  
   Ships, 21, 22  
   powers, 12, 14, 41
- Public Health Laboratory Service  
   (PHLS), 5, 8, 9, 10–11, 12, 14, 16,  
   17, 18, 46  
   PHLS Year Book, 17, 24  
   regional laboratories, 9
- rabies, 19, A32
- radiation, 40, 52, 60, see also under  
   pollution
- Radioactive Substances Act, 52, see  
   under pollution
- rehousing on medical grounds, 64–5

- Regional Water Authorities, 45, 47-8,  
51-2, see also water and pollution  
liaison with, 5  
relapsing fever, A32  
Report of Working Party on Dogs,  
50  
Road Traffic Acts, 44  
Royal College of General  
Practitioners, 10  
rubella, 16
- sabin vaccine, oral, 15, see also  
poliomyelitis  
salmonella  
typhi, 14  
paratyphi, 14  
other staphylococcal infections, 33  
scarlet fever, A32  
slaughterhouse (Hygiene) Regulations,  
1977, 23  
smallpox, 11, 12, 13, 14, 15, 16, A32  
vaccination, 15  
methisazone (Marborane), 15  
various memoranda, 23  
smoke and sulphur dioxide, 42  
Specialist in Community Medicine  
(SCM), 2
- tetanus, 15, 33  
toxic accidents, 40, 50, 55-9, 61  
waste, 50, 51, see also under pollution  
tuberculosis, A32  
typhoid fever, 13, A32  
paratyphoid, A32  
typhus, A32
- undulant fever, 33
- vaccination, see under immunization,  
notifiable diseases, and WHO  
verruca, 49  
viral haemorrhagic fever, 11, 12, 15,  
A32
- Warren Spring Laboratory, 45  
water, see under Regional Water  
Authority and pollution  
Act, 46  
fluoridated, 46  
chlorination, 46, 49  
contamination, 45-6, 49  
lead in, see heavy metals  
nitrates, 47  
reference sources, 60  
swimming baths, 49  
unpleasant tastes, 46  
Weil's disease, 52  
whooping cough, 33  
World Health Organization (WHO),  
*International Health Regulations*, 21,  
24  
pollution, 40, 42, 48, 54-5  
smallpox eradication programme, 16  
Technical Reports, 15  
Weekly Epidemiological Reports, 10,  
21, 22, 24  
*Vaccination Certificate Requirements  
for International Travel*, 22
- yellow fever, 33
- zoonotic diseases, 7  
Order, 19