

Health Protection In Scotland
A CONSULTATION PAPER

HEALTH PROTECTION IN SCOTLAND – A CONSULTATION PAPER

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HEALTH PROTECTION IN SCOTLAND – A CONSULTATION PAPER

Executive Summary

Introduction

In broad terms, health protection means protecting each of us from hazards which can damage our health, whether from disease or from biological, chemical, radiation and physical processes. Protecting health is an individual and collective responsibility. This consultation paper focuses on the latter and seeks views on the future direction of health protection in Scotland.

There are a number of compelling reasons for reviewing health protection arrangements in Scotland, including the proposals set out in “Getting Ahead of the Curve – A Strategy for combating infectious diseases”, which the Chief Medical Officer in England published on 10 January 2002. The rationale for that strategy is that the co-location of responsibilities in a Health Protection Agency (HPA) will enhance the capability to tackle health protection issues in England, including, infectious disease, and chemical and radiation hazards.

What is health protection?

The 2001 Review of the Public Health Function in Scotland defined health protection as activities that protect health and prevent ill health. These include communicable disease control; control of environmental hazards to health; management of public health emergencies; and population immunisation and screening programmes. However, other health problems are wholly or partly related to exposure to hazards such as injuries and cancers. We need to consider whether these other health problems should be brought within the scope of any new arrangements for health protection, and how we can best continue our commitment to working within a UK and increasingly international context on health protection issues.

The key functions involved in health protection are: surveillance; investigation; risk assessment, management and communication; and planning for and managing emergencies. In Scotland, within the policy and legislative framework set by the Scottish Executive and, as appropriate the UK Government, these functions are at present the responsibility of a variety of national, and local agencies. It is proposed that the scope for alternative organisational arrangements in Scotland should be limited to the functions discharged by the following bodies: National Radiological Protection Board; National Focus for Chemical Incidents; Scottish Centre for Infection and Environmental Health; Information and Statistics Division (the health surveillance elements); Scottish Poisons Information Bureau; Scottish National Reference Laboratories; and NHS Boards (health protection functions especially those delivered by communicable disease and environmental health teams). It is also proposed that the scope and shape of any re-organisation in Scotland should mainly be determined by the major health problems caused by exposure to hazards and how well alternative arrangements will help protect the public from them.

Major issues for health protection in Scotland

“*Our National Health, a plan for action, a plan for change*” recognised three clinical priorities: coronary heart disease and strokes, cancer and mental health. Other major issues for health protection in Scotland are: injuries in children and young people; healthcare associated infections, and anti-microbial resistance; infections in childhood; infections associated with injecting drug use; sexually transmitted infections; respiratory illnesses associated with exposure to airborne hazards; intestinal infections caused by organisms of animal origin; falls in older people; cancers linked with exposure to radiation; emerging and “re-emerging” infections; incidents and outbreaks caused by the deliberate release of biological, chemical or radiological agents; and climate change. A key outcome from this consultation process will be to determine whether there are any other health problems, which should be considered major issues for health protection, and why.

Strengthening health protection services

Surveillance

The effectiveness of surveillance depends upon: professional awareness of the value of the early recognition of actual and potential hazards and their notification to relevant protection agencies; accurate clinical and laboratory diagnosis of illness linked to hazards; a strong system of fully accredited diagnostic and reference laboratory services; information systems which permit the rapid transfer, processing and dissemination of data; and the ability to link surveillance data from different sources to develop an overall picture of the risk presented to the public from exposure to a hazard.

Against this background, the consultation aims to determine whether there is a need for health protection surveillance to be strengthened in the following areas: monitoring unusual illnesses; integrating different surveillance systems; modernising the system for notifying communicable diseases; improving information technology for data transfer.

Investigation

There are two approaches to health protection investigations. The first is the investigation of an outbreak or incident; the second is specifically commissioned research. The consultation aims to determine whether health protection investigations should be developed by: improving capability to carry out investigations into outbreaks or incidents; defining strategic priorities for research into health protection issues; making better use of findings from investigation and research.

Risk

Risk assessment, management and communication are distinct but inter-related elements of health protection measures. The consultation aims to determine whether there is a need for these to be strengthened by: developing guidance on good practice in risk assessment in health protection agencies, particularly those working within the NHS; ensuring that all policies developed to protect the public are formally founded on a rigorous approach to risk assessment; promoting partnership working on health protection; improving education on hygiene; developing indicators to assess the performance of NHS agencies with health protection responsibilities and the impact of risk reduction measures on health; developing guidance on risk communication for NHS agencies involved in health protection to be used in

establishing communication plans and procedures; commissioning research into understanding how certain risks become amplified and how the public can develop better means of comparing and contrasting risks which affect their personal life (risk literacy).

Emergency response and management

The importance of this function has been given added priority after the events of 11 September 2001. Extensive planning and guidance have already been put in place, including detailed guidance to health and local authority and other emergency services, raising clinical awareness and producing guidelines on the recognition and management of infections and exposures to chemical agents which give rise to unusual clinical presentations. The multi-agency response to an emergency involving the deliberate release of a biological, chemical or radiological agent is in most ways the same as one arising accidentally or naturally. The key aim is to reduce to a minimum the number of cases of illness by recognising promptly the outbreak of the incident, defining how cases have been exposed and identifying and controlling the source of the exposure.

Experience suggests that emergency response and management could be strengthened by: carrying out more regular joint exercises in all relevant types of incidents and improving the sharing of lessons learnt from them; continuing to develop and improve the reporting of outbreaks and incident management and the collation of the key lessons learnt from them; developing standards to audit the performance of organisations in managing outbreaks and incidents; and developing on-going training for frontline staff.

The contribution of microbiology services to health protection

Except for Reference Laboratories, the Scottish Executive sees no need to alter the organisational arrangements for microbiology services, which are the cornerstone of the surveillance of communicable disease. However, in line with progress being made in other UK countries, there is a requirement to improve the effectiveness and quality of NHS microbiology services' input to health protection, by, for example: identifying a lead microbiologist in each NHS Board area; establishing a standing sub-group of the Advisory Group on Infection; participating appropriately in two proposed UK initiatives (the adoption of standard operating procedures, and establishing an Inspector of Microbiology).

In addition, views are sought on: whether the current network of microbiology reference laboratories should be extended to deal with other micro-organisms and if so which; if their remit should be extended to test isolates from non-human samples; the scope for centralising all, or the majority of, reference laboratories in one NHS Trust or other appropriate service unit.

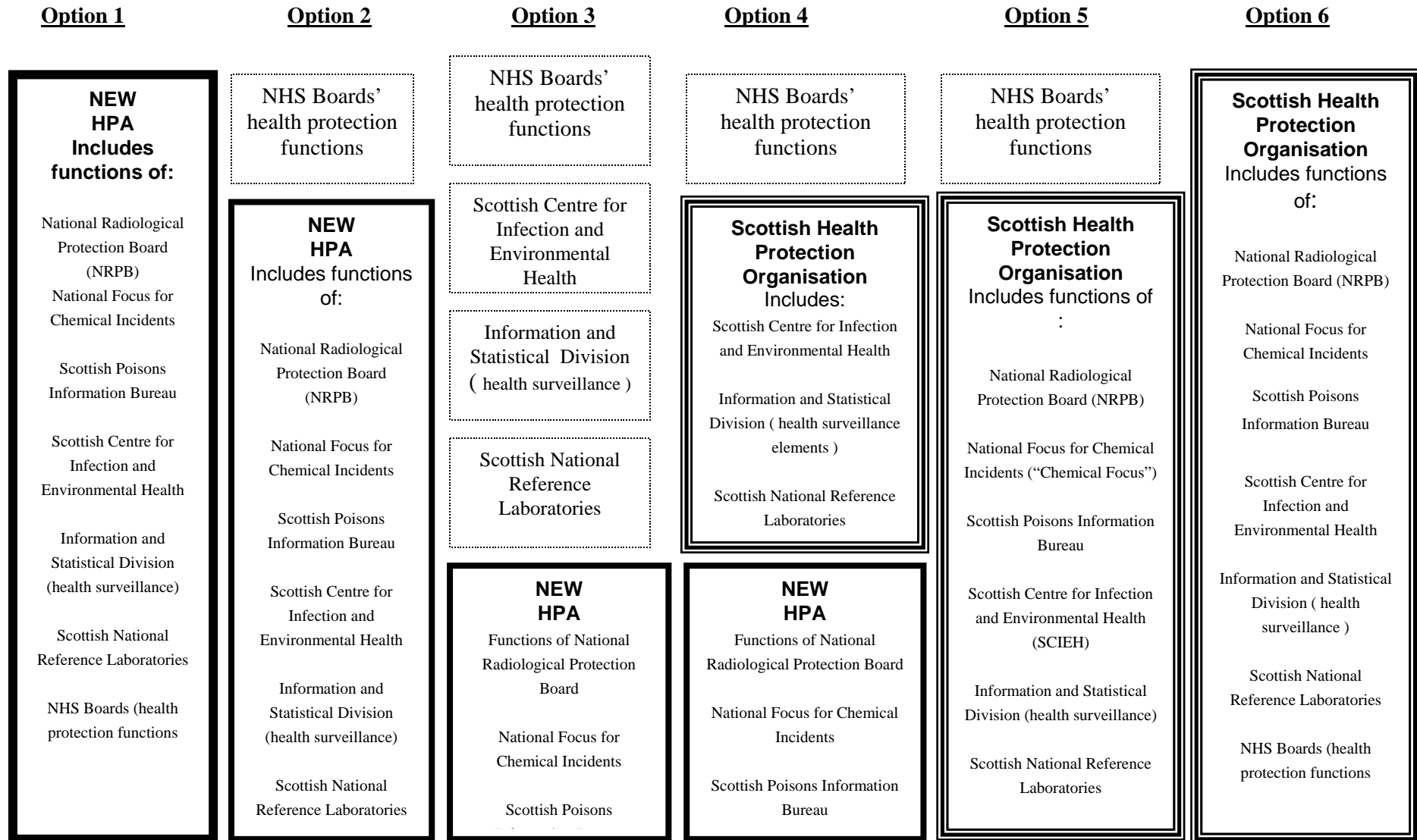
Options

The primary aim of this consultation is to assess the relative merits of 6 options for change summarised in the following table. Each option will have advantages and disadvantages. In judging them and framing a view on which is the best for Scotland, it will be important to consider whether and how each one:

- could improve the co-ordination and implementation of the required range of health protection measures;

Figure 1

OPTIONS FOR NEW ORGANISATIONAL ARRANGEMENTS FOR HEALTH PROTECTION IN SCOTLAND



- could improve the effectiveness and efficiency of the key health protection functions of surveillance, investigation, risk assessment, management and communication and managing emergencies.
- could enhance the accountability of health protection services in Scotland by more closely aligning policy, resource allocation and performance management functions.
- could facilitate collaboration with UK, European and international counterparts in protecting health, especially in securing the best possible specialist advice and in recognising and responding promptly to emerging infections and the deliberate release of biological and chemical agents.
- could provide incentives for people working in health protection to improve their individual and collective performance through a continuing process of personal, professional and organisational development.

Conclusion

More detailed, specific questions relating to all these themes are collated in Chapter 7.

HEALTH PROTECTION IN SCOTLAND – A CONSULTATION PAPER

Chapter 1: Introduction

1. Good health protection is at the heart of a healthy Scotland. Put simply, health protection means protecting each of us, young and old, from hazards, which can damage our health, whether from disease or from biological, chemical, radiological and physical processes. Protecting health is of course an individual and collective responsibility. This consultation paper is focussed on the latter, and seeks views on the future direction of health protection in Scotland.

2. Health improvement is high on the health agenda, manifested in the White Paper “Towards a Healthier Scotland” in 1999. This set priorities, targets and a framework for investment in good health and a coherent attack on health inequalities and the causes of ill health, based on a comprehensive and co-ordinated use of health and other resources and agencies capable of influencing health. The White Paper was followed, by the Chief Medical Officer’s “Review of the Public Health Function in Scotland”, which paves the way for a revitalised and integrated approach to public health; “Nursing for Health” the Chief Nursing Officer’s review of the contribution of nurses, midwives and health visitors to improving the public's health in Scotland; and by "Our National Health, a plan for action, a plan for change," which set out priorities for investment and reform to deliver a modern 21st century NHS, and for maintaining the momentum to build a national effort to improve health, including commitments to curb healthcare associated infection, to address anti-microbial resistance and to tackle the rising trends in sexually transmitted infections. There is thus a solid platform on which to build robust arrangements for protecting our health in Scotland.

3. There are compelling reasons for reviewing health protection arrangements in Scotland:

- there is a rapidly developing background of environmental and infectious threats which affect us now and could in the future.
- we need to put in place arrangements which are capable of addressing, monitoring and responding to a widening variety of environmental and infectious hazards.
- it is critical to shape a clear agenda, within which we can develop health protection services, consistent with the demands and challenges of the 21st century.
- recognising public anxieties over issues such as food safety and MMR, the importance of assuring the general public that systems and procedures are adequate to respond effectively to actual and potential threats, including biological terrorism, and
- the requirement to ensure that health protection, as an essential component of health improvement, makes a maximum contribution to the overall drive to better health in Scotland.

4. Changes under consideration elsewhere in the UK also provide an opportunity for considering whether we can improve arrangements for collaboration and co-ordination across the UK, while preserving the distinctive features of arrangements in Scotland (and elsewhere).

5. “Getting Ahead of the Curve – A Strategy for combating infectious diseases”, which the Chief Medical Officer in England published on 10 January 2002, set out proposals aimed at strengthening specialist support for health protection by bringing together, within one Agency, responsibility for a range of health protection functions.

6. In the light of consultation, the intention is that a special health authority (SHA) will be created as an England and Wales body from 1 April 2003. The SHA will be responsible for the functions currently performed by:

- the Public Health Laboratory Service (but not, in general, its clinical diagnostic microbiology services, which are transferring to the NHS, nor media production);
- the Microbiological Research Authority;
- the National Focus for Chemical Incidents, Regional Service Provider Units, and the National Poisons Information Service;
- the health protection functions provided by Consultants in Communicable Disease Control and other health protection staff; and
- the advice and other functions provided by regional health emergency planning advisors and their staff.

If legislative time allows, the aim is to establish the new Agency as an executive non-departmental public body from 1 April 2004. At that point, it is intended that the Agency will take on the functions to be discharged by the new special health authority (which will be wound up) and other functions, in particular, radiological protection functions which the National Radiological Protection Board currently performs for the UK Government and the National Assembly of Wales. This would leave the National Radiological Protection Board as a body with responsibilities in Scotland only.

7. The rationale is that the co-location of these responsibilities will enhance the capability to tackle health protection issues, including infectious disease, and chemical and radiation hazards.

8. In Wales, it is proposed that the Health Protection Agency will assume a more limited role, offering higher level advice and guidance to Wales. It is also envisaged that the HPA will take the lead on chemical incident advice and management. A National Public Health Service - Wales, will shortly be established and it is proposed that communicable disease control staff, and the PHLs in Wales (which includes CDSC Wales) will become part of this NPHS-W. That health protection structure will work closely with the HPA to ensure action on an England and Wales basis when needed i.e. emergency planning, counter measures, new policies and in specific work involving reference laboratories.

How We Will Use this Document

9. The following chapters sketch the scope of health protection in Scotland and the current organisational arrangements, and pose a number of questions on which we would appreciate views. The responses will help shape the institutional, organisational and procedural arrangements we need to put in place to optimise health protection in Scotland, with a particular focus on:

- a. how we should define the scope of health protection;
- b. major issues for health protection in Scotland;
- c. the organisational and legislative arrangements which might best be made for the delivery of health protection in Scotland; and
- d. whether, and if so to what extent, it would be beneficial for Scottish arrangements to link into the proposed Health Protection Agency in England and Wales;

10. A list of the consultees is at Annex 1; but the document is being placed on the web and is thus widely accessible. Though the aim is for the proposed Health Protection Agency in England and Wales to come into operation from 1 April 2003, there is no presumption that any changes in Scotland flowing from this consultation will match that timetable. Implementation will need to reflect the scope and scale of any agreed changes.

11. To help inform debate on the issues set out in this consultation paper, the Executive intends to follow its normal practice of making available to the public, on request, copies of the responses received. The Executive will assume, therefore, that responses can be made publicly available in this way. If, however, respondents indicate that they wish all, or part, of their responses excluded from this arrangement, confidentiality will be strictly respected.

Responses should be sent to:

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Public Health Division
Scottish Executive
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St Andrew's House
Regent Road
Edinburgh
EH1 3DG

Chapter 2: What is Health Protection?

12. In one sense, health protection means protecting people from hazards, which damage their health, but it is, of course, possible to construct a range of different, more detailed definitions. This chapter defines the main types of hazards, how people come into contact with them and how they affect their health. It goes on to describe the current legislative framework and organisational arrangements for the provision of services which safeguard people's health in Scotland and outlines the scope for change.

Hazards, exposures and ill health

13. Health and illness are a reflection of our interaction with the environment, our genetic endowment, and how we relate to each other. Societies have built on their knowledge of these factors to improve health. Among the steps taken are measures to protect people from hazards occurring in the physical and social environment. The broad categories of agents which endanger health (hazards) and how we come into contact with them (exposures) are presented in Table 1.

TABLE 1

HEALTH PROTECTION	
HAZARDS	EXPOSURES
Biological	Person to person
Chemical	Food
Radiation	Water
Physical	Air
	Animal
	Environmental

14. These categories overlap: for example, an outbreak of infection can involve the population being exposed to a micro-organism through two or more routes.

15. The hazards and exposures encompassed by health protection are often termed "involuntary" i.e. a person does not make a conscious decision to expose him or herself or his/her family to them. However, in real life, the boundary between voluntary and involuntary is blurred, can be contentious, and changes with time. In general, most people recognise that it is often beyond their own means to control their actual or likely exposure to "involuntary" hazards such as air pollution. Rather, they see the wider community and its institutions as having the major responsibility for protecting their health. Conversely, in other areas, such as sexual behaviour and injecting drug use, the dividing line between individual and community responsibility is one of continuing debate.

16. It is therefore important to acknowledge that preventing exposures to hazards is, where possible, a key element of health protection. It is often suggested that the supply of clean drinking water and immunisation against infectious diseases represent the two most significant and effective health protection measures of the last two hundred years.

17. However, most people, at some time in their life, will be affected by an exposure to a hazard. More often, they will be concerned about the risks to themselves and their families. At times, some may be anxious. For the media, health protection issues are often

synonymous with the word “scare”. People need to know what they themselves can do to reduce these types of risks and what to expect from local, national and international agencies, charged with health protection. For them, exposure to hazards is not just a health but also a quality of life issue. Individuals, therefore, need to be involved in health protection, not just as “cases” of ill health but also as citizens with rights and as consumers of the services which protect their health.

18. Although the hazards and exposures vary, they have in common that:

- they are capable of affecting large groups of the population in a relatively short time;
- when a problem arises, it may not be exactly clear what hazard is involved, how people have been exposed to it, and the numbers of individuals actually or potentially exposed;
- speedy action is essential to trace the source of exposure, control its extent and prevent further exposure.

19. Preparedness for the unusual as well as handling uncertainty and risk are therefore key features of health protection.

20. Exposure to hazards can affect the body to varying degrees. If exposure is severe and/or sustained, this will lead to disease, disability and, in the worse instances, death. The causation of ill health is complex, with lifestyle, life circumstances and genetic factors all playing a part singly and in tandem with exposure to hazards. The most common types of health problems associated with exposure to hazards are:

- infections;
- injuries;
- certain cancers;
- certain respiratory diseases;
- some congenital abnormalities.

21. Exposure to hazards, although not the principal cause of ill health in Scotland, still gives rise to a considerable burden of disease. As with most health problems, those associated with exposure to hazards often occur disproportionately in people with the lowest incomes. Improving health protection may therefore also help to reduce inequalities in health.

22. The number of people falling ill and dying from infections has dropped in the UK, and some of the reasons why they succumb to these types of diseases have also changed. New means of economic production, different ways of enjoying ourselves, the globalisation of trade and increasing pressure on the environment have led either to new hazards appearing or people being exposed to old ones in different ways. The pattern of injuries due to accidents has also been changing. Over the past 20 years, there has been a decline in deaths due to injuries as a result of accidents, with the rate in 2000 being less than half that in 1980,

and the reduction greatest in children. Explanations for this decline include both improved healthcare and increasing restrictions on children's independent mobility outside the home. Over the same period, emergency hospitalisation rates rose steadily, especially for home accidents, largely due to an increase in falls because of the growing number of older people in the population. Health protection services work in this context of change, and must evolve to reflect this.

23. People's understanding and perception of the risks to their health change with time. For most, as quality of life improves, so their expectations rise of the level and types of risk from which they should be protected. New technologies enable us better to identify hazards and measure exposures to them. These, coupled to an insatiable media appetite for "scare" stories, can give the impression that we are living in an era of unprecedented danger when almost all statistical and scientific data point in the opposite direction. At times, e.g. when they are caught up in an outbreak, people can become frightened. The recent BSE Inquiry and MMR controversy have highlighted the need for health protection agencies to pay as much attention to assessing public perceptions about risks and communicating with people about them as they do to investigating hazards and controlling exposures.

What is involved in health protection

24. The aims of health protection services are to:

- reduce the risk to the public from exposure to hazards which damage their health;
- limit the extent of exposure to these hazards if this cannot be avoided;
- reduce the incidence of co-morbidity, disability and mortality occurring as a result of exposure to these hazards;
- ensure that there is an effective response when a major exposure has occurred (i.e. a public health emergency).

25. The key functions involved in achieving these aims, are:

- *Surveillance*: monitoring the occurrence of hazards, exposures to them and their impact on health;
- *Investigation*: investigating the characteristics of hazards, the sources of them and their routes of exposure; assessing and measuring their effects on individuals and populations and evaluating the scope for, and effectiveness of, control measures.
- *Risk assessment*: estimating the probability of the health of a community being damaged from specific exposures;
- *Risk management*: taking effective measures to reduce the risk of, or limit the extent of, exposure to hazards and controlling their effect on the health of individuals and communities (for example, immunisation programmes).

- *Risk communication*: informing and educating the public in ways, which aid understanding, allay unnecessary anxiety and facilitate individual and collective action to reduce risk.
- *Planning for and managing emergencies*: ensuring that measures are taken promptly to prevent further exposure to a hazard, when a major exposure has taken, or may take, place such as in an outbreak of infection or a chemical incident;

26. Effectively delivering these functions requires underpinning by the following:

- suitable professional education and training;
- networks of professionals and agencies, operating locally, regionally and nationally, which co-ordinate policy, procedures and action;
- effective management, clear systems of accountability (including measures to assess the quality and impact of health protection services) and adequate resourcing of health protection services;
- effective links with UK and international bodies.

27. Protecting health is an individual and collective responsibility. The current legislative framework and current organisational arrangements for discharging health protection functions are now described.

Current Legislative Framework

28. The current legislative framework for health protection in Scotland dates from the Infectious Disease (Notification) Act 1889 and from the groundbreaking Public Health (Scotland) Act 1897, which, based on the principle of “protection from nuisances”, provided a wide range of functions to protect and improve health. Though powers for implementing this legislation rested mainly with local government, over the years, the responsibility for certain elements of health protection have been distributed from local authorities to other institutions. A series of statutes dealing with, for example, health and safety and the environment has helped re-define the statutory framework for health protection. Within the NHS, the National Health Service (Scotland) Act 1978 places a statutory duty on NHS Boards and local authorities to co-operate with one another to control communicable disease and to secure and advance the health of the people of Scotland. Subordinate legislation made under the 1889 Act and the Public Health (Scotland) Act 1945 requires the notification to the Chief Administrative Medical Officer of certain infectious diseases.

Current Organisational Arrangements

29. Hazards to health tend not to recognise national boundaries. Globally, under the leadership of WHO but with the support of many countries, there is renewed determination to co-ordinate international efforts to control infections such as the worldwide epidemics of TB, HIV and to combat the threat of bio-terrorism. The European Union’s new public health programme reflects continuing concern about infection and the environment and the need for EU-wide programmes on surveillance and rapid response to public health threats. In the UK, there is a set of operational arrangements, described in more detail in the following

paragraphs, some of which span the four UK countries and, in some instances, encompass the Republic of Ireland. Some of these are reliant on effective professional networks at national and local level, rather than organisations or managerial relationships.

30. In Scotland, the health protection function draws on a variety of national, and local agencies. The Scottish Executive sets the policy and legislative framework, monitors performance, and heads emergency planning, and of course this requires joint working among the Executive Departments concerned with health protection. At a local level, local authorities, NHS Boards and Trusts are the main players. A number of UK organisations provide relevant resources, for example, as outlined below, the Food Standards Agency has key functions in relation to food-related health protection. There follows a list of the main health protection agencies in Scotland:

31. Organisations with UK-wide responsibilities related to health protection

a. Food Standards Agency

The FSA is a UK-wide non-Ministerial Government department that operates at arms length from Ministers and was set up in 2000 to act primarily as an independent voice within Government to protect the public's health and consumer interest in relation to food. The FSA provides advice and information to the public and Government on food safety from farm to fork, nutrition and diet. It also protects consumers through effective food enforcement and monitoring. Its UK headquarters are in London, and the Agency also has a Scottish office in Aberdeen which advises Scottish Ministers on all policy and legislation relating to food safety and standards as these are devolved matters. The FSA employs about 700 staff (60 in Scotland) and is governed by a Board appointed to act in the public interest. The Board consists of a Chair, Deputy Chair and up to 12 other members, two of whom are directly appointed by Scottish Ministers.

The Meat Hygiene Service is an Executive Agency of the FSA operating within Great Britain and its functions are to provide a meat inspection service to all licensed meat plants.

b. National Radiological Protection Board

The National Radiological Protection Board was created by the Radiological Protection Act 1970. Its functions are to advance the acquisition of knowledge about the protection of mankind from radiation hazards and to provide information and advice to persons (including Government Departments) with responsibilities in the United Kingdom in relation to the protection from radiation hazards either of the community as a whole or of particular sections of the community. It also has a role in environmental monitoring and modelling. The NRPB employs some 300 staff at its centres in Glasgow, Leeds and its Head Office at Chilton, Oxfordshire. The NRPB is a Cross Border Public Authority (CBPA) which means, in simple terms, that the Board has functions exercisable in both reserved and devolved matters. Scottish Ministers have powers along with other Health Ministers to appoint members of the Board, extend its terms of reference and to direct it in the discharge of its functions. The Scottish Executive contributes to the funding of the NRPB.

c. The National Focus for Chemical Incidents

The National Focus for Chemical Incidents is jointly funded by the UK Health Departments. It is located at the University of Wales Institute at Cardiff. Its main activities are to improve NHS preparedness with respect to chemical incident management; to facilitate the response to chemical incident management; to advise Government of the potential public health impact of chemical incidents and to undertake public health surveillance of the impact of environmental chemicals.

d. Health and Safety Commission and Executive

The Health and Safety Commission (HSC) has overall responsibility for policy on health and safety at work in GB and advice to Ministers on standards and regulations. The Health and Safety Executive (HSE) is the operational arm of HSC. HSE's aim is to ensure that risks to people's health and safety from work activities are properly controlled. Its remit includes people outwith the workplace who may be harmed by the way work is done and, in some situations, the way work affects the environment. HSE enforces health and safety law, inspects workplaces, investigates accidents and cases of ill health, promotes good standards, publishes guidance and carries out research.

It should be noted that, under the Health and Safety (Enforcing Authority) Regulations, Local Authority Environmental Health services have a similar duty to enforce the law, inspect workplaces and investigate accidents and causes of ill health in prescribed workplaces.

e. State Veterinary Service

The State Veterinary Service (SVS) covers England, Wales and Scotland but not Northern Ireland. Its head is the Chief Veterinary Officer for Great Britain. The SVS is the lead agency responsible for animal health matters. It exercises the Scottish Executive's statutory responsibilities for responding to notifiable diseases in animals including those which can be transmitted to humans. The SVS in Scotland is an integral part of the Scottish Executive Environment and Rural Affairs Department.

32. Non-NHS statutory organisations with Scotland-wide responsibilities related to health protection

a. Scottish Environment Protection Agency

The Scottish Environment Protection Agency (SEPA) is the public body responsible for environmental protection in Scotland. It was established under the Environment Act 1995. SEPA's main aim is to provide an efficient and integrated environmental protection system for Scotland, which will both improve the environment and contribute to the Scottish Ministers' goal of sustainable development. SEPA regulates potential pollution of natural waters and the air and the storage, transportation and disposal of controlled waste as well as the keeping and disposal of radioactive materials. SEPA provides extensive guidance and advice to regulated organisations and works in partnership with others to deliver environmental goals through non-statutory means.

b. Drinking Water Quality Unit

Under the Terms of the Water Industry (Scotland) Act 2002, a Drinking Water Quality Regulator for Scotland was appointed in April 2002. He and his staff form the Drinking Water Quality Unit, which has the general functions of monitoring and enforcing drinking water quality standards on the public networks (provided by Scottish Water) and of supervising local authority enforcement of any private water supplies within their remit.

33. NHS Organisations with Scotland-wide health protection responsibilities

a. Scottish Centre for Infection and Environmental Health

The Scottish Centre for Infection and Environmental Health (SCIEH) is a Division of the Common Services Agency for NHSScotland. It is responsible for the national surveillance of communicable diseases and environmental health hazards and the provision of expert operational support on infection and environmental health to NHS Boards and local authorities in Scotland. Its aim is to improve the health of the Scottish population by providing the best possible information and expert support to practitioners, policy-makers and others on infectious and environmental hazards.

b. Information and Statistics Division

The Information and Statistics Division (ISD) is a Division of the Common Services Agency for NHSScotland. ISD collects, validates, interprets and disseminates data received from the NHS about healthcare activity, and the diseases dealt with by the service. It provides medical and public health advice to help understand such information. Key health topics on which data are collected are cancers, coronary heart disease, mental health, accidents, immunisation, drug misuse and sexual and reproductive health.

c. Health Education Board for Scotland

The Health Education Board for Scotland (HEBS), a Special Health Board within the NHSScotland, was established on 1 April 1991 as the national agency for health education in Scotland. The Board aims to promote good health through the empowerment of individuals, groups and communities. It works to ensure that people have adequate information about health and can acquire the motivation and skills which enable them to safeguard and enhance their own and other people's health. As well as providing programmes of health education at the national level, HEBS facilitates the development and co-ordination of complementary activities more locally throughout Scotland. Plans are being developed to merge and integrate HEBS and the Public Health Institute of Scotland

d. Public Health Institute of Scotland

The Public Health Institute of Scotland (PHIS) is a Division of the Common Services Agency for NHSScotland. PHIS was created in 2001 following the recommendations of the "Review of the Public Health Function in Scotland". Its remit is to protect and

improve the health of the people of Scotland by working with relevant agencies and organisations to increase understanding of the determinants of health and ill health, help to formulate public health policy, and increase the effectiveness of the public health endeavour. The work of the Institute focuses on three broad themes, namely, creating a new information base for public health; developing and utilising the public health evidence base; and developing the public health human resource.

e. Scottish Poisons Information Bureau

The Scottish Poisons Information Bureau (SPIB) provides health care professionals with advice on the features and the clinical management of poisoning via a 24-hour telephone enquiry service and an on-line computer database. The National Services Division, a Division of the Common Services Agency commissions the service for NHSScotland. It is one of six centres throughout the UK, which make up the National Poisons Information Service. SPIB forms part of the UK network of agencies and professionals with responsibilities for providing advice on toxicology.

f. Scottish National Reference Laboratories

The National Services Division of the Common Services Agency commissions this network of microbiological laboratories. They are based in NHS Trusts and most provide a service for the confirmation and typing of organisms in order to provide information for the management of individual patients and epidemiological information for public health purposes. Their work is often used in tracing and following outbreaks. There are national reference laboratories for: tuberculosis, *E. coli* O157, gonorrhoea, legionella, MRSA, meningococci and pneumococci, parasitology, salmonella, trace elements and toxoplasma. In addition, the Public Health Laboratory Service (PHLS) (an ENDPB with responsibilities in England and Wales under the NHS Act 1977) provides cover for other highly specialist reference services not dealt with by the Scottish laboratories.

34. NHS Organisations with responsibilities within Scotland for health protection

a. NHS Boards

There are 15 NHS Boards in Scotland. They have very broad responsibilities for improving and protecting the health of their local population. Recent guidance has reiterated that health protection is one of the key functions they must deliver in the push to improve Scotland's health.

The control of communicable diseases is a prime responsibility of NHS Boards. This entails the surveillance of communicable diseases, immunisation co-ordination, the management of programmes to prevent bloodborne virus infections, outbreak and incident management, the development and co-ordination of infection control policy and education related to health protection. A multi-disciplinary team, led by a Consultant in Public Health Medicine, usually carries out these functions. The Consultant normally carries the powers of Designated Medical Officer to the local authority in the event that legal powers are required to control the spread of communicable disease or other hazards. (In practice, of course, this responsibility

rests with Directors of Public Health, working with a number of CPHMs on an on-call rota).

NHS Boards also monitor and manage the impact on health of exposure to chemical and other toxic agents and lead the local NHS emergency planning function.

b. NHS Trusts

NHS Trusts provide a range of clinical and diagnostic services to treat people exposed to hazards. However, they also play a key role in their prevention. All clinical services are important in the early recognition of illnesses due to exposure to hazards. Microbiology services are essential for the diagnosis and management of infections, the surveillance of biological hazards, the investigation of outbreaks and the control of infection in healthcare settings. Infection Control Teams are fundamental to combating healthcare associated infection. Specialists in infectious diseases and genito-urinary medicine, paediatricians and general practitioners have a key role in the early recognition and subsequent control of communicable diseases.

35. Non-NHS statutory organisations with responsibilities within Scotland related to health protection

a. Local authorities

Local authorities play a pivotal role in protecting the health of their communities through three key approaches: planning, regulation and service provision. In the first, the development of local plans, the preparation of emergency plans, the promotion of sustainable development and the granting of permission to planning applications all influence the degree of health protection offered to local communities. This will be reinforced by the Local Government Bill, which, if enacted, will provide a statutory basis for community planning, and place on local authorities a duty to initiate and facilitate the process (working with other public bodies such as the Police and other emergency services, and NHS Boards). As such, local authorities also have a pivotal role in the context of planning and implementing action to respond to emergency situations.

Local authorities also monitor and enforce a series of national and local statutes related to health protection. These include licensing services and establishments, controlling air quality, trading standards, food safety, health and safety at work, contaminated land, public health nuisance, pest control, consumer protection, building control, road and community safety. Education, housing and cleansing are among the key services provided by authorities, which help prevent exposures to hazards.

Local authorities share the statutory responsibility for controlling communicable diseases with NHS Boards. On a day-to-day basis, Environmental Health Officers working in Environmental Services or other departments, constitute the prime local authority resource in this area of health protection. They also have the principal local responsibility for reducing the risks from many environmental hazards. They liaise closely with their NHS colleagues in the investigation and control of outbreaks of infections, being the enforcement arm of the teams set up to manage these incidents.

b. Public Analyst and other laboratories

Public Analysts provide chemical and biological testing of environmental, food, water and other types of samples at four laboratories in Scotland. They work to ensure the best scientific expertise is available to local authorities for their law enforcement role.

Food microbiological laboratories are an important part of the health protection function. Commissioned by local authorities, food laboratories are geared to detect human pathogens likely to be found in clinical material from human specimens.

Scottish Water has a number of laboratories, which test for the presence of chemical and biological agents in the public water supply, as a matter of routine and in emergency situations, and established arrangements for reporting to public health authorities. The Scottish Agricultural College provides laboratory services to the SVS, including testing for the presence of zoonotic pathogens and levels of anti-microbial resistance.

c. Emergency Services

The Police and Fire Services, often in liaison with NHS Boards and local authorities, provide essential services in protecting the public from exposure to hazards in chemical incidents and other public health emergencies and in ensuring that safety measures, which help prevent accidental injury, are in place and being observed.

d. Procurators Fiscal

Procurators Fiscal are responsible for criminal investigations and any consequent court proceedings as a result of infractions of legislation related to health protection

The scope for new organisational arrangements for health protection

36. Hazards do not respect frontiers. As described earlier, health protection agencies must, and do, link together in combating them. Global travel and trade arrangements mean that the Scottish response to certain incidents will form part of a wider UK and international response. The need for close co-operation among Scottish, other UK, European and international health protection agencies has never been greater. New organisational arrangements should seek to strengthen these ties.

37. Certain hazards are uncommon and expertise in dealing with them is limited and can only be made available at a UK or European level. Because of this, most formal scientific advice on health protection issues comes from expert committees organised on a UK-wide basis. The move in England to establish the proposed Health Protection Agency is not expected to alter the arrangements for obtaining formal expert scientific advice. This will continue to be provided on a UK-wide basis and the Scottish Executive will continue to liaise closely with its UK partners in this area. Of particular importance will be the new National Panel on Emerging Infectious Diseases, in terms of horizon scanning.

38. However, the day-to-day business of health protection work mainly involves more locally based tasks such as dealing with food poisoning, bloodborne virus and health care associated infections. The need for strong local partnerships is nowhere clearer than in these

areas. Health protection measures to control these problems need to be integrated with other health improvement functions such as health promotion. At times, relationships and organisational arrangements can be severely tested, particularly in the management of emergencies that potentially, or actually, threaten public health. Here a quick and effective response is essential. Professional networks and direct contact with individuals and communities who are affected or feel threatened by hazards are essential to the overall effectiveness of the function.

39. Health protection agencies operate in what, at times, is a highly adversarial climate, where blame is often used as a method of attack. Recent events have focused attention on how best to obtain the public's trust in risk management measures. Securing this requires developing a "listening, learning and engaging" mode of operation. To engage in this, health protection professionals and agencies should be clear about the objectives they are seeking to achieve. Local accountability is a key factor in ensuring that this occurs.

40. Organisational arrangements, therefore, have to balance local action with international co-operation. The establishment of the proposed HPA has a number of implications for local health protection services in Scotland. Firstly, it is proposed that the HPA will assume those functions currently undertaken for the UK Government and the National Assembly for Wales by the National Radiological Protection Board. As such an alternative arrangement for providing radiological protection functions in Scotland may need to be considered. Secondly, it is proposed that certain specialist laboratory and epidemiological units which provide UK-wide services and essential back-up to Scottish services, should either form part of the HPA or be commissioned by it. This may have implications for the Scottish National Reference Laboratories and SCIEH. Thirdly, the arrangements for providing advice on chemical toxicology issues relating to clinical poisoning and chemical incidents affected by the proposed establishment of the HPA require us to consider how the services provided by SPIB and the NFCI should best be arranged. Lastly, it is proposed that the HPA will develop new standards for information collection and public health practice in health protection, which may directly influence how we carry these out in Scotland.

41. It seems clear that because of these factors, it may not be possible to maintain the status quo for our organisational arrangements for health protection in Scotland. But the need to consider such change also provides an opportunity to review the range of problems to be dealt with in any alternative structure for health protection in Scotland.

42. The 2001 Review of the Public Health Function in Scotland included the following definitions:

- public health: the activity associated with "the science and art of preventing disease, prolonging life, and promoting health through the organised efforts of society".
- the public health function: a robust, adequately resourced endeavour that can secure and sustain the public health, addressing health policy issues at a population level, and leading a co-ordinated effort to tackle the underlying causes of poor health and disease. The Public Health Function is the pursuit of population health improvement by a whole range of bodies.

- health protection: activities that protect health and prevent ill health. These include communicable disease control; control of environmental hazards to health; management of public health emergencies; and population immunisation and screening programmes.

43. Because these definitions do not wholly coincide with those which underpin the HPA, we need to consider the issue further. One question is whether the remit of health protection agencies in Scotland should include other health problems wholly or partly related to exposures to hazards such as injuries and cancers, and how that might impact on our established commitment to working within a UK and increasingly international context.

44. Microbiological services form a key part of the health protection function. They:

- identify the presence of microbes in samples taken from humans, animals, food, water and the environment and interpret the relevance of the results for health;
- advise clinicians about the significance of results and liaise with them in managing infected patients;
- lead infection controls teams in reducing the risk of healthcare associated infections;
- notify public health services about the presence of microbes, participate in other aspects of surveillance and help investigate and manage outbreaks and incidents;
- investigate the characteristics of biological hazards and the scope for controlling them.

45. They carry out these functions as part of local, national, UK and international networks. Because of this, Scottish services cannot be isolated from the impact of the reforms flowing from *Getting Ahead of the Curve*. That said, the Scottish Executive takes the view that there is no reason related to health protection for reorganising NHS microbiology services in Scotland - with one exception, the Scottish National Reference Laboratories. We wish to explore the scope for more fully integrating these laboratories with other health protection services. However, based on *Getting Ahead of the Curve*, the Department of Health in England produced a discussion paper on the contribution of microbiology services to health protection, and we wish to obtain views about which of its recommendations might pertain to Scotland. These are discussed further in Chapter 5.

46. Except for the functions discharged by the NRPB and the NCFI, other UK-wide agencies with a specific health protection remit are not envisaged for inclusion in the proposed HPA. Subject to comments in the consultation process, it is proposed therefore to exclude these other bodies from any specific re-organisation in Scotland. Moreover, SEPA, HEBS, PHIS, NHS Trusts, the Drinking Water Quality Unit, the Emergency Services and Procurators Fiscal have a wider remit than health protection. Again, therefore, the intention is to exclude them from any re-organisation.

47. As earlier described, local authorities have a key role in health protection across the range of their functions. EHOs, in particular, have a crucial contribution to make. Arguments could be adduced for embracing many of the functions EHOs discharge in any

reorganisation of health protection in Scotland. Conversely, there are good reasons for not disturbing the present arrangements. For example, EHOs have close links with other agencies, including the Food Standards Agency and SEPA, which are not envisaged as part of any organisational change. It would be helpful to have views on this point and on how the contribution of local authorities and EHOs in particular to health protection can be enhanced. Similarly, it would be helpful to have views on whether this logic can be applied to other posts or functions.

48. It is therefore proposed that the scope for alternative organisational arrangements in Scotland should be limited to the functions discharged by the following bodies:

- National Radiological Protection Board;
- National Focus for Chemical Incidents;
- Scottish Centre for Infection and Environmental Health;
- Information and Statistics Division (the health surveillance elements);
- Scottish Poisons Information Bureau;
- Scottish National Reference Laboratories;
- NHS Boards (health protection functions especially those delivered by communicable disease and environmental health teams).

49. The scope and shape of re-organisation in Scotland should mainly be determined by the major health problems caused by exposure to hazards in Scotland and how well alternative arrangements will help protect the public from them. The next chapters provide further details on these.

Conclusion

50. Health protection has a long history in Scotland. It has adapted over the years to an evolving physical and social environment and has made an important contribution to improvements in people's quality of life and wellbeing. At the start of the 21st century, we have an opportunity to modernise services to face the new challenges presented in an ever-changing world.

Key Questions

It would be helpful to have views on:

- **the scope of health protection in Scotland and how that might support our established commitment to working within a UK and increasingly international context**
- **how the contribution of local authorities and EHOs in particular to health protection might be enhanced.**

Do consultees agree:

- **that consideration of change should focus on the bodies listed in paragraph 48?**

- **that EHOs should not be considered for inclusion in any new organisational arrangements for health protection?**

Chapter 3: Major Issues for Health Protection in Scotland

51. **“Our National Health, a plan for action, a plan for change” recognised three clinical priorities: coronary heart disease, cancer and mental health. This chapter illustrates some of the other major issues for health protection in Scotland which have been identified on the basis of, for example, the current burden of ill health from exposure to hazards, likely trends in their future occurrence and areas of public concern.**

Injuries in children and young people

52. Accidental injury is the main cause of death of children and young people. Accidents in the home cause most deaths within the 0-4 age range, while motor vehicle and pedestrian accidents cause most deaths among school-age children. Injuries from accidents at school account for 20-30% of all accidental injuries to school-age children, but the reporting of accidents varies widely between schools (Scottish Needs Assessment Programme, 1994). These injuries occur mainly in the playground in primary schools and during sports in secondary schools. Accidental injury is also the main single cause of death among young men aged 15-34 years, accounting for 25% of male deaths. These injuries and deaths are mainly among car and motorcycle users.

53. Deaths from injuries in early life make a substantial contribution to lowering overall life expectancy rates. The prevention and control of injuries in childhood and early adulthood is therefore a key health protection challenge.

Healthcare associated infections (HAI) and anti-microbial resistance

54. A marker of the extent of HAI is the number of bloodstream infections due to Methicillin Resistant Staphylococcus aureus (MRSA). Since the late 1990s, reports have been increasing at a rate of 15% per year. This has led to prominent public concern. HAI, however, is not a new phenomenon. In the 19th century, infection in hospital was a recognised and common hazard of care. Its resurgence has been for a range of reasons. More invasive treatments, more complex ways of delivering care for patients (at times in inadequate environments) and increasing numbers of older people and others more susceptible to infections, have been partly to blame. But lack of commitment to reducing the risk of HAI in healthcare settings and to maintaining good standards of hygiene, has also been a key factor.

55. Anti-microbial resistance arises when bacteria and other organisms find ways of surviving treatments such as antibiotics and disinfection. The best-known example is *S.aureus* which has developed resistance to many conventional antibiotics. MRSA, in its most virulent forms, is a serious hazard in health care. The recent Antimicrobial Resistance Strategy and Scottish Action Plan (2002) provide a template for further action.

Infections of childhood

56. Infectious diseases are the most common reason for a child to attend a general practitioner. They result in up to one-half of hospital admissions in this age group, most commonly with respiratory or abdominal complaints. Breast-feeding is vital to help the young child build up its resistance to disease. Childhood immunisation programmes have

been successful in eradicating some diseases, and safe and effective vaccines promise further successes . Existing and planned screening programmes will help to detect and prevent the spread of infections, such as HIV, from mother to baby.

57. Recent concerns surrounding MMR vaccination have shown that parents remain anxious about interventions in healthy children and associated risks and benefits. The *E. coli* O157 Task Force highlighted the need for children to be educated effectively about good hygiene and for them to be cared for in settings with adequate wash-hand basins and other hygiene facilities. Parents participating in the Task Force expressed concerns about some doctors' ability to recognise the onset of symptoms indicative of severe infections. This highlights the on-going need for effective high quality training of healthcare professionals dealing with infection in childhood.

Infections associated with injecting drug use

58. HIV infection, hepatitis B and hepatitis C (HCV) infection are the main diseases spread by injecting drug misuse. HCV infection is now widespread among injecting drug users. A report on HCV, published by the Scottish Needs Assessment Programme in 2000, highlighted the need to control this illness as one of the key public health challenges of the new millennium. By the late 1990s, it was estimated that 62% of those injecting had been infected. Harm reduction measures have helped reduce, but not control, the spread. Of concern is evidence pointing towards needle sharing becoming more frequent. A significant number of those infected will need liver transplants in the coming decades.

59. Preventing and controlling drug misuse is a major challenge for society in which the NHS plays a major role. Health protection services are key players in this. The recent outbreak of *Clostridium novyi* has shown that contamination of drugs, an on-going problem, can result in outbreaks.

Sexually transmitted infections

60. Since 1995, there has been a gradual and sustained increase across the UK in diagnoses of sexually transmitted infections such as chlamydia, gonorrhoea, syphilis and genital warts. In general, the increase has been greatest among teenage males and females but there is evidence from the investigation of clusters of cases of gonorrhoea, syphilis and HIV that there is increasing unsafe sexual behaviour among young heterosexual adults and men who have sex with men. A major complication of chlamydia and gonorrhoea is pelvic inflammatory disease which can lead to ectopic pregnancies and infertility.

61. The Executive has funded the £3 million Healthy Respect project in Lothian to help guide future action in this area. It aims radically to transform teenage attitudes to sexual health and sexual relationships, reduce the level of teenage pregnancies, and prevent the spread of sexually transmitted infections amongst young people. A sexual health strategy for Scotland is also being developed.

Respiratory illnesses associated with exposure to airborne hazards

62. The UK has the highest rates in Europe of young adults reporting asthma symptoms and probably the highest incidence of childhood asthma in the world. There has been an increase of about 50% in the prevalence of childhood asthma over the last 30 years, part of a

general increase in atopic diseases over the same time period. An estimated 21% of UK children aged 12-14 year olds reported having been diagnosed as asthmatic at least once in their life. There is some evidence that rates are higher in Scotland than in other UK countries. Admissions to hospital because of asthma have greatly increased over the last 10 years.

63. Recent major studies have concluded that air pollution with chemical hazards such as smoke or traffic plays a minimal role in causing asthma or in aggravating its symptoms when compared to biological hazards such as infections or allergens. In 1994, a severe thunderstorm in the UK was associated with the largest outbreak of asthma ever recorded. It is thought that the release of small aerosilised particles of grass was the main causative factor. Smoking also plays a role especially in adults. Most evidence points to the illness being caused by a number of interrelating factors which makes risk reduction difficult. However there is need for more concerted action in this area.

64. Studies of the relationship between ill health and air pollution have established that the main hazard is probably airborne particles that are small enough to get into the deeper areas of the lungs (rather than polluting gases and vapours). The concentration of particles is much higher in urban than in rural areas, due mainly to road traffic. There is now clear evidence that exposure to high concentrations of airborne particles causes short-term exacerbation of respiratory and cardio-vascular diseases, and that long-term exposure increases the incidence particularly of the latter.

Intestinal infections caused by organisms of animal origin

65. *E.coli* O157, campylobacter, salmonella, and cryptosporidium are the most significant causes of severe infectious intestinal disease in Scotland. The main reservoir of these micro-organisms is the gut of farm animals, especially cattle, sheep, and poultry. They can be transmitted from animals to humans through a variety of routes e.g. food, water, contact with animal faeces. Reducing the risk to health from these therefore requires an integrated approach involving those concerned with animal health, farming, the rural environment, water, food, waste, education and human health.

66. The incidence of salmonellosis has been falling in recent years with most commentators agreeing that this is due to risk reduction measures targeted at the poultry flock. In Scotland, most of the recommendations made by Professor Pennington in the wake of the *E. coli* O157 outbreak in central Scotland have been put in place. Most evidence points to a fall in the number of outbreaks associated with the consumption of meat and meat products although they still do occur. The *E. coli* O157 Task Force report provides a template for further action in this field and the implementation of its recommendations will go a long way to protecting us not only from that micro-organism but the others described above. One challenge will be the increasing global trade in food with products coming from an ever-increasing number of countries.

Falls in older people

67. Each year a third of the population aged over 65 years has a fall, and half of these fall at least twice. Mortality associated with falls is high. A common consequence, especially in women, is a fracture of the femur with a 33% mortality rate in one year. Those aged over 75 years old who are admitted after an accident (most often a fall) occupy a bed for, on average,

18 days. Falls are a major cause of disability and handicap in older people. Even the fear of falling limits activity and increases the risk of admission to care.

68. A recent SEHD Report by the Expert Group on Healthcare of Older People made a number of recommendations on the NHS's role in assessing individuals' risk of falling and offering interventions to reduce their risk. Most falls are multi-factorial in origin, and there is now a clear understanding of the risk factors involved. Successful interventions are those which address multiple risk factors and there is now substantial evidence from randomised controlled trials that these interventions are effective. The report recommended the establishment of NHS assessment services. Commentators have recommended that this approach be accompanied by one which seeks to improve environmental safety measures especially through joint working with housing agencies.

Cancers linked with exposures to radiation

69. Radon is a natural radioactive gas which emanates from the ground and accumulates in buildings. The gas decays into other radioactive species and, for most of the UK population, inhalation of these is clearly the largest source of exposure to radiation. The National Radiological Protection Board estimates that radon causes some 3000 excess cases of cancer in the UK population annually and is therefore the UK's second biggest cause of lung cancer after smoking.

70. A principal cause of all skin cancers is exposure to ultraviolet radiation from the sun and white skinned Scots are particularly susceptible. According to figures provided by the Scottish Information and Statistics Division, the last quarter of the 20th century saw the annual incidence of non-melanoma skin cancers rise from just under 2000 (in 1975) to just under 6000 (in 1998). Over the same period, the annual incidence of (the more serious) melanoma showed a similar rate of increase from less than 200 to over 500 cases. These represent the most rapid rates of increase for any common form of cancer in Scotland.

Emerging and "re-emerging" infections

71. As society evolves, so do micro-organisms. Through this process of change, new ecological niches arise which facilitate the spread of harmful organisms (some new, some old) and so give rise to epidemics. Since the early 1970s, at least 30 previously unknown infectious diseases for which there is no fully effective treatment, have become prominent. The collapse of the Soviet Union has been associated with the rise of a "re-emerging" infection, diphtheria. Tuberculosis rates are increasing throughout the world, including London. The 1990s saw a major epidemic of drug resistant TB in New York.

72. The incidence of variant Creutzfeldt-Jacob disease (vCJD) (still a uniformly fatal disease) continues to increase at a rate of 21% per year. It is still too early to forecast longer-term trends with any certainty. If in 4 or 5 years the trend has flattened out, it would rule out the extreme scenarios of the spread of the epidemic unless there was a secondary epidemic. However, there remain many uncertainties, not least about the extent to which the disease can be spread by medical treatments. Because of these, we must maintain vigilance and act with prudence in preventing transmission.

73. The key to combating these new threats is strong awareness of the possibility of them occurring, effective diagnostic and surveillance systems and good international co-operation.

These were recently put to the test in Scotland with the outbreak of *Clostridium novyi* in injecting drug users in the West of Scotland. A key conclusion of the Sheriff Principal in the subsequent Fatal Accident Inquiry was that, on the whole, public health systems had worked effectively. But there remains a need to strengthen these to cope with the unforeseen.

Incidents and outbreaks caused by the deliberate release of biological, chemical or radiological agents

74. In 1995, for the first time, a terrorist group in Japan deliberately used the chemical warfare agent sarin against a civilian population. Since September 11th 2001, awareness has grown of the threat from an individual or group deliberately releasing a biological or chemical hazard.

75. A large-scale deliberate release of a chemical or biological agent has never happened in the United Kingdom. However, the risk cannot be ignored. Hoaxes can occur. Therefore, the NHS and its partners need contingency plans to deal with this possibility. Effective health protection services are essential players in countering the threat from this source.

Climate Change

76. Climate change is considered the most serious environmental threat to our planet. Climate change impacts are expected to touch on many aspects of our lives, including our health. The Department of Health (in England) has studied the potential impact of climate change on public health and made a number of conclusions, including:

- far too little is known of the likely effects of climate change on health;
- winter deaths are likely to decline, while heat-related deaths in summer are likely to increase;
- food poisoning cases linked to warm weather are likely to increase;
- increasing severe storms will enhance the risk of injury or death, and flooding can lead to immense anguish.

77. Specifically in Scotland, the primary negative impact of our climate arises from pervasive dampness, increasing the incidence of respiratory diseases. Key to reducing these impacts will be an improvement in the quality of housing against damp and a reduction in the incidence of fuel poverty. These issues are being addressed by the Executive's climate change and social policies.

Conclusion

78. Exposure to hazards continues to be a significant cause of ill health in Scotland. Reducing the risk of this occurring will make a major contribution to improving Scotland's health.

Key Questions

- **Do consultees agree that the health problems detailed in this section, are major issues for health protection in Scotland?**

- **Could consultees indicate any other health problems, which they consider to be major issues for health protection and give the reasons why.**

Chapter 4 - Strengthening health protection services

79. This chapter considers the various functions involved in health protection and suggests how they might be strengthened.

Surveillance

80. Surveillance involves the collection, collation, analysis and dissemination of information about health and its determinants. Its purpose is to recognise a change in the distribution of illnesses, exposures and hazards so as to alert health protection agencies of the need for specific measures or to inform them whether current policies are being effective in reducing exposure to hazards. Surveillance and research underpin risk assessment and the development of risk reduction measures.

81. NHS agencies principally monitor the occurrence of episodes of ill health, death and the isolation of micro-organisms from samples taken from humans. A range of non-NHS agencies routinely collect, analyse and disseminate information on the occurrence of hazards in food, water, the air, and the general environment.

82. The effectiveness of surveillance depends upon:

- professional awareness of the value of the early recognition of actual and potential hazards and their notification to relevant protection agencies
- accurate clinical and laboratory diagnosis of illness linked to hazards
- a strong system of fully accredited diagnostic and reference laboratory services
- information systems which permit the rapid transfer, processing and dissemination of data
- the ability to link surveillance data from different sources to develop an overall picture of the risk presented to the public from exposure to a hazard.

83. Against this background, there is a need for health protection surveillance to be strengthened in the following areas:

a. Monitoring unusual illnesses or syndromes

Since 11 September 2001, there has been an increased awareness of the need to detect rapidly outbreaks of communicable disease or clusters of unusual illness and to identify the implicated hazard. A Working Group has developed proposals to introduce a surveillance system for the detection of unusual illness in the population. This initiative is linked to participation in the development of UK-wide and international programmes to "horizon scan" for emerging infections.

b. Integrating different surveillance systems

A common criticism of surveillance systems is that they place greater importance on collecting than using information and thus become "data warehouses". One way of overcoming this would be through better linkage between datasets to facilitate their use in assessing the risk from exposures and their effects, in particular:

- linking NHS information on episodes of ill health with that held on microbiological isolates;
- developing an environmental health surveillance system which connects data on hazards and exposures with the occurrence of ill health;

c. Modernising the system for notifying communicable diseases

The Public Health (Notification of Infectious Diseases) (Scotland) Regulations 1989 place a duty on medical practitioners to notify the Chief Administrative Medical Officer (CAMO, now known as the Director of Public Health) of any patient they believe to be suffering from a notifiable disease which is specified in the regulations. There is a consensus that there is a need to expand notifiable diseases to include pathogenic micro-organisms and this is proposed within the current review of public health legislation.

d. Improving information technology for data transfer

There is a need to ensure that the gap between exposure of the population to hazards and the detection and diagnosis of any resultant illness is as small as possible. Key to this is the introduction of information systems which attempt to achieve “real time” surveillance by facilitating the rapid transfer of data on cases of ill health and their possible reasons for falling ill.

Investigation

84. There are two approaches to health protection investigations. The first is the investigation of outbreak or incident; the second is specifically commissioned research. Epidemiological investigations attempt to establish the pattern of ill health associated with exposure to a hazard and its association with likely causes. Other types of investigation try to detail the ways in which the person was exposed to the hazard, or characterise the nature and properties of an implicated hazard. Health protection investigations are often multi-disciplinary and their utility depends on the collation of different types of data. Areas where further development of health protection investigations could take place are:

a. Improving capability to carry out investigations into outbreaks or incidents

Many NHS Boards lack the capacity to undertake structured investigations into outbreaks and incidents. There is a need for improved support from national agencies.

b. Defining strategic priorities for research into health protection issues in Scotland

The need for a more concerted and co-ordinated approach from research centres in Scotland to optimise output from research into health protection has long been recognised.

c. *Making better use of the findings from investigation and research*

A recent review of outbreak management has highlighted the need for improved collation of investigation findings from outbreak and incident investigation. The establishment of the Public Health Institute of Scotland provides a focus for the development of evidence-based practice in health protection.

Risk Assessment

85. Rigorously assessing the risk to the public health from exposures to hazards should be the cornerstone of advice to policymakers and regulators, the basis for accurately informing and communicating with the public and the platform for developing and evaluating control measures designed to reduce risk.

86. Risk assessment is a key element of the practice of many of the agencies involved in health protection. However although its use is extensive, it has not been formally adopted as a tool for ongoing application in many areas, particularly those concerned with communicable disease control. Because of this it is proposed that health protection services should continue to:

- a. *develop guidance on good practice in risk assessment in health protection agencies, particularly those working within the NHS;*
- b. *ensure that all policies developed to protect the public are formally founded on a rigorous approach to risk assessment.*

Risk Management

87. Risk management involves implementing and co-ordinating a series of interventions designed to reduce the risk from exposures to hazards. These include:

- providing advice on how to avoid and minimise risks;
- education and training about risks and how to reduce them;
- producing guidance on good practice, policies and procedures to reduce the risk of exposure to hazards;
- providing services which prevent the transmission and development of infections or their complications ;
- providing hygiene services which reduce or eliminate contamination with hazards;
- defining organisational and individual responsibility with regard to reducing risk and their consequent liabilities
- setting standards to measure the performance of agencies and the quality of their services in reducing risk to the public

- formulating and enacting regulations.

88. NHS agencies are key players in managing the risks from exposure to hazards and in particular those related to the person-to-person transmission of micro-organisms. However, most measures to reduce the risk of exposure to hazards fall within the remit of other agencies.

89. The following are highlighted as areas where developments in risk management could take place:

a. Partnership working on health protection

The recent introduction of community planning provides a focus for developing strong alliances to tackle issues such as accident prevention at a local level. The Public Health Institute of Scotland is taking forward the creation of a Healthy Environments Network, which will bring together key partners at national and local level, in order to develop environmental health policy, taking account of best practice arising from local initiatives, and contribute to ongoing work on health protection.

b. Education on hygiene

The growing numbers of healthcare associated infections and worries about the person-to-person spread of childhood infections have once more highlighted the need for improving hygiene education in the pre-school sector and in training programmes for healthcare professionals.

c. Development of indicators to assess the performance of NHS agencies with health protection responsibilities and the impact of risk reduction measures on health

There are few outcome measures to assess the overall impact on health of risk management programmes. Recently, the Food Standards Agency has developed a target for reduction in foodborne infections. There are opportunities to extend this model to other areas.

Risk Communication

90. Communicating about risk to the public health is of vital importance. People need to understand risks to make decisions about their and their families' health and to make proper enquiries of public bodies, which are charged with making decisions on their behalf. Communication needs to be considered by all those dealing with actual or potential public health risks, at all stages of the health protection processes. How to communicate about risk depends upon an understanding of how the population perceives risks and how the media and other factors exert an influence.

91. The BSE Inquiry highlighted the dangers from what has been termed "communication by sedation", i.e. professionals and Government downplaying unknown risks. A key matter for health protection agencies is handling uncertainty and, in doing this, they require to be open and transparent to the public and their representatives.

92. Priorities for the development of risk communication include:
- a. *Developing guidance on risk communication for NHS agencies involved in health protection to be used in establishing communication plans and procedures.*
 - b. *Commissioning research into understanding how certain risks become amplified and how the public can develop better means of comparing and contrasting risks which affect their personal life (risk literacy).*

Emergency response and management

93. The importance of this function has been given added priority after the events of 11 September. Extensive planning and guidance have already been put in place, including detailed guidance to health and local authority and other emergency services, raising clinical awareness and producing guidelines on the recognition and management of infections and exposures to chemical agents which give rise to unusual clinical presentations. The Scottish Executive Health Department has participated in establishing strategic stockpiles of drugs and vaccines and putting in place plans for their distribution.

94. The multi-agency response to an emergency involving the deliberate release of a biological, chemical or radiological agent is in most ways the same as one arising accidentally or naturally. The key aim is to reduce to a minimum the number of cases of illness by recognising promptly the outbreak of the incident, defining how cases have been exposed and identifying and controlling the source of the exposure. Health protection agencies should strive to keep the public and media informed of the health risks associated with an incident.

95. Incidents and outbreaks also provide an opportunity to collect information which will be of use in better understanding the nature and origin of exposure to toxic hazards and how best to present them.

96. Experience suggests that emergency response and management could be strengthened by:

- a. *Carrying out more regular joint exercises in all relevant types of incidents and improving the sharing of lessons learnt from them.*
- b. *Continuing to develop and improve the reporting of outbreaks and incident management and the collation of the key lessons learnt from them.*
- c. *Developing standards to audit organisations' performance in managing outbreaks and incidents.*
- d. *Developing on-going training for frontline staff in recognising and dealing with incidents.*

Conclusion

97. Surveillance, investigation, risk assessment, management and communication and managing emergencies are the key health protection functions. Improving them entails a series of developments, many of which are detailed in this chapter. It will require investment in organisational and staff development. To succeed in making health protection services more effective, more transparent and effective organisational, accountability and performance management arrangements need to be put in place.

Key Questions

- **Do consultees agree that health protection requires strengthening in the areas outlined above?**
- **Could consultees indicate any other areas for health protection services, which they consider to be deficient and require strengthening and give the reasons why.**

Chapter 5 - The contribution of microbiology services to health protection

Introduction

98. The commitment of microbiological services across Scotland is highly valued in the health protection and public health fields. Microbiological services confront a range of challenges which are common to many clinical and laboratory services. These include increasing workload, recruitment and retention of staff and other operational matters. This consultation document focuses on issues specific to health protection function, with a view to strengthening arrangements which already exist rather than proposing wholesale change.

99. NHS microbiology services should seek to balance their public health and individual patient care obligations. In respect of the former, the priorities for microbiology services are:

- improving the contribution of clinical diagnostic laboratories to health protection;
- continuing the drive to improve the standards of microbiology services;
- enhancing joint working among those involved in human microbiology services and with colleagues working in other types of microbiology e.g. food, animal, water and environment;
- enhancing the provision of reference and specialist public health microbiology;

Increasing the effectiveness of microbiology services' contribution to health protection

100. Microbiology services are the cornerstone of the surveillance of communicable disease. The advice of microbiologists is essential in managing incidents and outbreaks of communicable disease. To help develop these functions, it is proposed that in each NHS Board area there should be a lead microbiologist with an interest in health protection who will promote good practice and be the main microbiologist providing an input into local policy.

101. In line with improving local arrangements, there is a need to strengthen the participation of microbiologists in national policy setting on matters related to infection. It is therefore proposed that a Standing Sub-Group of the Advisory Group of Infection be established to provide advice to SEHD on the microbiological aspects of health protection and clinical management.

Continuing the drive to improve the standards of microbiology services especially those which relate to health protection

102. All NHS microbiology services in Scotland participate in the CPA and/or UKAS accreditation schemes. In England in addition to these, two other improvements to NHS microbiology services are proposed:

- to extend standard operating procedures developed in England and Wales to all NHS laboratories and develop national standards based on these;

- to establish an Inspector of Microbiology who will review microbiological laboratories to identify major problems in their functioning.

103. It is proposed that NHS microbiology services in Scotland participate in these two initiatives if further information provides a compelling case for so doing. In relation to the latter option in particular, there is a need to fully consider the range of possible functions, and what benefits might accrue in Scotland, and related to that, whether those functions could or should be delivered on a statutory or administrative basis.

Enhancing joint working among those involved in human microbiology services and between these and their colleagues working in other types of microbiology e.g. food, animal, water and environment

104. A key aim of the drive to make health protection better is further integrating human health with animal and other types of surveillance. This is required to control food and water borne infections, enable the detection of emerging infections and monitor and prevent the spread of anti-microbial resistance. It is proposed that the Standing Sub-Group of the Advisory Group of Infection dealing with microbiology should include representatives of those working in other areas of microbiology to develop common approaches to the testing of samples and isolates, share information on good practice and advise the Scottish Executive on policy issues related to microbiology.

Enhancing the provision of reference and specialist public health microbiology services

105. The current network of microbiological reference laboratories covers tuberculosis, *E. coli* O157, gonorrhoea, legionella, MRSA, meningococci and pneumococci, parasitology, salmonella, and toxoplasma. In addition, the Public Health Laboratory Service (PHLS) provides cover for any other highly specialist reference services not dealt with by the Scottish laboratories.

106. This chapter poses a number of questions around current organisational arrangements for reference laboratories. In addition, views are sought on:

- whether the current network of microbiology reference laboratories should be extended to deal with other micro-organisms and if so which;
- if their remit should be extended to test isolates from non-human samples;
- the scope for centralising all, or the majority of, reference laboratories in one NHS Trust or other appropriate service unit.

107. It is proposed that the new Health Protection Agency will assume responsibility for the provision of reference laboratories in England, many of which will provide a UK-wide service. The Scottish Executive will ensure that a service level agreement on these is drawn up with the Agency.

Conclusion

108. Except for Reference Laboratories, the Scottish Executive sees no need to alter the organisational arrangements for microbiology services. However, in line with progress being made in other UK countries, there is a requirement to improve the effectiveness and quality of NHS microbiology services' input to health protection.

Questions

Do consultees agree that:

- **no change should be made to the organisational arrangements for non-reference microbiology services in Scotland?**
- **national standards should be adopted by all NHS laboratories in Scotland, based on standard operating procedures developed in England and Wales?**

It would be helpful to have views on:

- **whether the current network of microbiology reference laboratories should be extended to deal with other micro-organisms and; if so, which;**
- **if their remit should be extended to test isolates from non-human samples;**
- **the scope for centralising all or the majority of reference laboratories in one NHS Trust or other appropriate service unit;**
- **whether you see a role in Scotland for the Inspector of Microbiology, expected to be appointed in England; and what that role might be;**
- **the arguments for and against having the same standard operating procedures throughout the UK.**

Chapter 6: Options for Organisational Arrangements for Health Protection in Scotland

109. **This chapter sets out options for re-organising health protection services in Scotland. Consultees are invited to review each option, outline what they see are the strengths and weaknesses of each, and indicate which they prefer.**

Background

110. Many of the issues confronting health protection services in Scotland were considered in the Review of the Public Health Function in 1999. Among its key recommendations, which were accepted by the Scottish Executive, were:

- NHS Boards should have sufficient staff to develop and discharge the communicable disease and environmental health control function. (A staffing norm for each mainland Board was provided). The further development of supra-regional and national CD&EH networks should seek to ensure that out-of-hours cover arrangements across Scotland are adequate.
- the development of joint training opportunities for public health specialists and EHOs should be enhanced and local level public health liaison committees between CD&EH specialists, EHOs and other professionals strengthened,;
- Closer technological and organisational ties should mean greater integration of communicable and non-communicable disease surveillance and control. Incremental development in areas of common interest should allow progressive integration of these important functions.
- Multidisciplinary team working between CPHMs, public health nurses, good networks with professional colleagues in public health, clinical and microbiological disciplines, and adequate cross-cover arrangements between and among Boards are crucial and should be strengthened;

These recommendations remain extant and form part of the policy framework within which decisions on new organisational arrangements should be made.

Other Relevant Initiatives

111. A number of other initiatives need also to be borne in mind, in considering the arrangements for health protection in Scotland. These include:

- The current review of public health legislation. The basis of public health law in Scotland still lies in 19th century legislation and, in particular, the Public Health (Scotland) Act 1897. That visionary statute has served us well but the climate is now right for change, given developments in the public health field, and a review of the legislation is in train. New legislation will, of course, be dependent, among other things, on Parliamentary time being available. The extent to which any forthcoming legislation in the public health field could be used as a vehicle for any changes arising

from the consultation would depend on issues such as timing, scope and nature of the proposals.

- The Review of Management and Decision-Making in NHSScotland. This project is examining the style of management and decision-making processes appropriate for a post-devolution and post-internal market NHSScotland, including the relationship between the Scottish Executive and NHSScotland, the optimum number and configuration of NHS organisations appropriate to the size and geography of Scotland, and consequential legislative changes.
- Arrangements for more systematic regional and national planning for services and responses that needed to be planned and implemented for populations larger than those of NHS Board areas (HDL (2002) 10). These arrangements bring NHS Boards together in three regional planning groupings – West, South East and North of Scotland-to plan and implement health care services, to harmonise regionally NHS Boards' service plans and to plan for and respond to a variety of emergency situations. These arrangements also required NHS Boards and the regional planning groups to engage the appropriate senior clinical and other staff to plan for particular services, and also to involve Local Authority partners in the regional planning arrangements.
- The Review of the Common Services Agency (CSA). A review is currently in train of the existing and potential responsibilities of the Common Services Agency, and other aspects, including the Agency's relationships with NHSScotland, its governance and accountability, and the legislative implications of any proposed changes. Consultation with NHS bodies on the review will close on 2 December 2002. The review's recommendations are mostly aimed at the governance of the CSA, and it has concluded that current responsibilities remain appropriate, while recognising that this may be impacted upon by the Review of Management and Decision Making in NHS Scotland, the review of health protection arrangements or by the introduction of the new GMS contract.

Options for new organisational arrangements

112. As earlier proposed, the following table sets out the various bodies around whose functions options have been developed.

1. National Radiological Protection Board (NRPB)
2. National Focus for Chemical Incidents (“Chemical Focus”)
3. Scottish Poisons Information Bureau (SPIB)
4. Scottish Centre for Infection and Environmental Health (SCIEH)
5. Information and Statistics Division (the health surveillance elements – ISD)
6. Scottish National Reference Laboratories
7. NHS Boards (health protection functions especially those delivered by communicable disease and environmental health teams.)

113. Six options involving permutations of the seven services have been developed based on their potential viability as organisational entities. Figure 1 outlines the differing options. They are:

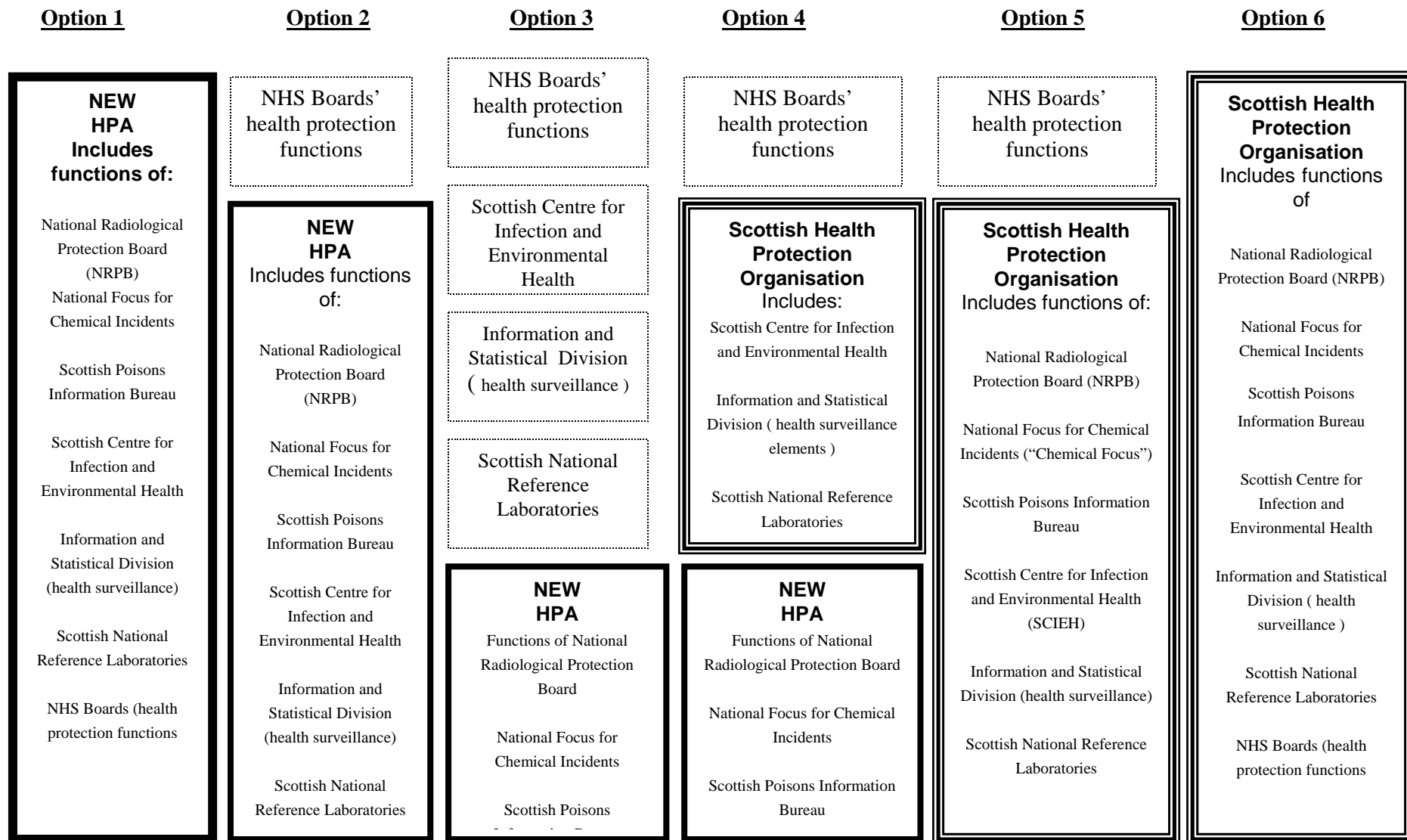
Option 1: Full integration of all Scottish health protection services into the proposed new HPA

All seven of the current local and Scotland-wide health protection services detailed above become part of a new Health Protection Agency (HPA), covering Scotland and England and providing certain services to Wales and Northern Ireland.

The inclusion of the health protection functions of NHS Boards in Scotland goes beyond what is currently being developed in other parts of the UK. This may not be a substantive issue in terms of considering the relative merits of this option, in principle, but could be expected to complicate any potential implementation process and timescale.

Figure 1

OPTIONS FOR NEW ORGANISATIONAL ARRANGEMENTS FOR HEALTH PROTECTION IN SCOTLAND



Option 2: Integration of all Scotland-wide services into the proposed new HPA but no change to local arrangements

All Scotland-wide health protection services (i.e. services 1-6 detailed above) would become part of the proposed new HPA. NHS Boards would retain responsibility for local health protection services (i.e. service 7 detailed above)

Option 3 Integration of certain Scotland-wide services into the proposed new HPA but no change to other Scottish arrangements

Certain Scotland-wide services, NRPB, Chemical Focus, SPIB would be incorporated into a new HPA (i.e.. services 1-3 detailed above) and arrangements made for these services to continue to be provided in Scotland. Other Scotland-wide services SCIEH, ISD, and the Scottish National Reference Laboratories (i.e. services 4-6) would remain as related but independent functioning organisations. NHS Boards' health protection arrangements would be unchanged.

Option 4 Integration of certain Scotland-wide services into the proposed new HPA and the establishment of a Scottish Health Protection Organisation for the remaining Scotland-wide services

Certain Scotland-wide services, NRPB, Chemical Focus, SPIB would be incorporated into the proposed new HPA (i.e. services 1-3 detailed above) and arrangements made for these services to continue to be provided in Scotland. Other Scotland-wide services SCIEH, ISD, and the Scottish National Reference Laboratories (i.e. services 4-6) would come together within a new Scottish organisation. NHS Boards' health protection arrangements would be unchanged.

Option 5 No integration into proposed new HPA but the establishment of a Scottish Health Protection Organisation for all Scotland-wide services with no change to local services

All Scotland-wide agencies (i.e. services 1-6) become integrated into a Scottish Health Protection Organisation with no change to NHS Boards' health protection arrangements. .

Option 6 No integration into new HPA, establishment of a Scottish Health Protection Organisation for all Scotland-wide and local services

All Scotland-wide and local agencies become integrated to create a distinct separate Scottish Health Protection Organisation. It would incorporate all the seven listed (see box) organisations, including the health protection functions of NHS Boards. An organisation would be created in Scotland along the lines proposed for England with NHS Boards' services becoming field services for the new organisation.

Legislative and Practical Considerations

114. In considering the relative merits of these options, it is important to recognise and take account of the varying impact and interaction of a range of factors. These include:

- considerations relating to value for money, efficiency and effectiveness. For example, establishing a new body to provide radiological protection services or

advice on chemical incidents in Scotland, either on its own or as part of an organisation with other responsibilities, along the lines set out in Option 6, may not be viable on economic grounds or having regard to the availability of expertise in a specialised field. In particular, the present cross-border delivery of the radiological protection function has operated effectively, an advantage which may be eroded, if services were organised on a geographical basis;

- the extent to which the current UK-wide discharge of some services could be maintained by service level or contractual agreements between the Scottish Executive and the HPA, on terms and conditions geared to Scottish needs and circumstances;
- the degree to which legislation will be required to give effect to any of the options. Options 1-4, in particular, would be likely to have implications for both the UK and Scottish Parliaments;

The Strengths and weaknesses of options on organisational arrangements

115. Each option will have advantages and disadvantages. In judging them and framing a view on which is the best for Scotland, it would be helpful if consultees could address the following questions:

1. will the option improve the co-ordination and implementation of the range of health protection measures needed to deal with the challenges outlined in Chapter 3?
2. will it improve the effectiveness and efficiency of the key health protection functions of surveillance, investigation, risk assessment, management and communication and managing emergencies as outlined in Chapter 4?
3. will it enhance the accountability of health protection services in Scotland by more closely aligning policy, resource allocation and performance management functions?
4. will it facilitate collaboration with UK, European and international counterparts in protecting health, especially in securing the best possible specialist advice and in recognising and responding promptly to emerging infections and the deliberate release of biological and chemical agents;
5. will it provide incentives for people working in health protection to improve their individual and collective performance through a continuing process of personal, professional and organisational development?

If it were considered that an option could be strengthened or varied to secure the more effective discharge of the health protection function in Scotland, it would be helpful to have details.

Conclusion

116. Whatever arrangements come into place, it will be important to secure an enhanced Scotland-wide overview expert panel. Currently, the Scottish Executive has commissioned

the Advisory Group on Infection (AGI) to advise on general and specific issues. This Group meets as and when issues arise. With each option, we would propose to establish this Group on a firmer footing, with regular meetings and an agenda of Scotland-specific matters.

117. Of equal importance will be negotiation of formal agreements which secure and strengthen networks, services and advisory capacity currently provided to Scotland by bodies whose functions are proposed for transfer to the proposed HPA.

118. It will be crucial, as well, to maintain and enhance collaboration and networking among the key stakeholders in the health protection function in Scotland, including local authorities, the environmental health profession, the Food Standards Agency, the Scottish Environment Protection Agency and the Drinking Water Quality Unit.

Questions

Taking into account the considerations and criteria set out earlier in this Chapter, it would be helpful to have views on:

- **which option is preferred and for what reasons?**
- **do you see any downsides to the option you prefer?**
- **can you suggest any other option which would meet the criteria listed?**
- **do you agree that the role of the Advisory Group on Infection should be enhanced to provide an overview of health protection arrangements in Scotland? Are there any other functions the Group might discharge?**

Chapter 7: Conclusion

This Chapter draws together the various questions posed in preceding chapters on which it would be helpful to have views. They are:

What is health protection?

It would be helpful to have views on:

- **the scope of health protection in Scotland and how that might support our established commitment to working within a UK and increasingly international context.**
- **how the contribution of local authorities and EHOs in particular to health protection might be enhanced.**

Do consultees agree:

- **that consideration of change should focus on the functions discharged by:**
 - **National Radiological Protection Board;**
 - **National Focus for Chemical Incidents;**
 - **Scottish Centre for Infection and Environmental Health;**
 - **Information and Statistics Division (the health surveillance elements);**
 - **Scottish Poisons Information Bureau;**
 - **Scottish National Reference Laboratories;**
 - **NHS Boards (health protection functions).**
- **that EHOs should not be considered for inclusion in any new organisational arrangements for health protection?**

Major issues for health protection in Scotland

Do consultees agree that the health problems detailed in chapter 3, are major issues for health protection in Scotland?

Could consultees indicate any other health problems, which they consider to be major issues for health protection, and give the reasons why.

Strengthening health protection services

Do consultees agree that health protection requires strengthening in the following areas:

Surveillance

- *Monitoring unusual illnesses or syndromes*
- *Integrating different surveillance systems*
- *Modernising the system for notifying communicable diseases*
- *Improving information technology for data transfer*

Investigation

- *Improving capability to carry out investigations into outbreaks or incidents*
- *Defining strategic priorities for research into health protection issues*
- *Making better use of the findings from investigation and research*

Risk Assessment

- *Continue to develop guidance on good practice in risk assessment in health protection agencies, particularly those working within the NHS;*
- *ensure that all policies developed to protect the public are formally founded on a rigorous approach to risk assessment.*

Risk Management

- *Partnership working on health protection*
- *Education on hygiene*
- *Development of indicators to assess the performance of NHS agencies with health protection responsibilities and the impact of risk reduction measures on health*

Risk Communication

- *Developing guidance on risk communication for NHS agencies involved in health protection to be used in establishing communication plans and procedures.*
- *Commissioning research into understanding how certain risks become amplified and how the public can develop better means of comparing and contrasting risks which affect their personal life (risk literacy).*

Emergency response and management

- *Carrying out more regular joint exercises in all relevant types of incidents and improving the sharing of lessons learnt from them.*
- *Continuing to develop and improve the reporting of outbreaks and incident management and the collation of the key lessons learnt from them.*
- *Developing standards to audit organisations' performance in managing outbreaks and incidents.*
- *Developing on-going training for frontline staff in recognising and dealing with incidents.*

Could consultees indicate any other areas for health protection services, which they consider to be deficient and require strengthening and give the reasons why.

The contribution of microbiology services to health protection?

Do consultees agree that:

- no change should be made to the organisational arrangements for non-reference microbiology services in Scotland?
- national standards should be adopted for all NHS laboratories, based on standard operating procedures developed in England and Wales?

It would be helpful to have views on:

- **whether the current network of microbiology reference laboratories should be extended to deal with other micro-organisms and; if so, which;**
- **if their remit should be extended to test isolates from non-human samples;**
- **the scope for centralising all or the majority of reference laboratories in one NHS Trust or other appropriate service unit;**
- **whether you see a role in Scotland for the Inspector of Microbiology, expected to be appointed in England and what that role might be;**
- **the arguments for and against having the same standard operating procedures throughout the UK.**

Options for Organisational Arrangements for Health Protection in Scotland?

Taking into account the considerations, criteria and options set out in Chapter 6, it would be helpful to have views on:

- **which option is preferred and for what reasons?**
- **any downsides to the option you prefer?**
- **any other option, which would meet the criteria listed**
- **whether the role of the Advisory Group on Infection should be enhanced to provide an overview of health protection arrangements in Scotland? Are there any other functions the Group might discharge?**

LIST OF CONSULTEES

Age Concern
Association of Chief Police Officers Scotland
British Medical Association
CBI Scotland
Chief Environmental Health Officers
Committee on Medical Aspects of Radiation in the Environment (COMARE)
Common Services Agency
Consultants in Communicable Disease Control
COSLA
Crown Office
Directors of Public Health
Drinking Water Quality Unit
Faculty of Public Health Medicine
Federation of Small Businesses
Food Standards Agency
Friends of the Earth
Health Education Board Scotland
Health and Safety Commission
Health and Safety Executive
Public Sector Ombudsman
Microbiological Research Authority (Centre for Applied Microbiology Research)
National Biological Standards Board
National Focus for Chemical Incidents
National Poisons Information Service
National Radiological Protection Board
NHS Boards
NHS Trusts
Public Health Institute Scotland
Reference Laboratories Working Group
Royal College of General Practitioners
Royal College of Midwives
Royal College of Nursing
Royal College of Obstetricians and Gynaecologists
Royal College of Pathologists
Royal College of Psychiatrists
Royal College of Physicians
Royal College of Physicians of Edinburgh
Royal College of Physicians and Surgeons of Glasgow
Royal College of Speech and Language Therapists
Royal College of Surgeons
Royal College of Surgeons of Edinburgh
Royal Environmental Health Institute Scotland
Royal Society Edinburgh
Royal Society for Prevention of Accidents
Scottish Agricultural College
Scottish Centre for Infection and Environmental Health

Scottish Chambers of Commerce
Scottish Environment Protection Agency
Scottish Microbiological Forum
Scottish National Reference Laboratories
Scottish Organisation of Local Authority Chief Executives
Scottish Poisons Information Bureau
Scottish Water
Society for Clean Air
State Veterinary Service
STUC
UNISON
University Medical Schools

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