THE CASE FOR A NEW UK HEALTH OF THE PEOPLE ACT

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Foreword by John Wyn Owen CB

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FOREWORD

The health of the people is a major determinant of Government expenditure and it is increasingly acknowledged that good health is good economics. Prudence as well as compassion dictates that the people of the United Kingdom should be as free as possible of disease and other forms of ill health, particularly those against which individuals cannot protect themselves.

The issues raised in this report cover the United Kingdom as a whole. In brief, the United Kingdom ranks poorly in Europe on many population health indicators; and our institutional arrangements for public health have been neglected to the point where it is no longer possible to say who (if anyone) is responsible for the control of communicable disease in these islands, though the publication of the Chief Medical Officer for England's consultation document *Getting Ahead of the Curve* recognised the need to update the law in this area.

I believe that sorting out the public health function could make a significant contribution to the aim of delivering modernised public services and make an appreciable difference to the quality of people's lives and life opportunities, and as the Wanless report so clearly recognises, have an impact on reducing public expenditure for health.

Over the last three years the Nuffield Trust has consulted widely at senior levels and commissioned independent research on the health of the people and the mechanisms available to improve or protect it. Enough is known about what needs to be done to improve the health of the nation. The challenge now is to find ways of ensuring that it gets done. The responsibility for local population health was originally firmly lodged with local authorities, but was largely overlooked in successive reorganisations of local and central government and the health service and is now dispersed and unclear. The public health function - insofar as it exists at the national level - is now the responsibility of the devolved administrations. There is no longer any appropriate mechanism for taking effective action on the health of the people at the United Kingdom-wide level (perhaps in response to a public health emergency) although that is the level at which we will continue to be judged internationally. This report makes the case for taking action to address this deficit.

John Wyn Owen CB
Secretary

SUBMISSION TO THE PRIME MINISTER

Dear Prime Minister

"Public health is the science and art of preventing disease, prolonging life and promoting health through the organised efforts of society."

Acheson Committee Report, 1988

In the nineteenth century the United Kingdom was at the forefront of many of the social and scientific developments that have since contributed to improvements in the health of populations throughout the world. The Public Health Act 1848 was a significant landmark. Yet at the beginning of the twenty first century the United Kingdom ranks poorly on many indicators of average population health and inequalities in health when compared with several other European countries.

The Nuffield Trust has a longstanding interest in public health and has in recent years intensified its activities in this area. The 1997 Rock Carling Fellowship was awarded to Professor Walter Holland, whose monograph *Public health, the vision and the challenge,* written jointly with Susie Stewart, was published by the Trust in 1998. Later that year, the Trust marked the 150th anniversary of the Public Health Act 1848 by convening a high level workshop at Christ Church, Oxford, at which all the relevant interests were represented at a senior and authoritative level. The workshop concluded that although the public health function in the United Kingdom could look forward with a sense of excitement and anticipation to the next millennium, there was a need to modernise and adapt its mission, structure and organisation. The concerns of the participants were epitomised by the fact that there is no clear answer to the simple question "Who is responsible for the control of communicable disease in these islands?" Enough is known about what needs to be done to improve the health of the people of the United Kingdom. The challenge lies in finding ways of ensuring that it gets done.

Guided by those discussions, the Nuffield Trust commissioned research to review the current legal framework and to consider if new legislation, perhaps comparable in significance with the Public Health Act 1848, could help to promote and secure improvements for the next 150 years. This paper summarises the outcomes of the workshop and the research exercise that followed it.

The Health of the People

Compared with several European Union countries many indicators of population health are unfavourable in the United Kingdom. Life expectancy for both men and women lags behind the other large European countries. The United Kingdom has an infant mortality above the European average. Coronary heart disease, cancer and respiratory disease mortality and incidence exceed rates in the other large European countries. The indicators are worse in some regions and devolved countries within the United Kingdom. The degree of inequality in health status between social groups is larger in the United Kingdom than elsewhere and it is rising.

The determinants of health can usefully be grouped into the four fields of environment, lifestyle, heredity (genetics) and health care services. The most powerful determinants of health that operate at the population level and differ by geographical area are socio-economic and socially mediated lifestyle and environmental factors. These elements provide the main explanation for inequalities in health status. Many are potentially amenable to social action by government.

The public health function

The participants at Christ Church felt that early moves by the then new Labour Government held out encouraging prospects for progress in the field of public health, but they identified a number of concerns about the current state of the public health function, which they saw as being at a crossroads. Many of the concerns stemmed from the fact that throughout decades of change in central and local government and in the health service, little conscious attention was paid to the role and location of the public health specialty, with the result that there is genuine ambiguity about where leadership and responsibility lie.

The fact is that among all the interested parties at the home country, regional and local level, the Minister for Public Health in England (a ministerial post, outside the Cabinet) is the only individual whose *sole* responsibility is to concentrate on delivering improvements in public health. Yet there is no formal framework which links Ministers in any executive, or even advisory, way with public health professionals and others working on the ground across the United Kingdom. There is no single person or body with a duty to monitor and advise on the health of the people of the United Kingdom or any devolved home country. There is no requirement for any Chief Medical Officer to produce a regular report on the state of the health of the people. Similarly there is currently no duty to act to protect the health of the people. For the purposes of international comparisons this country will continue to be judged at the United Kingdom-wide level, but below the level of Prime Minister there is no one body or individual whose responsibility it is to ensure that at that level performance is improved; neither does the mechanism exist to secure such improvement.

The Scottish Parliament's law-making powers include public health and the Welsh Assembly controls the allocation of the health budget for Wales and with it responsibility for the health of the people in Wales. Like England, the devolved administrations have their own Chief Medical Officers, but there is a lack of clarity about the role of the CMOs and the extent to which they can act as independent advocates for the health of the people. Devolution could result in different parts of the country adopting different approaches to tackling common problems that affect the United Kingdom as a whole; indeed, there are already signs of that happening. The Chief Medical Officer for England has recently published a strategy for combating infectious diseases which will apply only in England, but infectious diseases will not recognise the boundaries of devolution.

The NHS and local authorities both play important formal roles in public health yet there is no really effective link between them, and there are few mechanisms for ascertaining the views of the populations they serve. No single person or body has a clear legal duty to control infectious disease. Current legal powers lie with local authorities, but they need decisions by public health physicians who are, in the main, employed by the NHS. Tensions can arise from the fact

that public health practitioners also retain responsibility for clinical services; when they are centrally involved in the purchasing of NHS health care services by health authorities, it seems inevitable that broad public health goals which seek to address the fundamental determinants of health will easily become subordinate to clinical priorities and targets.

These concerns expressed by the senior figures attending the workshop were fully borne out by the subsequent research commissioned by the Nuffield Trust. The researchers looked at current and recently proposed structures and the powers and duties of officers and organisations with explicit public health functions. The resulting picture is one of largely accidental complexity. Not only do the existing provisions lack coherence, but there are gaps. Many organisations and sectors whose activities directly affect the determinants of health have no duty to protect or promote the health of the people. The Report sets out the researchers' findings and conclusions in detail. They found that at the national level there is a lack of overall scrutiny of the health impact of government policies and legislation and a lack of co-ordination in monitoring the health of the population across government. They point out that the problems highlighted by the Phillips Report in the wake of the BSE and nvCJD crisis demonstrated a lack of clarity about who is responsible for specific cross-sectoral issues. That report also found that the public lack of confidence in the Government's ability to provide scientific advice independent of political and commercial interests. There are close parallels between food safety and public health. No one body or individual currently has a duty to act to protect the health of the people.

Exemplar individual public health case studies

When the research project was being designed, the Nuffield Trust was keen to start from first principles by undertaking detailed public health and legal research and analysis which would both look at specific determinants of health and allow general conclusions to be drawn on legal shortcomings and possible legislative remedies. Four exemplar case study areas were selected on the grounds that they were areas where the UK performs very poorly in comparison with other European Union countries, and they were also areas where it was thought gaps exist in inter-sectoral measures to prevent poor health. The fifth case study looked in depth at the law and arrangements applying to communicable diseases.

Conclusions from the commissioned research

The case studies provide detailed evidence which bears out the misgivings expressed at the Christ Church workshop in 1998. Public health in the nineteenth century was a major public issue, but it has now almost ceased to be regarded as a subject in its own right even though substantial public health problems remain. At best, the law and institutional provision for the health of the nation can be described as untidy. At worst - for example in the area of control of communicable disease - it is not at all clear just who is responsible for action. Public health provisions are not to be found in any one coherent body of law or regulation. No single body or institution has the responsibility to consider the factors that affect the health of the people of the United Kingdom, or the duty to act upon them. There is no system for gathering the information needed to monitor the health of the nation or for putting it in the public domain.

If a public health emergency struck the whole of the United Kingdom, no single individual

or body would - or could - take charge of tackling it. In any case, the currently available legal powers are inadequate for the task. There is no-one whom Parliament or the public can call to account for preventable shortcomings in the nation's health and well being which are beyond the individual's power to control.

General conclusions

The Nuffield Trust and its senior advisers have drawn some general conclusions based on the detailed work of the research team. The research report itself sets out several possible institutional models for taking forward the public health agenda, but that is essentially a matter for politicians to decide. Some general conclusions can, however, be drawn.

There seems to be a need to strengthen the role of Ministers — especially that of the Secretary of State for Health - in relation to matters for which they do have direct responsibility, such as conducting international relations and maintaining a broad policy overview.

Ministers need to be able to ensure, whether through legislation or otherwise, that the responsibilities of the key players are clearly defined and to satisfy themselves that effective structures are in place for improving the health of the people.

The role of the Secretary of State as the public health Minister in the United Kingdom Cabinet needs to be settled in relation to those of the Ministers responsible for public health in the nations of the United Kingdom.

We also see a need for some framework which will link Ministers more directly with public health professionals and others working on the ground right across the United Kingdom. At the same time, Ministers may need to be distanced from certain other matters, such as the collection and dissemination of information and statistics about the health of the people; and matters where local ownership and control are essential for effective local action.

The research team marshals strong arguments in favour of establishing a single United Kingdom-wide body to provide a point of focus, authority and influence on matters relating to the health of the people throughout the country. An independent body, a commission or board acting as the champion for the health of the public and operating at arm's length from central or local government could do much to meet the needs identified in this report and strengthen public confidence in the public health function. It would be capable of influencing the activities of all authorities, for example health, education or social services. It would be a matter for political judgement how that was to be made compatible with the devolution settlements. Nevertheless, it is evident that practitioners, local authorities, the devolved administrations and Ministers themselves would all gain from an orderly allocation of institutional responsibilities for the health of the people, followed in due course by the vesting of clear legal powers and duties at the appropriate levels. Only then could robust strategies for action be developed and operational plans be put in place to improve the health and well being of the people of the United Kingdom.

Yours sincerely,

John Wyn Owen CB
Chairman, UK Partnership for the Health of the People

INTRODUCTION

This report and its appendices describe the work of the UK Partnership for the Health of the People Project in building the case for and performing some of the detailed preparatory work towards a UK Health of the People Bill.

It begins with an account of the context and background to the project, including the structure of the Partnership for the Health of the People. It goes on to describe the design of the project in terms of its focus, scope, timescale and research methodology and outputs. The results of the basic research and the conclusions drawn are then detailed. These represent the "where are we now? " - the foundation for the subsequent discussion which covers the "where do we want to be? " with the law before moving to the final section which is about "how do we get there? " in a legislative sense.

Many indicators of population health - such as life expectancy for both men and women and mortality and incidence rates for coronary heart disease, cancer and respiratory disease - are unfavourable in the United Kingdom in comparison with other large European countries. Within the UK itself, the indicators are worse in some regions and devolved countries and the degree of inequality in health status among social groups is also larger than elsewhere in Europe and rising.[1]

One way of addressing these problems is by changing the legislative framework to ensure that it promotes and supports population health improvement and reduces health inequalities. Such legislation might provide the opportunity to create a UK-wide mechanism focused on public health concerns. Appendix 1 reviews possible models for a new Health of the People Commission or Agency.

Any effective intervention to improve the health of the people must be preceded by an understanding of what determines the health of the population and what patterns of health can be observed within and between social groups.

1. Acheson, Sir Donald (Chair). *Report of an Independent Inquiry into Health Inequalities.* London: The Stationery Office, 1998.

Appendix 2 contains a summary of the findings from the academic literature on the determinants of health and disease and suggests which factors public policy should target to achieve health gain and reduce social inequalities in health.

From a review of this published work, it seems that socio-economic and socially mediated lifestyle and environmental factors have the strongest influence on population health and its geographical variation. Many of these factors are potentially amenable to social action by government through healthy public policy underpinned by appropriate legislation.

BACKGROUND TO THE PARTNERSHIP AND PROJECT

The Nuffield Trust's longstanding interest in public health was re-expressed by its publication of the 1997 Rock Carling Monograph entitled *Public Health: the Vision and the Challenge* in which the history and current challenges for public health in the UK were reviewed.[2] The Trust subsequently convened a workshop on *Public Health in the New Millennium* which was held at Christ Church, Oxford in July 1998, the year of the 150th anniversary of the original 1848 Public Health Act. The aim of the workshop was to review the current legal framework for public health and consider whether it was adequate to meet contemporary challenges. Participants concluded that:

The next task is the production of a paper to influence government: public health has been around for 150 years, and it is time now to prepare for the next 150. This paper should be kept simple and straightforward and be in the form of a Cabinet-style paper. The major theme of the paper will be arrangements for public health in the future.

The Trustees of the Nuffield Trust then formally agreed to create a UK Partnership on the Health of the People and to support, through it, a project to carry out the work recommended by the Christ Church workshop.

The UK Partnership for the Health of the People Board was established and met for the first time on 29 September 1999. Its purpose was to act as a supervisory board and expert group for the project and its membership was based on a combination of relevant technical expertise, knowledge of the policy process and experience in related public administration (Appendix 3).

A small project team was recruited with a part-time project director, a part-time deputy project director and a full-time research assistant/ project lawyer. Ad hoc assistance was

2. Holland WW, Stewart S. *Public Health: the Vision and the Challenge.* London: The Nuffield Trust, 1998

provided by a number of other individuals. Full details of all those involved are given in Appendix 4.

The Partnership Board was responsible for deciding the scope of the project, agreeing the methodology for the work, signing off the project plan and monitoring progress against it. The project director was responsible for managing the project on a day-to-day basis to ensure that the specified outputs were delivered to the required quality within the agreed timescale and was accountable for this to the Project Board. Ultimate accountability was to the Nuffield Trust Board through the Secretary of the Trust.

The overall aim of the Partnership was the achievement of a new Health of the People Act for the United Kingdom to promote and support population health improvement. The primary objective of the project was to secure a political commitment by Government to produce a Health of the People Bill by reviewing rigorously the extent to which the current legal framework has failed to support health improvement, and by producing effective arguments to support the introduction of appropriate legislation.

Project work was completed at the end of December 2001 and the following documents in support of the aim and objective have been produced.

1. The present report, *The Case for a new UK Health of the People Bill*, which reviews the health and legal evidence and makes the arguments for a new Health of the People Act. This report is the final technical paper (the detailed appendices are available from The Nuffield Trust website only, because of the volume of material involved: www.nuffieldtrust.org.uk).

2. A specific report on *"The State of Communicable Disease Law"*[3] already published (2002) by the Trust.

3. Monaghan S. *The State of Communicable Disease Law.* The Nuffield Trust. London: 2002.

PROJECT DESIGN

The primary focus for the project was the UK nation state level - the UK Government and Westminster Parliament.

The new dynamic of devolution, however, meant that differing models of governance for each devolved country had to be taken into account to ensure that a future Health of the People Act would be applicable throughout the UK. The wider European Union legal perspective was also relevant[4] as were the international treaties between the UK and the Republic of Ireland.[5] All these arrangements were borne in mind where relevant throughout the project.

The work concentrated mainly on the law relating to wider health improvement with a view to proposing legislative change to improve the health of the people by tackling the determinants of health.

Coverage of the law relating to all major health determinants would clearly have been impossible within the financial, manpower and time constraints of the project. A more selective approach was, therefore, adopted in which a number of case studies of exemplar health determinant areas were undertaken to allow both specific and general conclusions to be drawn on legal shortcomings and possible remedies. It was also hoped that in this way some lessons could be drawn on the optimal organisation and delivery of the public health function.

The Partnership Board selected the case study areas according to two criteria: (i) where the UK performs poorly in comparison with other EU countries and (ii) where gaps were thought to exist in inter-sectoral measures to prevent poor health. The broad areas

4. Many determinants of health are subject to European law and public health itself has been a European Union competence since the Maastricht Treaty, strengthened further by the Amsterdam Treaty.

5. Strands 2 and 3 of the Belfast ("Good Friday") Agreement put in place joint working in public health policy and East-West collaboration within the British-Irish Council between any combination of the two sovereign governments and each of the UK devolved entities.

identified using these criteria were children, accidents and injuries, teenage pregnancy and communicable disease. The project team carried out research on the following topics:

- Domestic Fire Injuries
- Child Pedestrian Road Traffic Accidents
- Unintended Teenage Pregnancy
- Alcohol Misuse and Road Traffic Accidents
- Communicable Disease

General research was also necessary to assist the project team to reach broader conclusions on where UK law should be going in regard to the health of the people and this was undertaken in the following three areas:

The Public Health Function - the legislative basis of much of the public health function was reviewed at both local and central level.

Devolution - this was necessary to enable the project team to understand the existing legislative position in relation to the case study areas and to the public health function and to suggest legislative remedies that might be applicable across the UK. The team therefore looked at the legal and political basis of devolution in the UK, to try to assess whether certain legislative proposals might be acceptable across the board. This knowledge underpinned research in all other topic areas and informs almost every section in the rest of this report.

Other Legal Models - this involved legal research on existing models from other sectors or countries that might be applied to the UK public health arena - for example, the Audit Commission, the Greening Government initiative, the Food Standards Agency, the Environment Agency, a number of French legislative arrangements.

METHODOLOGY

The project team conducted legal research in the selected case study areas to establish prevailing legal powers and how evidence-based public health interventions could be advanced through legal means. The precise methodology adopted was proposed by the project team and agreed by the Partnership Board. A synopsis is presented here with a full account in Appendix 5 (available on the Nuffield Trust website: www.nuffieldtrust.org.uk).

The basic methodological approach in each case study area was one of linked public health and legal research. The following Figure contains a summary of the major work-scoping[6] and methodological steps of the project.

Phase 1 of the methodology[7] initially involved public health research into the evidence for effective policy interventions in the respective case study areas. This was followed by legal research to understand and analyse the relevant EU, UK, and UK devolved country statutory frameworks, focusing particularly on gaps and shortcomings in the law and on the potential for evidence-based policy measures to be applied through legislation. This was intended to allow specific legislative applications to be suggested. The precise literature search and evaluation strategies adopted in order to identify and appraise the evidence on effective policy interventions, along with the comprehensive legal research techniques also used, are described in Appendix 5.

Phase 2 of the methodology[8] concerned the process for drawing general conclusions, from the detailed case study work for the wider legislative framework and for the public health function, so that legislative solutions could also be suggested. This was developed pragmatically and involved more work on the legal basis of the public health function, and especially of devolution, than was originally envisaged. This included reviewing UK public health powers, legislation and legislated structures and processes at each administrative

6. Step 1 in Figure.
7. Steps 2, 3 and 4 in Figure.
8. Step 5 in Figure

level and especially at the central UK level. This also involved legal research on existing models from other sectors or countries that might be applied to the UK public health arena.

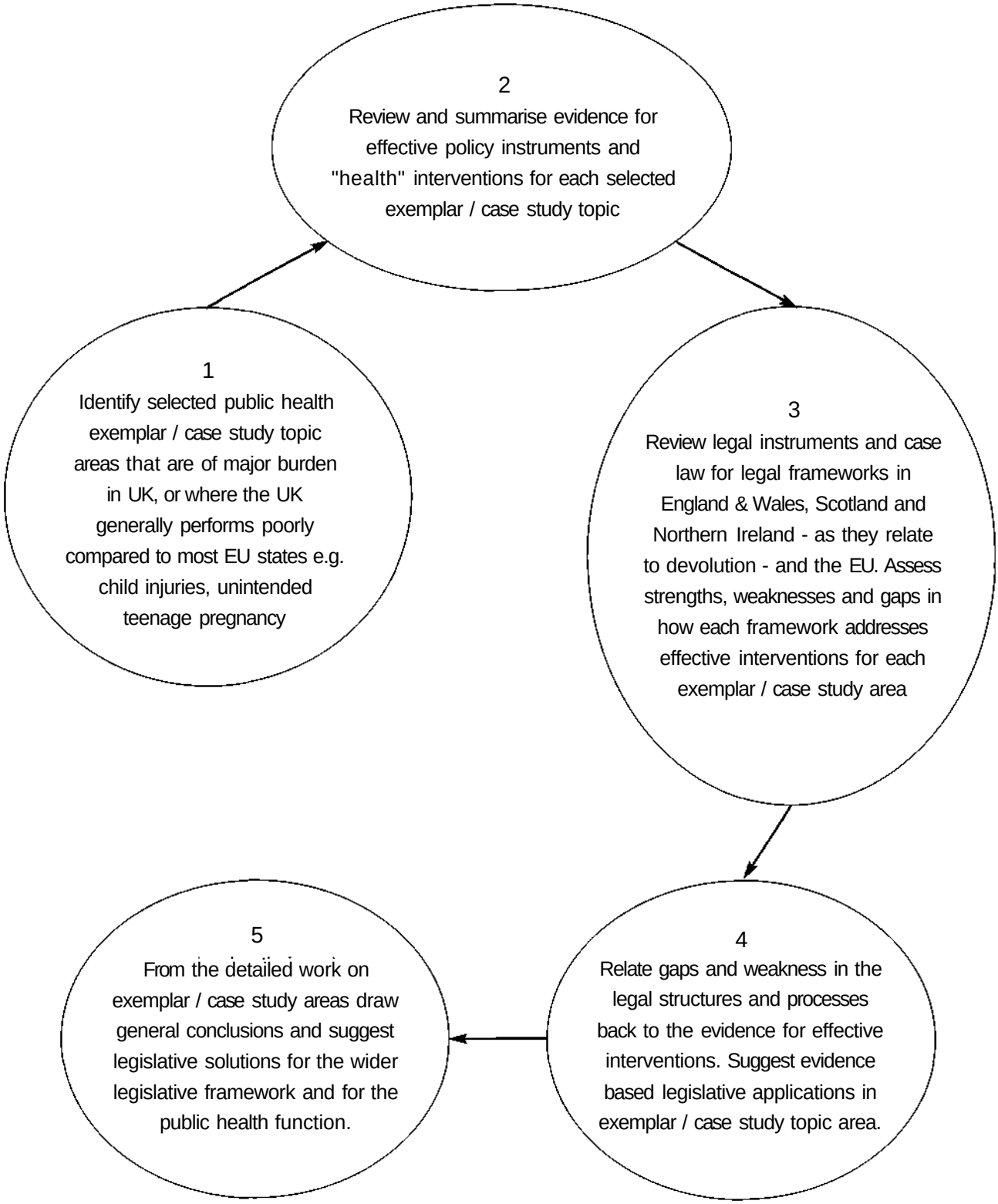


Figure *Summary of work-scoping and methodological steps of the project*

RESULTS

CASE STUDY AREAS

A review and summary of evidence for effective policy instruments and health interventions was carried out and this was followed by a review of the legal instruments relevant to the effective measures.

The method adopted was effective for linking public health to the law but proved extremely time-consuming. Many legal frameworks do not have adequately indexed electronic databases and hand searching or reading large amounts of text to identify relevant legal instruments were often necessary.

The detailed findings of the case studies can be found in appendices 6 to 10 (available on the Nuffield Trust website only: www.nuffieldtrust.org.uk). General conclusions are discussed later in the report.

Table *Location of detailed findings according to case study area*

Case study area	***Appendix number***
Alcohol misuse and road traffic accidents (RTAs)	6
Domestic fire injuries	7
Child pedestrian RTAs	8
Unwanted teenage pregnancy	9
Communicable disease	10

Appendix 10 presents an up-to-date and comprehensive statement of current UK and EU law in communicable disease. Building upon this, a separate report specifically reviewing the inadequacies and shortcomings of the legislative framework for controlling communicable disease control has also been produced and has already been published by the Trust.[9]

9. Monaghan S. *The State of Communicable Disease Law.* The Nuffield Trust. London, 2002.

THE PUBLIC HEALTH FUNCTION

In regard to the public health function, the project team also reviewed current and recently proposed structures, powers and duties of officers and organisations with explicit public health functions (Appendix 11 - see the Nuffield Trust website). The main findings were as follows:

UK and devolved executives and legislatures

Analysis of the current and proposed structures, accountabilities, powers and duties relating to the public health function revealed several weaknesses. Policies and legislation emanating from most government departments affect population health in some way. The problems at national government level for the UK are threefold:

1. there is no minister in Cabinet with a clear responsibility for population health protection and health improvement
2. there is no one ministerial committee or sub-committee that deals with public health or health across government departments
3. there is no Cabinet Office unit that deals with the cross-cutting issues of public health

In short, public health issues are dealt with by several ministerial committees. There is a lack of overall scrutiny of the public health impact of government policies and legislation and of poor co-ordination in monitoring the health of the population across different government departments.

The situation is similar in the devolved administrations. The Government of Wales Act 1998 does at least place a duty on the National Assembly for Wales to consider sustainable development in all its activities, although the inclusion of public health into the definition of sustainable development remains open to interpretation. There is no requirement at UK or devolved administration level for health impact assessment of proposed sectoral policies, legislation, budgets, programmes to be undertaken.

Within the civil service no single officer currently has a statutory duty to monitor and advise on the health of the people of the UK or of any devolved home country. There is no requirement for the Chief Medical Officer (CMO) of any of the UK countries as a whole or individually to produce a regular report on the state of the health of the people, independent from ministerial influence. Similarly, there is no current duty to act to protect the public health. No provision is made for advice given to ministers by a CMO to be made public. The Department of Health describes the role of CMO as that of a principal medical adviser not a principal adviser on the health of the people and the CMO has remarkably few statutory functions.

The UK Government situation is mirrored in the UK Parliament where the Health Select Committee shadows the Department of Health but not other departments that may have a considerable impact on health. This is reflected in its reports where health service rather than broader health improvement or health gain issues predominate. The Assembly and Parliamentary Departmental Committees of the devolved administrations operate in a

similar way although not identically - that is, they shadow the executive department and ministers with responsibility for the health service and do not scrutinise the work of other departments which may influence the broader concerns of health improvement.

National public bodies with explicit public health roles

A number of national public bodies deal with various aspects of public health. Administratively, they cover variously the UK, Great Britain only, England only, Wales only, England and Wales only, Scotland only, or Northern Ireland only. Many have remits that overlap partially with other national and local organisations, local authorities in particular. Their respective powers and duties are often unclear. Although some national bodies such as the Environment Agency occasionally collaborate with other national and local bodies with public health responsibilities, there is not a duty to do so. In addition, many national public bodies, outwith the NHS but with explicit public health functions, may not possess or seek public health expertise. This situation is similar for the UK as a whole and for all four home countries. For example, the Health Development Agency, set up in 2000 as a Special Health Authority, is an England-only body with the remit of identifying the evidence of what works to improve people's health and to support policy makers and practitioners, working in collaboration with other bodies; this remit has a public health component, but this is only one facet of the HDAs work

The Food Standards Agency (FSA) - covering one important specific aspect relevant to public health - is an interesting example that differs from other national public bodies in several ways. Although it is a non-ministerial government department, the FSA board is independent of government and its members are openly appointed. In particular it has the power to publish the advice that it gives to other public bodies and Government, which must be based on the best scientific evidence. It also scrutinises the enforcement of food safety law by local authorities and its policy discussions and decisions must be made in public. Finally, it is a UK-wide body.

Independent reporting of national population health data

There is no single body or officer, independent of government, at UK or home country level with a specific duty to monitor and report on the overall health of the population.

At national level, published health information is piecemeal and ad hoc, occasionally published by National Statistics, but rarely by others. Information on particular issues is often published - for example, annual road traffic crash casualties for Great Britain by the UK Department of Transport, London and the Regions together with the Scottish Executive and National Assembly for Wales. These data, however, are not analysed and interpreted using basic epidemiological methods nor are they linked to health sector initiatives. The Public Health Laboratory Service and Scottish Centre for Infection and Environmental Health publish regular health information related to communicable diseases. Rarely do national public bodies compare UK health information with that available elsewhere in the European Union.

The situation in Scotland has been partly rectified by the establishment of the Public Health Institute of Scotland (PHIS). One of the main remits of this body is to create a new information base for public health in collaboration with the Information and Statistics Division of the

Scottish NHS Common Services Agency. It has no duty, however, to report regularly on the public health, independently of the Scottish Executive. The proposed Wales Centre for Health is likely to perform a similar role in Wales in collaboration with the proposed All Wales National Public Health Service and the NHS Wales Business Services Centre.

Independent scrutiny of the public health function and health impact

No independent national body has a performance management or scrutinising role of the public health function of national and local public bodies, or of the health impact of other sectors with potential impacts on health. The Commission for Health Improvement (and its successor the Commission for Healthcare Audit and Inspection) and the Clinical Standards Board for Scotland are concerned primarily with clinical governance issues in NHS organisations related to the provision of personal medical services rather than with the broader concept of health improvement.

Regional and local level

England differs from the other home countries in that its administration is linked more directly to overall UK Government. In England, it appears that government will be better co-ordinated regionally than centrally in terms of public health because of the nine Regional Government Office based Directors of Public Health. Part of their role is to oversee local arrangements for health improvement and to bring public health issues into other sectors at regional level. The accountability of these new government officers will, however, need to be determined in the light of recent changes in the structure of the NHS in England. As before, there may still be a tendency for clinical issues to take precedence. Although the roles of the new officers are promising, clearly they are not independent of Government.

Health information analysis and provision is also more systematic at English regional level than centrally through the Public Health Observatories.

At the local level in England, the statutory functions in relation to population health improvement and protection possessed by the previous health authorities have passed to primary care trusts (PCTs). These trusts are concerned primarily with the provision and procurement of personal clinical services. Some PCTs are very small, covering relatively small populations and their capacity to discharge their public health functions may be compromised. The new local strategic health authorities in England are intended to manage the PCTs and local NHS providers in terms of the quality of clinical services - and not in terms of the health of the population they will serve. In Wales a similar fragmented and clinical service-dominated NHS health environment may arise with public health capacity problems, through the abolition of five large health authorities and the creation of 22 local health boards to mirror the 22 unitary authorities.

In response to the risk of fragmentation and loss of critical mass for health protection and public health the Health Protection Agency and the All Wales National Public Health Service are now being created in England and Wales respectively. Meanwhile the law continues to vest public health powers and duties elsewhere - for example in relation to communicable disease control with local (government) authorities.

The situation is less fragmented in Northern Ireland and Scotland where the continuation of generally larger health boards promises better integration with local NHS providers. Indeed, in Scotland the Government considers the 15 existing health boards to be public health organisations, although just as elsewhere in the UK, the statutory basis for this role is weak.

Health authorities, primary care trusts, health boards and their officers - in particular Directors of Public Health and Chief Executives - do not have a duty to protect and improve the health of their populations. Neither is there a duty to report in a comparative way with other localities on the health of their populations. Traditionally, Directors of Public Health produce eclectic local annual reports in which independence from their organisation's corporate, and sometimes competing objectives, is in practice not guaranteed. The lack of a statutory duty of health improvement for local NHS organisations is partly countered by official guidance and could be strengthened further by an accountability framework for health improvement, related to relevant health gain targets. It is too often argued by these organisations that they do not have a direct lever on the determinants of health. It is time to acknowledge that local NHS organisations have increasing opportunities and statutory duties to collaborate with other sectors and organisations that have a direct influence on health.

At local level, throughout the UK, recent legislation is strengthening the link between local government and local NHS bodies for health improvement. Local NHS organisations must produce Health Improvement Programmes (or Health and Wellbeing Plans) in consultation with local authorities and others and these should be linked to the community planning process. Encouragingly, local authorities now have the power (and increasingly the duty) to promote the social wellbeing of their area. They must participate in the production and implementation of health improvement programmes (HIPs). There are also duties on local authorities to form collaborative multi-agency partnerships for health improvement, to include local NHS organisations. What seems to be missing, however, is a duty on local authorities to bring about health improvement, as well as protecting specific aspects of public health as at present. There is no current requirement for local authorities to carry out health impact assessment of their policies, legislation, budget allocation, programmes and projects.[10]

Finally, at the local NHS/local government interface there is in general no statutory mechanism for linking the wider public health advice of the local Director of Public Health (DPH) into the work of local government at Cabinet and senior officer level. In Scotland the DPH is usually appointed as the Designated Medical Officer to the local authority to provide focused public health and medical advice. The role, however, is still unclear and needs to be developed to reflect a modern understanding of public health. According to the Review of the Public Health Function in Scotland, the powers of the post appear to be under-used, both by Directors of Public Health and by local authorities.

10. There is a notable exception, not considered in depth in this report, and that is the Greater London Authority. Its creating Act places a duty on it to prepare plans for eight major sectors and in so doing assess the potential health impacts of the plans (for example transport, housing and energy).

The lack of a coherent and cross-cutting approach to population health protection and improvement is evident when the whole system dealing with the public health function is compared with, for example, the Greening Government initiative (described in Appendix 1).

CURRENT LAW SUPPORTING THE PEOPLE'S HEALTH

The detailed research into the law concerning both the specific case study areas and the public health function also enabled more general conclusions to be drawn about the shortcomings in the legal framework relating to the Health of the People, allowing possible legislative remedies to be suggested.

Because of the piecemeal way in which British law is built up, layer upon layer, it is extraordinarily difficult to establish the law relating to any specific determinant of health. The UK is admired for its pragmatic outlook but a lack of legal codification leads to uncertainty as to the statutory powers and responsibilities of public authorities in relation to most determinants of health - including communicable disease.

Legislation currently relates to specific health topics, divided along functional lines. . Different government departments are responsible for different topics, both as regards introducing new primary legislation into Parliament and for making regulations under primary legislation. Thus the Department of Health, the Department of the Environment, Food and the Regions, the Department of Local Government, Transport and Planning and, to some extent, the Home Office each have separate responsibilities. The authorities which implement the legislation are also widespread, with local authorities working through their separate departments of public health and transport and highways and the Department of Health working through health authorities, trusts and doctors.

Devolution has meant that these separate responsibilities have become even more diverse in Northern Ireland, Scotland and Wales. As a result central UK government departments continue to be responsible for certain public health matters in these countries while other public health matters have become the responsibility of the devolved bodies. In Scotland and Northern Ireland, both new primary and subordinate legislation can be made by the devolved bodies in relation to the devolved public health matters, while in Wales, the National Assembly can make certain subordinate legislation under UK Acts of Parliament.

A further difficulty is that the legislative provisions on specific health topics are to be found in a variety of documents. Some provisions are set out fully in Acts of Parliament, while others appear in subordinate legislation made under Acts of Parliament. The subordinate legislation can take the form of statutory instruments, schemes, codes, directions, orders or statutory guidance. Non-statutory advice is also issued by both central and devolved authorities which has to be considered in deciding how the law is to be applied to a particular matter.

In the field of teenage pregnancy, for example, there is no central body regulating or controlling the quality or the actual provision of contraceptive services and no central monitoring of contraception or advice services.

The same lack of a central regulator also applies to alcohol misuse, and the prevention of fires in houses in multiple occupation (HMOs). Grants for the latter are provided not only for the fitting of fire precaution devices but as part of a general improvement plan. They are, therefore, discretionary and limited by the funds available from the local authority. A central body would also be appropriate here.

In relation to the particular problem of the surveillance and control of communicable disease there is at present no one individual or body unambiguously responsible and accountable for this function - *no-one is in charge.*

In transport, there are no requirements for general safety design of cars (some very precise and technical legislation exists from EC Directives), there is no body to control or test vehicles or to impose safety standards. There are no requirements for a properly planned transport system in relation to new developments, and no requirements for the highways authorities to enlarge an existing highway or to create a new one. It is for the local authorities to provide for traffic calming, but such powers are totally discretionary. The powers relating to transport and traffic are spread among the local authorities, the planning authorities and the highways authorities with no overarching authority, co-ordination or consultation. There is no overall body responsible for an integrated regional transport system.

A comprehensive Act of Parliament could provide, for example, for a co-ordinating structure to deal with transport in all its aspects and could give guidance and directions on the compulsory use of existing powers in all the areas discussed above.

In short, the legal frameworks examined by the project team do not address adequately the main public health problems or those relating to the underlying determinants of health.

Much of current public health law was originally drafted in the nineteenth century and is not based on a modern understanding of the broad inter-linked determinants of health. Instead it is largely the result of crisis measures taken to respond to a particular event rather than a comprehensive body of legislation. Public Health is not considered as a subject in its own right and particular Acts (except perhaps for some rather dated legislation on communicable diseases) are not directly targeted towards public health in general but deal with specific matters.

Public health law currently lags behind the recent general reforms in both the health service and local government and has also been affected by devolution. Within the new constitutional structure of the UK, different provisions under the same public health legislation may be made for different parts of the UK. The differences are already substantial and could increase in complexity in the future. Legislation produced by the centre will often apply only to England and there could be up to four different sets of rules applying for exactly the same matter throughout the UK.

In addition, each government department and devolved body is continually issuing advice and guidance on different public health matters which can now not only differ from one department to another, but also from one UK country to another. The resulting duplication and inconsistency are becoming more obvious every day.

As a result of the current constitution of the UK, the legislation, policies and structures applying in various areas of the UK are thus becoming quite different. With continuing devolution, this trend is likely to continue and totally different systems and legislation could apply in the four individual countries of the UK. In the future it is likely homogeneous legislation will be found across the different countries of the UK only when European legislation prescribes obligations. This has been clearly demonstrated by the legal research in the case study areas.

Even more importantly, there is no one body to oversee the application and development of the law relating to public health. The development of legislation, both primary and subordinate, by reference to a division along specific and separate aspects of public health may have made sense in the earlier part of the last century. But it is no longer possible to regard the general subject of public health as being capable of division into discrete segments with each subject to legislation, regulation and guidance belonging only to itself.

There is a serious risk of confusion of roles and responsibilities, of wasted effort and duplication, and of creating a dangerous vacuum between different government levels. Mechanisms such as the Australian Commonwealth and State Agreements for health information and the Australian Public Healdi Partnership could be considered as possible models in relation to a UK Health of the People Act to secure public health protection and population health improvement in the newly emerging government structure in the United Kingdom.

At best the current legislation can be described as untidy, not comprehensive and in need of updating and streamlining. At worst - for example in relation to communicable disease - there is genuine ambiguity about where leadership and responsibility lie.

In a democracy it is important to know who is responsible for what. No-one should be able to avoid blame and no one should be required to accept blame for matters beyond their control. There is also an increasing need for transparency and accountability.

The problems highlighted by the Phillips Report in the wake of the BSE and nvCJD crisis demonstrated a lack of clarity about who is responsible for specific cross-sectoral issues. The BSE incident raised questions about the role of government departments and their advisory committees, as well as the public's access to information. It also made very clear the public's lack of confidence in the Government's ability to provide scientific advice independent from political and commercial interests.

In short, in current UK public health legislation there are three main problems.

1. There is a dangerous lack of clarity about public health accountability - who is responsible for protecting and improving the health of the people in general, and which (local, regional and central) organisation is responsible for dealing with specific health crises as and when they arise?
2. Structures responsible for monitoring, protecting or improving different aspects of the public health remain confused and unco-ordinated, making effective enforcement of regulations and provision of public health information and advice difficult.
3. No statutory duty is laid on any body at any level to consider the health impact of legislation, policies and programmes.

CASE STUDIES

The first step in each exemplar case study area was to carry out public health research into the evidence for effective policy interventions. This was followed by legal research into the relevant European Union and United Kingdom statutory provisions and the devolved country measures, particularly focussing on gaps and shortcomings in the law and on the potential for the evidence-based policy measures to be applied through legislation.

Alcohol misuse and road traffic accidents(RTAs)

The first case study was into alcohol misuse and road traffic accidents. Alcohol misuse is relatively common in the UK. In 1996, it was estimated that 27 per cent of men and 14 per cent of women aged over 18 drank in excess of sensible limits. Trends show rising consumption for women across all age groups and in young men. Amongst young people in the UK the age at which they begin to drink is decreasing and the amount drunk and frequency is increasing, often in the context of other high risk activity including the use of illicit drugs. European comparative studies have found that 15 year olds in Wales in 1990 and 1993/4 were consuming significantly more alcohol than young people of the same age in other European countries. Alcohol is a major factor in causing injuries, including 15 per cent of road traffic accidents and 30 per cent of pedestrian accidents.

The effective interventions for alcohol misuse include information campaigns which can improve knowledge and awareness. They are more effective if placed within a broader context of community action. Campaigns can contribute to the social climate surrounding alcohol use. They can reinforce specific environmental efforts to reduce high risk drinking and drinking and driving in particular. The use of remediation therapy for drink driving offenders can be effective and a reduction in the permitted blood alcohol concentration would be likely to lead to a reduction in injuries.

Domestic fire injuries

The second case study looked at death and injury to children in fires in domestic premises. In England and Wales fire deaths account for 13 per cent of deaths by unintentional injury in children aged under 15. The social class gradient for injury deaths is steeper than for any other cause of death in childhood, and the gradient is steepest of all for child fire deaths. The risk of fire death in children from the more deprived social class V is 16 times the risk in social class I. The risk of death from fire in private sector houses in multiple occupation, where more than one household lives, is significantly higher than in single household properties.

The public health research found that there is still a significant amount of poor housing in some parts of the country. Some two fifths of houses in multiple occupation lack an adequate means of escape, fire fighting equipment or smoke detectors, although the distribution of free smoke detectors has been shown to reduce fire deaths by 80 per cent. The evidence shows that while publicity campaigns based on education alone are unlikely to have much effect, home visiting programmes can significantly reduce rates of childhood injury and targeted childhood initiatives appear to be more effective, especially if supported by free or subsidised home safety equipment schemes. The legal research found that while legal provisions gave guidance to local authorities on the provision and maintenance of

means of escape from fire in houses in multiple occupation, local authority grants appear not to be available solely for fitting fire precautions but only as part of a general improvement plan and they are discretionary and limited by the funds available.

Child pedestrian RTAs

In the third area the research team examined the death of child pedestrians in road traffic accidents, which in the United Kingdom is the main cause of death in children aged under 15, accounting for 50 per cent of all injury deaths. The United Kingdom has one of the highest child pedestrian death rates in Europe. The rate in children from poorer social class V families is five times that in children from social class 1 families, and this gradient widened between the 1981 and 1991 censuses. The rate is highest in boys and in the 10 to 14 age group. For each child pedestrian killed, over 150 are injured. Most child pedestrian accidents occur in urban residential streets, particularly in deprived areas.

The research found that most of the modifiable risk comes from the physical environment and not from the child's behaviour. Indeed, there is evidence that children are walking, cycling and playing less outdoors. The risk factors identified were the deprived nature of an area; high traffic volume; high housing density and narrow Victorian type of housing; higher speed limit; higher actual average speed of traffic; and lack of play areas. Traffic speed controls, including the use of cameras, are effective in reducing child pedestrian injuries. Safer design of roads, the use of guard rails and area wide traffic management schemes targeted at areas with high injury rates are also effective. Deaths on rural roads are becoming relatively more important. Fitting all vehicles with pedestrian protection features (and removing bull bars) would lead to a significant reduction in injuries and fatalities. Powers relating to transport and traffic are dispersed among local authorities, planning authorities and highway authorities. Many are discretionary and there is little incentive to give priority to the safety of child pedestrians.

Unwanted teenage pregnancy

Unintended teenage pregnancy was the subject of the fourth exemplar case study. The United Kingdom has the highest rate of teenage conceptions in Europe: three times that of Germany, four times that of France, and seven times the rate of the Netherlands. Of those teenage girls who conceive, nearly half of those under 16 and more than a third of 16 and 17 year olds opt for termination. For those who continue with their pregnancies, there is an increased risk of poor social, economic and health outcomes for both mother and child. The rates of teenage pregnancy are highest in the areas of greatest deprivation and among the most vulnerable young people, including those in care and those who have been excluded from school.

The research shows that school-based sex education plays an important role in the prevention of teenage pregnancy and is most effective when it includes information about contraceptive methods and how and when to access contraceptive services. There is an association between conception rates and the level and type of contraceptive services available locally. Clinics oriented to the needs of young people have a better rate of uptake and lower pregnancy rates. Specialised antenatal care programmes for pregnant teenagers with multi-disciplinary input are likely to improve health outcomes.

In relation to sex education, the legal research describes the framework within which the European Parliament has called upon Member States to promote good universal sex education in schools and to provide information about contraception. In England and Wales sex education courses are compulsory in secondary schools as part of the national curriculum, but parents have an absolute right to withdraw their children from such courses. The substance of sex education itself is regulated. In Scotland there is no prescribed national curriculum but guidelines developed through wide consultation seek to ensure that health education, including sex education, has a secure place within the curriculum in all schools. In Northern Ireland schools have no legal obligation to provide sex education, but neither are they prohibited from doing so.

Conclusions front the four case studies

The four case studies looked at four areas of public health which have a very substantial adverse impact on the well being of the people of the United Kingdom; where the United Kingdom performs very poorly by European standards; and which have very little to do with the provision of health care services. The detailed findings of the thorough legal research show that it is extraordinarily difficult to establish the state of the law in relation to any specific determinant of health. This reflects the fact that for decades there has been no effective institutional focus of responsibility for public health issues at the national level.

Communicable diseases

The fifth case study carried out in the context of the research commissioned by the Nuffield Trust was into the control of communicable disease in the United Kingdom. This part of the study has been published as a separate report. It reviews the state of the law relating to the control of communicable disease and the administrative arrangements which should underpin it. It draws attention to the deliberate release of anthrax following the terrorist attacks on the USA on 11 September 2001.

The study concludes that the current legal framework, which was drafted in the 19th century with no reasoned reform since 1945 is not based on a modern understanding of communicable disease control, nor does it adequately address some of the communicable disease problems of today. Some of its more authoritarian provisions affecting the liberty of the individual might also be in conflict with subsequent human rights legislation. There is real doubt about where responsibility lies and who would be in charge if there were to be a major outbreak of communicable disease. The legal provisions are already becoming further complicated by devolution. The study concludes that there is a need for a new legal framework for communicable disease control based on a reasoned set of principles for public health law reform.

DISCUSSION

The general legal framework

The focus of the present project was on laws that affect the health of the people but given the pervading nature of the determinants of health, this represents a considerable proportion of the entire body of statute law which has grown exponentially since 1959.

There is unquestionably an urgent need for co-ordination and simplification of the law as it relates to the public health. With the advent of devolution, a fundamental legal rationalisation is required. The complexity of the present legal base serves to obscure the true legal position in relation to available powers, even when interpreted by lawyers. As already indicated, this includes matters as fundamental as who is responsible for controlling communicable disease at the local level.

At the very least major legal rationalisation / codification of the existing statutory framework most directly relevant to public health is required. But this will not be enough.

Following on from the thinking at the Christ Church workshop, the legislation for a twenty-first century UK Health of the People Act should also aim to provide legal rationalisation based on general rights and basic principles of public health and then to set out comprehensive public health structures, new powers, duties and accountabilities. The rest of this discussion considers these aspects.

General rights and principles for health improvement

We need general rights and principles for health improvement in order to achieve a readjustment of the balance between individual rights and the common good[11] and to clarify and define what constitutes the UK public health function and what are its roles. We can then identify the necessary new statutory powers, duties and accountabilities.

11. For a discussion of how to set the balance see Gostin L. *Public Health Law - Power, Duty, Restraint.* University of California Press, 2000.

Clarification of what the nation wants its public health function to be would be a great galvanising force for its effectiveness. More fundamentally, this clarification should establish clear jurisdiction and responsibilities and create a firm basis for leadership.

The first step is to give legislative force to an explicit definition of the role of the public health function and its major constituent organisations; some of the ideas from the 1989 United States Institute of Medicine report may be relevant here. This report defined the roles of public health as: Assessment, Policy Development and Assurance.

It would be essential to ensure that the original meanings of these terms as clarified by the American report were fully conveyed by the Act. Similarly, these overarching roles should be delineated in respect of specific public health functions - again in statute and drawing on American work that followed on from the above report.

The values and principles that could be considered are many. In the aftermath of, for example, the BSE crisis, however, the time may have come to give particular recognition to applying the precautionary principle across a wider spectrum. This has long been the position for the licensing of new pharmaceutical agents as a reaction to the Thalidomide tragedy of the early 1960s. The time has come to widen this approach.

It is not generally in the nature of UK legislation to establish statutory rights, but there is legislation which does establish rights - the rights in the Schedule to the Human Rights Act 1998, for example, the duty imposed on education bodies in the Education Act 1996 to provide education for people in England and Wales, and the duty to provide for the Health of the People in England and Wales in the National Health Service Act 1977.

Serious consideration should, therefore, be given to establishing a general statutory human right to public health and vesting a matching statutory duty of care for population health to ensure the achievement of the statutory right in a public authority. This might include the right to protection from hazards and the right to information about hazard levels. In this connection it is interesting that the "Constitution" enacted in 1978 for the government of the Spanish autonomous region of Catalonia includes a right to health protection (Article 43[12]). This does not seem to have impeded the economic development of what has become one of the European Union's economic "Motor Regions".

For both the precautionary principle and the human right of public health to be truly meaningful would require the establishment of statutory duties to carry out health impact assessments across wide ranges of policymaking by government departments, devolved administrations and local authorities and within the public planning processes applied to development decisions.

For health impact assessment to work effectively and transparently it would be essential for all necessary health information to be made publicly available. It is particularly important that there should be full public disclosure and ongoing freedom of public access to health information if the legitimacy and trust which have been lost by government as a result of recent public health mishaps is to be restored.

12. Article 43 also places a duty on the Catalonian government with regard to the organisation and guardianship of the public health.

Given the problems of public trust, it is crucial that a major component of the public health function is given a measure of statutory independence from the government of the day. This is true at all levels of government and could be balanced by statutory advisory duties to government.

Given the nature of UK legislation, it would seem preferable for the legislation itself to set out only what is included in the definition of public health. To list principles in an Act constrains the giving of guidance and the making of regulations, thus preventing any development in the future, without amending the primary legislation itself. This prevents flexibility and progress.

The application of specific principles relevant to public health would seem to be best dealt with by the single body (proposed in this paper) issuing guidance. The body could be given a general duty/power to issue guidance by reference to principles relating to public health but it should not be restricted by a list of principles in the Act itself but enabled to expand and amend the public health principles as a result of scientific or social advancement.

New structures and powers

Real leadership from government for public health (the health of the people) is essential and there should be one overall ministerial responsibility for public health on a UK wide basis as well as ministerial responsibility at devolved administration level, to provide this. The overall central governmental responsibility would co-ordinate the work of different government departments. In England, in *Our Healthier Nation,* the government emphasised its determination to provide such leadership. Similar statements have been made in the other UK countries. How government does this is crucially important.

Commission[13] for the Health of the People

There is at present no formal framework which links government departments themselves or central government ministers or devolved administrations with public health professionals and others working on the ground. Recent experience from BSE to genetically modified foods demonstrates the need for ministers to have access to public health experts and for the public to be reassured that the information they receive is sound and independent.

The 1848 Act created a Board of Health which does not now exist. There is at present no organisation with specific responsibility for supporting the health of the people. A central Commission for the Health of the People could help to ensure the creation and continuation of a unified structure of public health legislation. It could be effective in harnessing relevant expertise, devising procedures for co-ordination, issuing guidance, and, on the model of the Audit Commission, providing accountability. It could be a forum in which the countries concerned could share their competencies and experiences, co-ordinate and synchronise their laws and mobilise common action in response to a crisis such as BSE.

An independent Commission for the Health of the People - acting as a champion for the health of the public and operating independently from central and local government - could

13. The term "Commission" will be used in this report for the proposed body in the interests of clarity - the precise title of such a body would of course be decided at a later stage.

help to achieve the objectives of expert advice and strengthened enforcement, to increase public confidence in the public health function and to spearhead the work for health improvement. The Environment Agency, the Food Standards Agency and the new Strategic Rail Authority are all examples of opportunities for independent authority in a particular area that have been grasped and implemented.

A Commission's functions should include advice, guidance, monitoring and possibly enforcement in cases of default by the existing statutory enforcement bodies. In this way, duplications and inconsistencies would be minimised, legislative gaps could be filled and expertise and best practice could be brought together and developed. Such a body with the remit to provide expert policy advice, derived from a reputable source of accurate information, would require to be independent from both political and commercial influences. It should also have the power to disseminate information publicly to influence people's knowledge and behaviour. The Commission should also have public health surveillance and monitoring, notification and registration capabilities and powers and could also have a role in dissemination of best practice to public health professionals.

To ensure accountability, Commissioners for Health could be appointed at each level of authority - national, devolved and local - to be responsible for monitoring the activities of government and other relevant bodies in terms of effective use of the Commission's advice. Their approach would be inclusive and work across all sectors with impact on health, establishing a mechanism for collecting information, for surveillance, and for discussing strategies and tactics with ministers to achieve improvements in public health across all sectors.

They could also be responsible for ensuring co-ordination and integration between local Health Improvement Programmes and Community Plans, produced by local NHS organisations and local authorities, for monitoring the implementation of these plans, supporting community development and finally for ensuring that appropriate expert bodies are set up at all levels, with the necessary independence, a duty to report publicly and the freedom to do so.

How could the structure be achieved in legal terms?

Primary legislation would be required to establish a Commission as described above. This proposal also addresses the Christ Church workshop concern on whether an underpinning legislative framework could bring together all the necessary elements - the notification/advice theme, the surveillance requirement, information and explanation, dissemination of good practice and so on.

For England and Wales this would require an Act of the UK Parliament. In Scotland and Northern Ireland public health in general is devolved to the jurisdiction of the Scottish Parliament or the Northern Ireland Assembly. Thus, while a UK Act could apply to these countries, the current understanding is that the devolved administrations would need to legislate separately to enable the single body to operate in each of these two countries as well as in England and Wales. The Commission and its Commissioners would thus be a United Kingdom body.

A discussion on the central proposal of this project is included as Appendix 1 to this report - Possible *Models for a Health oj the People Commission/'Agency.* The objective would be to establish a Commission (independent of the UK Government and the devolved executives) and to list its powers and duties. The first question to decide is which type of body would be most relevant. There are several types of bodies in the UK (commissions, agencies, councils, etc) which offer a wide variety of possible structures and powers. There are purely consultative bodies, regulatory bodies, and government departments (See Appendix 1).

The body established for this purpose should be national and independent, providing advice both to the central government and preferably also to the devolved bodies in Northern Ireland, Scotland and Wales in the policymaking function.

The most appropriate approach to meet the requirements of the Partnership Board and those listed in the Christ Church conclusion, as well as fitting the devolution context, would be based on the model provided by the Food Standards Agency. This is a non-ministerial government department with offices in each devolved country. This structure would have the following major advantages for a public health body: it would have the powers needed to provide advice on the improvement, co-ordination and protection of public health, as well as the machinery necessary for monitoring. It would also respond perfectly to the devolution framework. As the Government created the FSA recently, in response to the BSE crisis, it would seem reasonable to suggest the creation of a similar Agency with a preventive/ health improvement remit. To compensate for the lack of total independence from regulation and to restore the confidence of the public, the FSA type of agency provides very strong guarantees of impartiality, transparency and openness.

The powers of the FSA are vested in its board which is totally independent, its debates take place in public and its advice to government is published (see Appendix 1). Thus its status would meet the primary criterion of independence necessary for the public health body under discussion here.

The Commission for the Health of the People would also develop policies, including assisting other bodies or authorities in relation to all matters relating to public health. The policies would be taken into account when relevant primary and subordinate legislation is being proposed by the Government and regulatory bodies.

Powers, duties and responsibilities

There would be three main objectives in considering the powers and responsibilities of such a Commission. The first would be broadly to strengthen the leadership role of ministers particularly by allowing the Secretary of State for Health - and also devolved administration health ministers - to be the main ministers responsible for all aspects of public health.

It is the job of ministers to ensure - whether through primary legislation or otherwise - that responsibilities for enforcing public health law are clearly defined (and communicated) and to satisfy themselves that effective structures are in place for securing and improving the health of the people.

The vesting of several specific rights, duties and responsibilities in the Commission should also be considered in addition to clarifying the statutory position and strengthening the public health function:

- Duties of notification, registration, information
- Duties to give and receive advice
- Statutory duty of care for population health in a public authority. This should cover both protecting and improving population health
- A duty of precaution, which could have important implications in terms of holding organisations accountable
- A duty on local and health authorities to provide information and a freedom to use it for public health purposes. This should involve linked data, individually based and openly available; a duty to share/use/report; involvement at all levels from local to international; protocols for data handling; the inclusion in the system of relevant agencies.

The second objective would be independence - that ministers would be distanced from certain matters, especially where local ownership and control are essential for effective local action and also from the independent collection and dissemination of information and statistics about the health of the people and the factors which affect it.

The third objective would be flexibility - to consider enabling the Secretary of State and the Scottish and Northern Irish Executives by order to amend or add to any primary or subordinate legislation relating to public health. This could involve setting out comprehensive public health standards to be complied with, enforcement with criminal sanctions in cases of breach of public health legislation, and combination of different legal instruments relating to different aspects of public health into one comprehensive piece of legislation.

Clarification is required as to where the public health powers envisaged above now lie - particularly in the realm of communicable disease but also more widely - across relevant public authorities spanning the NHS, local government, devolved country administrations, regional outposts of central government and various peripheral agencies.

How could the powers and duties be achieved in legal terms?

To achieve the three objectives discussed above, comprehensive legislation would be needed to clarify and strengthen the leadership role of Ministers, to set out clear standards on law enforcement, and to make responsibility and accountability for all aspects of the public health fully transparent.

A recent example of comprehensive legislation which in many ways is similar to the legislation proposed above is provided by the Regulatory Reform Act 2001 with its emphasis on better regulation burdens placed on persons or bodies by legislation. The legislation enables ministers to amend primary legislation in order to impose or increase burdens, including imposing burdens on persons and bodies not previously affected by legislation. Specific powers include: the making and re-enactment of statutory provisions

for the purpose of reforming legislation with the view to reorganising entire regulatory regimes; imposing additional burdens, providing they are proportionate to the mischief which it is sought to control; removing inconsistencies and anomalies in legislation; allow administrative and minor details to be further amended by subordinate legislation. There is a specific involvement of both Houses of Parliament in scrutinising any orders put forward by ministers under the Act, enabling them to make adverse reports in relation to the proposals. The Act allows the National Assembly for Wales to make certain categories of orders under the legislation.

NEXT STEPS

Enough has already been said about the need to improve the health status of the UK population as a whole and in its devolved entities. The challenge now is to ensure that this improvement is achieved.

This paper represents the next step in carrying forward the aim of achieving a Health of the People Bill for the United Kingdom and the establishment of a Commission for the Health of the People. This present report and the previous publication *The State of Communicable Disease Law*[14] form the central technical resource to assist in this task.

Political ideology still informs the values that guide government - such as, in this case, a concern with the health and wellbeing of the people. We are now, however, in an era where an evidence-based rather than an ideological approach seems the most appropriate method of policy formulation. Contemporary public health should be as in tune with current times as Chadwick was in his - 150 years ago. A new UK Health of the People Act, based on the arguments put forward in this paper, should be as relevant and as effective an instrument in meeting the current and serious health challenges we face as was the first Public Health Act in 1848.

14. Monaghan S. *The State of Communicable Disease Law.* Nuffield Trust. London: 2002

APPENDIX 1
POSSIBLE MODELS FOR A HEALTH OF THE PEOPLE COMMISSION/AGENCY

The United Kingdom has a history of creating bodies to respond to particular needs, of which the Central Board of Health established by the 1848 Public Health Act was an early example. Today, it has been estimated, there may be as many as 5,500 extra-governmental bodies,[15] presenting a range of options for combinations of different structures and types of function, executive, advisory, co-ordinating and regulatory.

EXECUTIVE BODIES

Historically public corporations and other executive public bodies have been used in an attempt to combine the perceived advantages of business efficiency and management with arms length public control and accountability. Central to this approach (though rarely if ever realised in practice) has been the notion that while overall responsibility should reside with Ministers, the successful running of a large industry is only achievable if the scope for political interference in operational matters is reduced to a minimum. This has been seen as particularly important where issues of public interest are involved, as in the case of the Environment Agency, and public distrust of political interference requires a degree of distance from Whitehall and Westminster if the agency in question is to be publicly recognised as credible.

The Environment Agency is an example of an executive body, with its own staff and budgets, which combines regulatory and administrative functions. It was created by statute and has no direct public accountability to central government, though it has wide discretionary powers and responsibility for policy and rules.[16] The advantage of constituting

15. Bradley AW and Ewing KD. *Constitutional and Administrative Law,* 12th edition. Longman, 1997.
16. Bell S and McGilivray D. *Environmental Law,* 5th edition. Blackstone, 2000.

a Health of the People Commission along these lines would be independence from the influence of central government and the devolved administrations, in, at the least, the exercise of such regulatory powers as might be entrusted to it. It should be noted in this context that the history and experience of the Environment Agency demonstrates the need for clear delineation of powers and jurisdiction.

ADVISORY BODIES

Advisory bodies are normally set up where government wishes to retain control of decision-making and management. They may be concerned with:

- reviewing the need for fresh legislation;
- advising on the choice of policies under existing law;
- providing information and advice to government on specific topics.

They may be temporary or permanent. Royal Commissions are examples of temporary bodies; they gather evidence and their reports are normally published and laid before Parliament. Departmental committees and consultative committees are other examples of advisory bodies; and there is a wide variety of other non-statutory bodies.[17]

Advisory bodies may find it easier to gain and retain the confidence of government than more independent agencies, if only because their role is normally to assist with the development of policies which are then implemented by other bodies. But they normally lack powers of enforcement or the ability to compel the provision of evidence, and being non-statutory can be abolished with the same ease with which they are created.

The UK Partnership for the Health of the People concluded that neither of the models considered above would be entirely satisfactory as the basis for a Health of the People Commission or Agency. This raised the question of a possible hybrid agency, which might combine the advantages of executive and advisory bodies. A recent example of such a body is the Food Standards Agency.

The Food Standards Agency (FSA)

In the conventional sense of the term, the Food Standards Agency is not an agency at all, but in effect a UK-wide government department. It is not, however, a ministerial department. It was established by Act of Parliament with a UK-wide remit and is accountable to the Westminster Parliament and the devolved administrations through their Health Ministers. Its powers are vested in its Board, which comprises 14 independent members, and are exercised by its staff. Board members are appointed through an open competition held under the system established by the Commission of Standards in Public Life, and are subject to a publicly available code of conduct; a public register of members' interests is maintained; Board meetings take place in public. And in addition to being open and providing information as accessibly as possible, the Agency has set out deliberately to listen to public concerns: consultation, both with established consumer and other bodies and with those who traditionally have not had a voice, is seen as an integral part of its work.

17. Bradley and Ewing, op.cit.

The FSA is responsible for giving advice - has a statutory right to do so - to the government, the devolved bodies and other authorities, national, regional and local, on a wide range of matters related to the general subject area of food. It may issue reports on the response to its advice, and it has the power to require the giving of evidence and information. And while not an independent enforcing authority, it can act as an agent of government in enforcing certain legal requirements.

OTHER MECHANISMS

The "Greening Government" Initiative is a recent example of government responding to environmental concerns on a cross-departmental basis. A range of bodies combines with the object of considering the environmental implications of policies and programmes. The House of Commons Environmental Audit Committee produces reports, including annual reviews of the progress of the initiative. The Cabinet Committee on the Environment provides a high-level inter-departmental forum for discussion of government policy on sustainable development and environmental issues; but this body meets infrequently and in private, and does not publish proceedings. The Green Ministers Committee is intended to ensure that each department adopts environmental best practices, and departments are required to set targets for environmental improvement. However, although these arrangements provide an institutional structure for an integrated approach to environmental issues, there is little evidence that the initiative has had much impact.[18]

Parliamentary Committees are a well established system for the scrutiny of government activities, either departmentally (for example, the House of Commons Select Committee on Health) or across government (as in the case of the Commons Public Accounts Committee or the House of Lords Select Committee on Science and Technology). They are primarily inquiring bodies, free to decide what they will investigate, and independent of the Executive. They publish their reports, which are normally unanimous. However, they operate only when Parliament is in session, and their approach is investigatory, not monitoring; and although they report on their inquiries, and make recommendations, they do not normally revisit their findings to establish whether these recommendations have been acted on effectively. There have been difficulties finding parliamentary time to debate their reports; and the committees themselves have few permanent staff to assist them, though they can call on specialist advisers.

CONCLUSIONS

Having examined the various alternative mechanisms outlined above, the Project Team concluded that the Food Standards Agency model offered a viable approach which could with advantage be adopted for a Health of the People Commission or Agency. Proceeding on this basis, the new body would be established by Act of Parliament. Its main duty would be to give and publish independent advice to government, both central and

18. Bell and McGilivray, op.cit.

devolved. To ensure its credibility this advice should be based on a programme of information gathering and, where necessary, research, which would be published. The new agency should, like the FSA, be a UK-wide body.

APPENDIX 2
THE DETERMINANTS OF THE HEALTH OF THE PEOPLE

THE DETERMINATION OF HEALTH

As a first step towards improving health and reducing health inequalities, it is natural to ask what factors lead to our current pattern of ill health and health inequality.

Usually in this context, the medical concept of causation comes to mind as the required element. However, for these purposes the medical notion of a necessary and sufficient cause is too narrow, implying a direct "follow-on" relationship and originating from the doctrine of specific aetiology whereby each disease has a single cause.

This is commonly the position for infectious diseases, which are actually defined and classified according to their causative agent. But for the majority of health conditions, it has become clear that at best a complex web of causation involving many interacting factors is involved, and it is even debatable how useful the narrow concept of direct causation is over and above the concept of the wider determining factors.

Furthermore, in the circumstances of chronic disease and ill-health, "causative" and determining factors cannot logically be limited to biological, chemical and physical agents as various psychological and socio-economic factors are just as strongly related to these health states.

Why are we seeking to understand what influences health? Presumably, this is in order to suggest interventions that could be applied to improve human health. Even in the rare instances, such as infectious diseases, where we can describe a single causative factor, this in itself may not be enough to suggest a useful intervention.

Rather, in order to effect a useful intervention, we may need to understand what influences the exposure of susceptible humans to this agent, which may be a "vehicle of transmission"

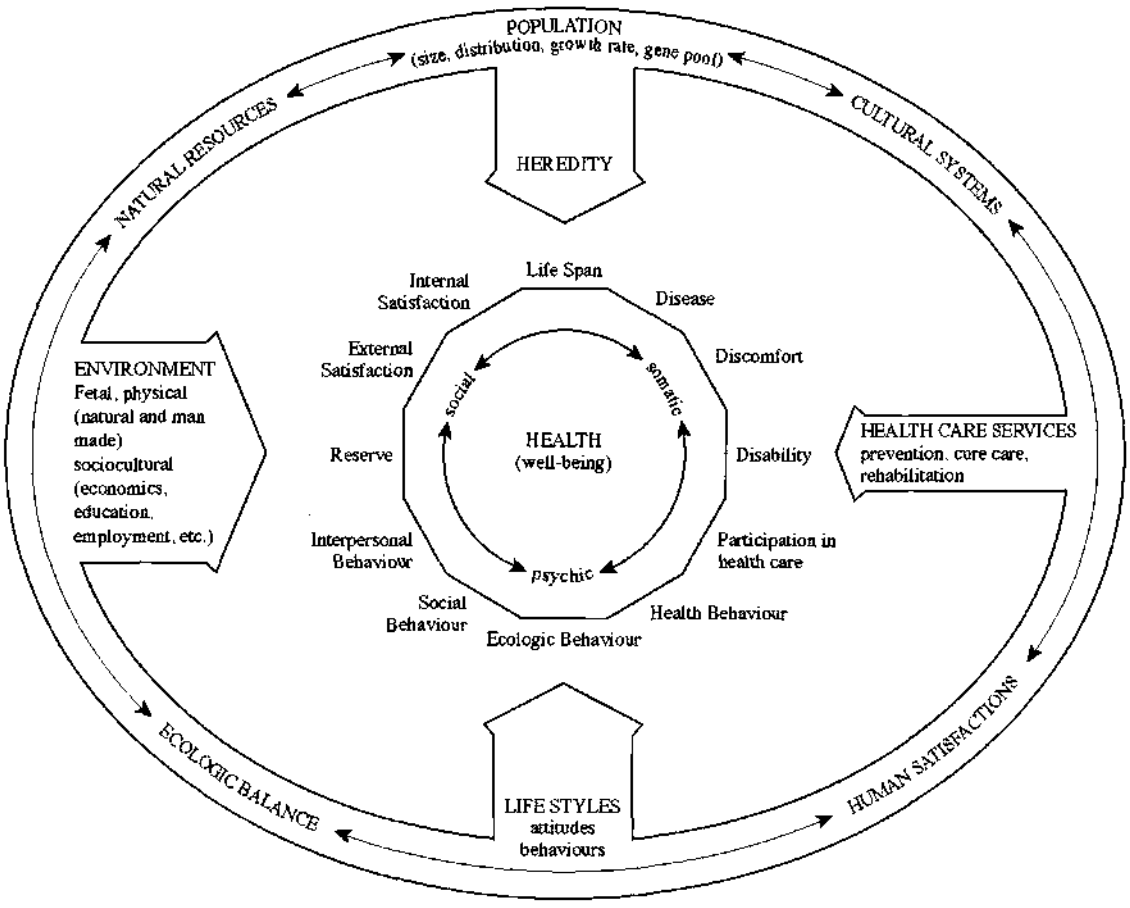
- for example drinking water contaminated with sewage, or else some situational factor such as poverty or homelessness.

Similarly, in the more common situation of chronic multi-factorial disease, we need to look much further than physical, chemical, biological or psychosocial agents to what influences exposure and / or susceptibility if we are to understand what leads to these conditions. Frequently we can usefully do this even where we do not know the identity of the agent(s) or even whether an environmental agent is involved at all.

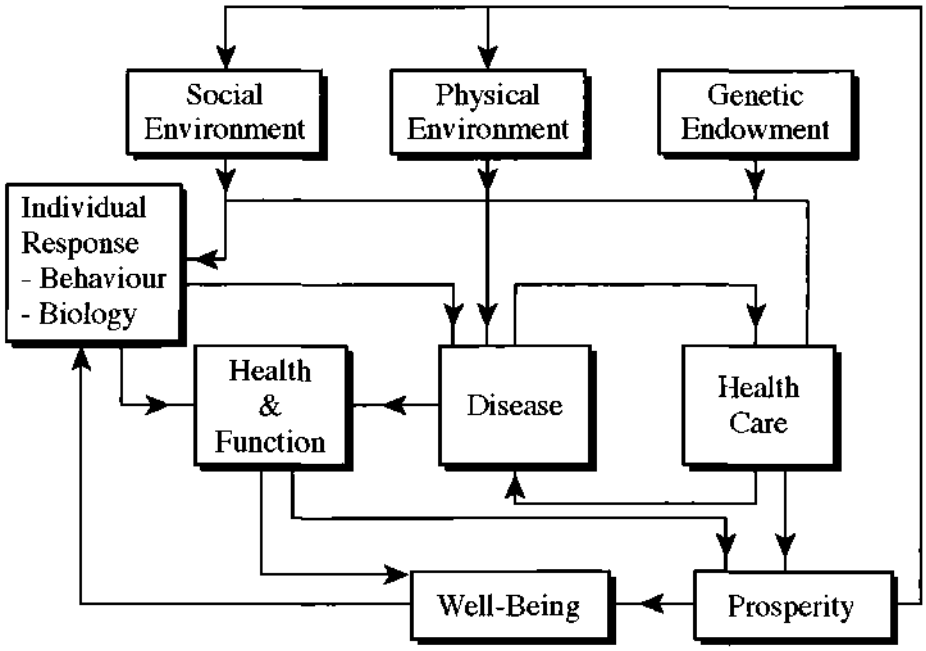
Broadly, there are two approaches to gaining this knowledge, basic laboratory science and human population research (epidemiology). Epidemiology is the study of the distribution and the determinants (of the distribution) of health related states in human populations. It is this epidemiological information on the determinants of health and disease in that population that we mainly require for public health policy.

WHAT DETERMINES HEALTH STATUS?

Blum (1974, 1981) has usefully grouped the determinants of health within a model which comprises the four fields of Environment, Lifestyle, Heredity (Genetics), and Health Care Services. Lalonde used a similar classification, the Health Field Concept (Laframboise 1973) in his famous public health strategy (Canadian Government 1974).



Building upon Blum's framework, Evans and Stoddart (1990 and 1994) developed a detailed model (below) suggesting interactive pathways in the production of health.



Considering the determinants of health in turn, within the original categories of Environment, Lifestyle, Heredity (Genetics), and Health Care Services as suggested by Blum (1974, 1981).

THE ENVIRONMENT

The environment can usefully be sub-divided into the pre-natal environment - before birth, within the womb; and the post-natal environment to which we are exposed following birth during childhood and adult life.

THE PRE-NATAL ENVIRONMENT

A growing body of evidence supports recognition of the central importance of the pre-natal environment within the womb as a central determinant of subsequent adult health and mortality (Barker and Robinson 1992) and of health inequalities (Barker and Osmond 1987a, Osmond 1987, Barker *et al* 1989a, Barker *et al* 1989c, Osmond *et al* 1990).

Adverse maternal factors compromise the intrauterine environment; maternal illness, smoking or high blood pressure result in low birthweight babies, whereas uncontrolled maternal gestational diabetes results in overweight babies.

There is also a huge literature on the sensitivity of the foetus to intrauterine environmental agents. These range from ionising radiation to maternal medication and nutrition (eg a diet lacking in folic acid), resulting most graphically in congenital malformations while also having other less obvious implications for lifetime health.

The adult mortality rate from stroke and ischaemic heart disease appears to be powerfully determined by adverse maternal factors acting before and during pregnancy. The same factors cause neonatal mortality, and in a given geographical area, the adult mortality rate from stroke and ischaemic heart disease is closely correlated with the neonatal mortality rate which applied some sixty years earlier (Barker and Osmond 1986 and 1987b) (Barker *et al* 1989a and 1989c). These intrauterine factors may be linked with stroke and ischaemic heart disease through the mediator of high blood pressure (Barker *et al* 1990b and 1992) (Law *et al* 1992) or maternal anaemia or iron deficiency (Godfrey *et al* 1991). Impaired intrauterine growth is also strongly predictive of non-insulin dependent diabetes in late adulthood (Hales *et al* 1991) and impaired glucose tolerance in early adulthood (Robinson *et al* 1992).

THE POST-NATAL ENVIRONMENT

Research evidence has shown beyond reasonable doubt that the dramatic improvements in the health experienced by all societies as they develop can be attributed less to improvements in medicine and surgery and more to improvements in wider environmental conditions (McKeown 1979). These include access to sufficient nutritious food, the provision of pure drinking water and separate disposal of sewerage, improvements in working conditions and in housing, and a voluntary reduction in birth rate. The environment can be usefully sub-categorised into the physical, chemical and biological environment and the social, psychological and economic environment.

The social, psychological and economic environment

Social inequalities in population health have in the past been principally environmentally determined, with the most important component probably being the socio-economic environment (McKeown 1979). Evidence suggests that the socio-economic environment remains the primary determinant of current social inequalities in health status seen between populations and between areas (Townsend *et al* 1992, Whitehead 1995, Davey-Smith *et al* 1997).

Social factors powerfully determine health and ill-health, and this is clearly exemplified by the very strong association between health and socio-economic status as measured according to the Registrar General's Social Class Classification. Within this schema individuals are allocated to social classes depending on occupation with high prestige professionals (doctors and lawyers) placed in social class I, managers and other professionals (teachers and nurses) in social class II, skilled non-manual and skilled manual workers in social class III, semi-skilled manual in social class IV and unskilled manual in social class V

In the UK there is a 5 year difference in life expectancy between males in social class I and in social classes IV and V The corresponding figure for females is 3 years (Davey-Smith et al 1997, Hattersley 1997). Both of these differentials are wider than they were 15 years ago (Harding *et al* 1997) with the gap for young males opening most markedly (Drever and Bunting 1997). Long standing limiting illness is 40 percent more common in social class V than social class I in the UK, while no such differential exists in acute sickness (Bunting 1997).

Socio-economic status throughout adulthood is the more important socio-economic indicator over a life time for differentiating groups with differing risks of mortality from cancer and non-cardiovascular non-cancer causes, whereas socio-economic status in childhood is particularly important in determining lifetime risk of death from cardiovascular disease (Davey-Smith 1997) which like most other diseases is much more common in poorer socio-economic groups (Morrison *et al* 1997).

Infant mortality in the UK is 70 percent higher in social class V than in social class I (Botting 1997), and again this is a differential that has widened in the last decade and a half. Children in the manual social classes are more likely to suffer from chronic sickness and tooth decay than those in non-manual classes (Botting and Bunting 1997).

A real association or an artefact?

Clearly the socio-economic environment is strongly associated with health. However, the next consideration is whether this association is real or whether it is due to some artefact or bias or confounding factor. The evidence suggests that these associations are unlikely to be explained by artefact or by the social drift hypothesis (whereby health determines social class) or by genetics determining both health and social class (Marmot *et al* 1995). Historically, neither social class nor health status have been primarily genetically determined. Similarly, health status has not been the main determinant of social class, though it does have some effect (Fox and Benzeval 1995).

Given that artefact is not the explanation, and that the association is therefore real, it is natural to enquire into the possible mechanisms linking the socio-economic environment and health, and also into the particular aspects of the socio-economic environment which are responsible for determining health. These issues are now considered in turn, beginning with a discussion of the possible mediating pathways between the socio-economic environment and health, before moving on to a discussion of the important (general and later specific) socio-economic environmental factors which determine health.

Mediators between the socio-economic environment and health

The main mediators acting between the socio-economic environment and ill health are likely to be psychosocial stress (Patrick *et al* 1995) and other psychological states including self-esteem, identity, and personality, which also influence personal and social expectations. Some of the translation from socio-economic environment to biological health state probably occurs through endocrine hormone release and other biological signals (Tarlov 1996). The psyche (the mind) and the soma (the body) are likely to be much more closely linked than the philosopher Descartes implied when he separated them within his model of "Cartesian Dualism", a conceptual separation which unhelpfully persists to this day.

The socio-economic environment in turn considerably determines the level of exposure to physical environmental hazards - wealthier people have more choices, being able to buy their way out of unhealthy environments, and also appears to produce the lifestyles and behaviour that lead on to ill-health, probably as a result of stress and peer pressure (Brenner 1995, Davey-Smith *et al* 1997).

General socio-economic environmental determinants

The general factors within the socio-economic environment which act to determine health status can be summarised by the "3 Rs" of "relational position" (social integration and cohesion), "resource position" (wealth, poverty and deprivation), and "relative position" (social stratification, inclusion and exclusion) (Miller 1995). These will be taken in turn:

Relational Position (social integration and cohesion)

The relational position of a society or group refers to how closely individuals relate to each other. Research dating back as far as the great 19th century French sociologist Emile Durkheim (1897) has suggested that the closeness of a society in terms of a sense of belonging (anomie as opposed to atomie) and community is a strong determinant of mental health particularly of suicide. Similarly, more recent work shows clear links between social networks, confiding relationships and depression (Brown 1978). Community cohesion, including family structures, is also related to physical health indices (Patrick *et al* 1995).

Resource Position (wealth, poverty, and deprivation)

Wealth, income, poverty and deprivation are strongly related to social class and a very close correlation between the pattern of deprivation and the pattern of ill-health and disease is evident.

The level of material well being experienced by an individual is largely determined by their social class, which is therefore also a key indicator of poverty and deprivation; and almost every health state and every disease is strongly social class related, being more common among poorer people (Hart N. 1997).The health differentials seen by social class probably result partly from absolute resource poverty but also from the social barriers created by relative lack of resources.

Relative Position (relative poverty and social exclusion)

There is considerable evidence suggesting that once one gets above a basic third world developmental level, then it is relative rather than absolute deprivation and poverty which is the more important determinant of health. Countries with lower levels of inequality in wealth (relative poverty) have lower levels of health inequality (Wilkinson 1996, 1997, Marmot *et al* 1995).

If relative poverty is more important than absolute poverty (at least in a country with a welfare state) this may suggest that health disadvantage may be more a result of psychological mediators (Brunner 1997) related to relative social position than to differential exposure to hazardous material physical agents.

Absolute poverty can be prevented by benefits, and some argue that absolute poverty barely exists in the UK, at least in the way that it did 50 years ago. However, benefits may also create dependence resulting from a poverty trap caused by the perverse incentives built into the benefit system.

Relative deprivation can be tackled by social engineering to flatten out differentials through re-distributive policies (which are far more politically controversial) or alternatively if the mediators are psychosocial then perhaps the effects of relative deprivation can be ameliorated through psychosocial support mechanisms or policies to reduce psychosocial stress (Wilkinson 1997a).

Specific socio-economic environmental determinants

Unemployment, economic inactivity and economic dependency

Unemployment is a key determinant of health (Brenner 1995) with a close correlation, even after correction for social class, with various measures of health status including premature mortality, suggesting that it is an independent determinant of health (Bethune 1997). This relationship is not explained by pre-existing ill health leading to unemployment. Unemployment and economic inactivity also appear to have an effect on self-esteem and mental health, over and above the health effects of unemployment mediated through poverty.

Employment and the occupational environment

On the whole, employment is healthier than unemployment. However, there is a long legacy of occupationally caused ill health in post-(heavy) industrial parts of the UK in particular. Although much of the hazardous heavy industry has now disappeared, while that which remains is probably more closely regulated than previously in health and safety terms, nevertheless most exposure to health damaging agents probably still occurs in the occupational setting. Psychosocial stress in the workplace (Everson *et al* 1997), particularly that related to low autonomy at work, and "high effort - low reward" work has been implicated as an occupational determinant of ill health, with those of lower employment status within organisations being most disadvantaged (Marmot and Feeney 1996, Marmot *et al* 1997, Bosma *et al* 1997, Johnson and Hall 1995).

Education

After age, the largest determinant of differential health status is probably social class. However, social class and education are strongly correlated in both directions in a virtuous cyclical relationship (Blane *et al* 1996). The absence of wealth and education acts in a vicious cycle potentially spiralling towards a socially excluded position associated with ill health (Wadsworth 1996).

The main determinant of adult social class is the social class into which one was born. However, general education appears to offer the greatest potential for social class mobility and is probably the key intervention available to prevent poverty, deprivation or exclusion and thereby to reduce health inequalities and to promote public health (Wadsworth 1996, Blane *et al* 1996).

Maternal education level is a particularly strong predictor of various parenting skills and behaviours beneficial to foetal and infant health including duration of breast feeding (Wadsworth 1996).

Economic growth and recession

There is a relationship between economic growth and health (Brenner 1995). Population health status decreases in recessions mediated through social mechanisms such as poverty, unemployment and loss of social position (Brenner 1995).

Culture and social norms

Cultural factors and social and group norms (peer pressure) are powerful health determinants (Patrick *et al* 1995) through their effect on behaviour. Social norms condition (normative) behaviour patterns that are socially acceptable but not necessarily healthy.

Traversing social norms can also lead to felt stigma or enacted stigma (labelling) resulting in secondary deviant health related behaviour.

Lifestyle (which is covered separately later) represents a predictable combination of several specific behaviours, ranging across different aspects of life experience. Lifestyle is a strong determinant of health, and obviously is partially subject to "free will". However, research suggests that lifestyle is actually largely determined by these social processes involving culture and social norms (Patrick *et al* 1995).

Crime and violence

If the social environment becomes unsafe this can influence the mental health status of an individual. A safe environment free of crime (or fear of crime) is an important factor and contributes significantly to individuals' sense of well being (Patrick *et al* 1995). Violent crime directed at the person is of particular importance as a health determinant. However, crime against property is also relevant. The challenge is not just to be "tough on crime" for health as well as other reasons, but also to be "tough on the causes of crime", which are largely the same socio-economic factors which determine health.

The physical, chemical and biological environment

Physical, chemical and biological environmental influences are highly important determinants of health (Last 1998). Exposure to hazards in these environmental categories is strongly correlated with social class and determined by socio-economic status, acting largely through occupation and precise geographical area of residence.

Shelter and housing (and the domestic environment)

After food and water, shelter from the extremes of the natural environment is probably the other important physical environmental pre-requisite for health. Homelessness, which has been seen with increasing frequency in recent years, is therefore a fundamental threat to health. Alongside the availability of shelter, the quality of housing has also been a crucial factor related to health. The links between housing conditions and health have long been recognised. Generally, those living in good housing are in better physical and mental health than those who are not.

These links were most prominent in Victorian Britain, which established the connection between overcrowded and insanitary housing, high death rates and high rates of disease. The link was probably mainly between overcrowding and poor ventilation and respiratory infections such as TB. Massive slum clearance and significant investment in private sector and social housing improved these conditions but often broke up community psychosocial support. Even though the condition of housing has now improved, it is still likely that many of the inequalities in health which we see in today's adults and elderly are related to the poor housing conditions they experienced many years ago when they were children (Barker and Osmond 1987a). Poor adult respiratory health status and adult death from chronic obstructive airways disease are both determined by childhood respiratory infection, which is partly related to overcrowded living conditions (Barker *et al* 1991).

The indoor environment is believed to influence allergic respiratory disorders, some of which may be related to dampness, central heating and wall to wall carpeting (Best 1995). These environmental conditions have particular impact on children (Barker and Osmond

1987a). Fuel poverty is also an issue that is under increasing examination and especially its impact on the poorest and oldest in whom it causes hypothermia.

Pollution of the general environment

Pollution, whether generalised, as in air quality in urban areas, or localised, as in incidents such as oil spills, is often believed, and may sometimes be proved, to be the cause of ill health and may therefore account for health inequalities. A lot is known about the health damaging effects of exposure to high doses of myriad different chemicals in the occupational setting. Much less is known about low dose exposure in the general community (Last 1998). However, a large evidence base now exists on the health effects of urban pollution principally emanating from motor vehicle emissions. These are principally the provocation of asthma attacks in the susceptible (Last 1998).

Water and sanitation

Historically, following the industrial revolution, domestic water polluted with sewage was probably the greatest single threat to health. The efficient separation of drinking water from effluent achieved by the sewer system in cities was probably the greatest achievement of the public health movement. The maintenance of this system remains crucial today, and drinking water providers have to consider new microbiological threats such as Cryptosporidium which are particularly difficult to deal with. The main chemical hazard in drinking water is lead from piping which can cause lead poisoning and mental retardation. Fluoride in drinking water at appropriate naturally occurring (or artificially created) levels substantially reduces the incidence of dental decay across all classes and age groups. This benefit is not enjoyed in large parts of the UK.

Food and agriculture

Availability of sufficient quantities of safe nutritious food is a fundamental determinant of health and its lack is a form of absolute deprivation.

LIFESTYLE

Another important factor which influences health is the lifestyle of each individual; whether a person chooses to smoke, exercise frequently, or limit intake of fatty foods.

At first sight lifestyle may be thought to be a matter of free choice. However, evidence suggests that in addition to being influenced by educational level and personal skills, it is also strongly determined by wider factors related to local and personal situation. These include peer pressure, social norms, socio-economic factors (including poverty and deprivation) social class, and also by product marketing and advertising and local availability (Abel-Smith 1994).

DIET AND NUTRITION

A healthy or unhealthy diet, is a key determinant of health (Last 1998).

Evidence suggests that poor nutrition in early childhood related to family poverty some sixty to seventy years ago increased subsequent susceptibility to death from ischaemic heart disease

and stroke in adulthood (Barker and Osmond 1986, Barker and Osmond 1987a, Barker *et al* 1989b, Barker *et al* 1990a). Several of these papers suggest hypertension as the mediator within this relationship, though evidence also implicates high serum cholesterol concentration again resulting from poor nutrition in childhood earlier this century (Fall *et al* 1992).

In more modern times, deficient maternal and early childhood diets may be less common. However, the important recent discoveries of the nutritional value of maternal folic acid for the prevention of neural tube defects and of breast feeding for the promotion of general health and the prevention of disease makes it clear that this issue remains relevant. Furthermore breast feeding has actually been declining, particularly in poorer groups (James *et al* 1997). Diet in adulthood may be less important in explaining inequalities in health than diet in childhood (Cade *et al* 1988), though there is also a wealth of evidence of a relationship.

Green vegetables, salads and fruit provide antioxidant vitamins and fibre and are thought to be protective against bowel diseases and cancers in general (James *et al* 1997). Current health promotion campaigns advise five helpings of fruit or vegetables daily. Diets high in saturated fatty acid cause heart disease and strokes and high salt intake causes high blood pressure and heart disease and strokes (James *et al* 1997). Similarly, it is well known that foods high in refined sugar cause obesity and dental caries.

For each component of a healthy diet a consistent picture relating poor diet, poverty and low social class is seen throughout the UK (James *et al* 1997).

SUBSTANCE MISUSE

The misuse of nicotine, alcohol and drugs has major implications for health.

Smoking

Smoking increases the risk of having a small baby, and of suffering heart disease, lung cancer, bronchitis and emphysema, limb amputation and various other problems, A major concern is the continued high number of teenage girls who smoke.

Alcohol

In excess, alcohol causes cirrhosis of the liver and high blood pressure in addition to social problems. In moderation, alcohol is probably beneficial to health.

EXERCISE AND OBESITY

Both exercise and obesity are strong risk factors for coronary heart disease, which is the biggest killer in the UK.

Overweight I obesity

Obesity increases risk of heart disease and stroke, among other problems. The UK has some of the worst rates of obesity in the world - and rising.

Exercise

Regular strenuous exercise has a protective effect for heart disease and stroke, builds bone mass, improves posture and helps control body weight.

HEREDITY (GENETICS) AND OTHER INTRINSIC FACTORS

These factors include genetic endowment (including sex) and biological age. The genetic constitution of individuals and populations is the key intrinsic determinant of health. All human diseases have a genetic component, including those due to infectious diseases or toxic agents, where the host response, in terms of the extent and severity of the effect, is at least in part a function of genetic susceptibility. Some diseases, which are due to single gene or chromosomal deficits, appear to be completely genetically determined.

Genetics is also potentially the most powerful arena for medical intervention to improve the health of individuals and could therefore also be a key focus for public policy in facilitating the treatment of those who could benefit. Thus far, medical intervention cannot change the genetic constitution of individuals to improve their health, but the power of the genetic revolution is to enable greater understanding of the interaction between genetic and environmental factors. This will allow conventional public health interventions to be focused on genetically susceptible sub-populations, and health promotional messages to be targeted at individuals at specific risk of disease.

Genetic testing and screening for diseases can at this stage only identify those at greater or lesser risk, with little prospect for direct curative intervention. Nevertheless, in some cases useful medical or personal action can be taken to reduce that risk, while in others the information may lead to benefit for other family members. The extent to which such knowledge may give rise to unnecessary anxiety is unclear but the whole question of genetic testing and screening raises significant ethical questions.

In the area of pre-conceptual counselling and foetal screening, recourse is available to more definitive intervention, though in the latter case, this means termination of pregnancy, a course of action few find easy. Furthermore, again there are ethical questions about falsely alarming those who are not affected.

In summary, at the moment there is only limited scope for clinical or public health intervention, but a number of policy issues can reasonably be set out at this time. This provides a window of opportunity to debate the ethical and financial implications of genetic science, yet however these resolve, there can be little doubt that the greater understanding of disease mechanisms brought about by the genetic revolution will have significant benefits for the public health (see also Zimmern and Cook 2000).

HEALTH CARE SERVICES

A person's health can also be influenced by access to good quality (effective) services (Bunker *et al* 1995). However, contrary to popular opinion, the evidence from historical studies (McKeown 1979), between countries comparisons (Cochrane 1978), and other studies (Marmot *et al* 1995) suggests that this influence of medical and health care upon the health of the population has been and remains smaller than each of the three other fields of environment, lifestyle and genetics. It follows therefore that inequalities in access to effective medical and health care services are not likely to be the main explanation for inequalities in health status.

It should be noted that these conclusions are based largely on mortality based evidence and it is possible that health care may well play a larger part in improving quality of life rather than increasing length of life.

Nevertheless, the evidence which does exist is sufficiently convincing to be able to conclude that prevention through social and environmental policy and public health action is more effective than medical and healthcare services, in achieving population health gain (Hobbs and Jamrozikl997). This has been the position across the sweep of history though the contribution of clinical medicine has been increasing in the late twentieth century. Nonetheless, in simple terms, and perhaps unsurprisingly, it appears that it is easier to prevent health from being forfeited in the first place than it is to restore health after it has been lost.

Within the domain of clinical medical and health care services, it is preventive medicine in the form of immunisation and preventive maternal and child health, rather than "curative" services that have historically been of greatest value in advancing population health and also in reducing health inequalities (Bunker *et al* 1995, Hobbs and Jamrozik 1997). Large though this contribution has been, it should not distract from the fact that overall, prevention has most effectively and efficiently been achieved by social and environmental policy than by public health or preventive medical services.

Therapeutic medicine has benefited the health of the population most through the antibiotic treatment of sexually transmitted diseases and of some other infectious diseases, particularly Tuberculosis (Hobbs and Jamrozik 1997). However, in the latter case, the role of improving social and environmental conditions (including provision of clean water and better housing leading to reduction in overcrowding) and better nutrition was much more important in the decline of this disease than the advent of effective treatment.

There have been some notable medical successes in the treatment of cancer in younger patients particularly in the case of childhood leukaemia, and of testicular cancer in young men, both of which are now almost invariably curable, however the population health impact of successful treatment of these rare diseases is small.

Outside medical drug therapy, orthopaedic and accident surgeons have a claim to be among the doctors achieving greatest population health gain particularly as a result of treating fractures due to trauma in younger patients (Hobbs and Jamrozik 1997). Ophthalmic surgeons can rival these claims as a result of the great benefits to be derived from cataract surgery (Hobbs and Jamrozik 1997).

In recent times there have been considerable advances through medical innovation and it is often assumed that this must therefore translate into a greater benefit to the health of the population. It is reasonable to assume that there has been benefit at the population as well as the individual level. However, there is little convincing evidence to suggest that the the relative contribution made by medical and health care to the health of the population has increased markedly compared to wider social, environmental and public health policy and action.

Following the success of the latter interventions in combating infectious diseases, the current picture of population ill-health is different from that in the past, comprising largely

chronic degenerative diseases in older people. These patients are in health terms on a downward trajectory and their diseases being degenerative in nature, are more refractory to medical intervention. Hence there is also a law of diminishing returns, whereby progressively larger increments of expenditure on medical care for these groups achieves progressively smaller incremental health improvement. Health maintenance may be a more realistic goal than health improvement for these groups.

Ironically therefore, just as medicine appears to have become more potent, the prevalent degenerative health conditions make it more difficult for it to demonstrate unequivocably that it is making a larger contribution to the health of the population. These degenerative diseases are usually amenable more to delay than prevention, and to quality of life improvement rather than cure. Because medical treatment benefits might therefore be more evident in quality of life improvement rather than mortality rates or longevity, they may also be more difficult to demonstrate unequivocably.

CONCLUSION

Although absence of evidence of benefit is not synonymous with failure, rational public policy should as far as possible be made according to the evidence which does exist. This favours social, environmental and public health policy over clinical medicine and healthcare.

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APPENDIX 3

UK PARTNERSHIP ON THE HEALTH OF THE PEOPLE

MEMBERSHIP

Chairman

John Wyn Owen	Secretary, The Nuffield Trust

Members

The following served on the UK Partnership; their designations are those at the time of their membership.

Professor John Ashton	Regional Director of Public Health, NHS Executive North West Regional Office
Dr Chris Bartlett, Director	Director, Communicable Disease Surveillance Centre
Maria Duggan	Policy Adviser, UK Public Health Association
Karen Dunnell	Office for National Statistics
Professor David Hunter	Durham University Business School
Professor Rachel Jenkins	Director, WHO Collaborating Centre Institute of Psychiatry
Rayjobling	Senior Tutor, St John's College, Cambridge
Professor Tim Lang	Professor of Food Policy, Thames Valley University; currently Professor of Food Policy, City University

Janet Lewis-Jones	Independent Policy Adviser
Professor James McEwen	President, Faculty of Public Health Medicine
Professor Martin McKee	Professor of European Public Health London School of Hygiene and Tropical Medicine
Dr Jeremy Metters	previously Deputy Chief Medical Officer, Department of Health
Dr Peter Orton	General Practitioner
Dr Angus Nicol	Director, Communicable Disease Surveillance Centre
John Ransford	Head of Social Affairs, Health and Housing, Local Government Association
Geof Rayner	Chair, UK Public Health Association
Aisling Reidy	Constitution Unit, University College London
Dr Eileen Rubery	Head of Health Aspects of the Environment and Food, Department of Health
Dr Iqbal Sram	Consultant in Public Health Medicine, NHS Executive North West Regional Office
Dr Helen Zealley	Chief Administrative Medical Officer and Director of Public Health, Lothian Health Board
Dr Ron Zimmern	Director, Public Health Genetics Unit, Cambridge

Secretariat

Max Lehmann	Deputy Secretary, The Nuffield Trust

APPENDIX 4

PROJECT TEAM

CORE TEAM

Dr Stephen Monaghan (Project Director)
Public Health Director, Cardiff Local Health Board and Consultant in Public Health Medicine, National Public Health Service for Wales; previously Deputy Director of Public Health, Bro Taf Health Authority, Cardiff;

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Ms Marie Navarro (Project Lawyer)
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Ms Elizabeth Gould, Primary Care Development Officer, Gwent Health Authority

Ms Lynette Thomas, Research Officer in Social Affairs, formerly of the Welsh Local Government Association, now with the European Commission, Brussels.

Dr Gill Richardson, Specialist Registrar in Public Health Medicine, BroTaf Health Authority, Cardiff.

Dr Merion Evans. Consultant in Public Health Medicine. Communicable Disease Surveillance Centre (Welsh Unit), Public Health Laboratory Service.