

# Evidence and public health

Towards a common  
framework

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## Acknowledgements

Additional research for this paper was conducted by Hanif Ismail, who compiled the analysis of recommendations featured in Section 2.4. The discussion paper also draws on points made by participants at a King's Fund symposium, *Our Healthier Nation: Evidence, policy and practice*, held in June 1999 with support from the Department of Health.



# Background and introduction

## *Introduction*

This discussion paper sets out the key points that have emerged from the King's Fund's participation in the public health evidence debate. It is intended as a contribution to that continuing debate.

The discussion in this paper addresses four central issues.

- **The need for change:** how adequate is the existing public health evidence base? What issues need to be addressed? What are the consequences of leaving these unresolved?
- **The scope of the public health evidence base:** how wide should the net be cast? What information should the public health evidence base contain? What gaps need to be filled – and what are the implications of leaving them unplugged?
- **Values and hierarchies:** how should the new public health evidence base be conceived? Are existing frameworks suitable for application to the field of public health?
- **Towards a new, shared framework:** can a conceptually sound framework for evidence be developed and applied to the field of public health? What might the elements of such a framework be?

The paper comments on specific points raised by the Health Education Authority's consultation paper, *Evidence Base 2000: Evidence into Practice*, circulated in December 1999.<sup>1</sup> An open response to key aspects of the HEA's proposals is set out in Section 1. Central issues raised in the response are explored in more detail in the discussion that follows in Section 2.

## **Our Healthier Nation: Evidence, policy and practice – a *symposium at the Kings Fund***

The *Our Healthier Nation: Evidence, policy and practice* symposium was held at the King's Fund in June 1999, with support from the Department of Health. The event addressed the role of evidence in delivering the goals of the *Our Healthier Nation* strategy,<sup>2</sup> and explored the potential for a new conceptual framework for evidence. Participants included leading academics and researchers from a variety of disciplines, managers and practitioners from health and local authorities and from voluntary organisations and community groups, as well as representatives from key Government departments.

A background paper was produced for the symposium, mapping the challenges for evidence posed by the new public health agenda.<sup>3</sup> This paper draws on points made in the course of the discussions that took place.

# 1. Evidence Base 2000: the King's Fund's response

## ***Introduction***

In December 1999 the Health Education Authority circulated a consultation document, inviting comments on the development of a new evidence base for public health. The King's Fund's comments, together with some background information, are set out below.

## ***The new Health Development Agency***

The Health Education Authority (HEA) will be replaced by a new specialist agency, the Health Development Agency (HDA), in spring 2000. The core functions of the HDA were defined in the public health White Paper *Saving Lives: Our Healthier Nation* as:

- identifying gaps in the evidence base
- commissioning research
- setting standards
- disseminating good practice
- undertaking campaigns
- advising on capacity and capability.

## ***Evidence Base 2000***

The development of a new resource, Evidence Base 2000 (EB2000), has been proposed as a major contribution to the fulfilment of the HDA's functions. Delivered primarily through a database accessible through the Internet, it has been proposed that EB2000 should map:

- evidence of the effectiveness of public health measures to reduce inequalities
- the quality of this evidence
- gaps in the evidence base and those practices and activities that have no demonstrable impact.

The HEA has suggested an ambitious initial aim of capturing and disseminating existing evidence relating to priority areas, focusing on evidence from three main sources:

- evaluation and effectiveness
- best practice
- social action research.

A system for grading evidence and ensuring quality and reliability has been put forward, based on the familiar ‘hierarchy of evidence’ (see Section 2.4 below). An ambitious timetable for developing and implementing the EB2000 resource is proposed, with the aim of establishing an initial database by spring 2000.

## **1.1 The King’s Fund’s response**

A new public health evidence base is urgently needed, and the King’s Fund has called for the development of an appropriate resource.<sup>4</sup> The proposals currently being consulted on recognise the complexity of the task and the challenges involved. However, they raise a number of issues that require further consideration or clarification, and which in some cases need to be challenged. The HEA has asked for responses to a number of key questions. The King’s Fund’s comments are principally directed towards two of these questions:

- the scope of the new resource
- gaps in the planned content.

Suggestions are also put forward about the development of Evidence Base 2000, specifically relating to:



- the proposed timescale
- practical implementation and organisational development.

### ***General***

- The King's Fund welcomes the proposed contribution of the new HDA to developing a new, shared evidence base for public health. There is an urgent need to define the body of evidence that relates to health improvement and public health, and to make such evidence accessible to inform policy and practice.

### ***Limitations of the existing evidence base***

- The HEA's proposals state that 'Evidence Base 2000 aims to bring together the existing evidence base for public health and health promotion'. Bringing together evidence from the many sources where it currently resides (including journals, databases and expert opinion) would be a major undertaking. But the success of such an exercise would depend on the existing evidence being adequate and simply needing to be brought together in one database. While this in itself would be a major achievement, it is not enough to meet the needs of the new public health agenda.
- Researchers in the USA have argued that there is not 'enough evidence to support an evidence-based approach' to the field of public health.<sup>5</sup> Their conclusions are presented in Section 2.3. They indicate that the priority for EB2000 should be identifying gaps in the evidence base and putting in place measures to supplement it.
- The extent to which the existing UK evidence base adequately addresses the issue of inequalities in health is increasingly open to question. For example, much of the information likely to be rated highly by the HEA's proposed system for grading evidence may exclude a consideration of the social determinants of health (see Section 2.3 below).

- Evidence Base 2000 could in future provide the basis for decisions about prioritising public health activity, with the HDA acting in a similar way to the National Institute for Clinical Excellence (NICE). The current proposals do not make it clear what force the HDA's guidance and advice will have: will the extent to which they influence public health practice be left to individual discretion, or could the HDA have a role in establishing national criteria for resource allocation? In any event, for the HDA's recommendations to be heeded, those affected must have confidence in the quality and relevance of the public health evidence base.

### ***Grading evidence: 'What counts?'***

- The HEA is right to recognise that information conforming to the established hierarchy of evidence has traditionally been considered of greater value than some other approaches. The HEA's assertion that EB2000 will require 'a reconception of the notion of hierarchies of evidence' is therefore extremely welcome.<sup>6</sup>
- The King's Fund agrees with the HEA that '... the key to high-quality evidence is to be found in the rigorous and systematic application of methodologies that are appropriate to different topics'.<sup>7</sup> This could be achieved by constructing a framework with a spectrum of approaches rather than a linear hierarchy.
- *Saving Lives: Our Healthier Nation* signalled clearly that a wider approach to assessing evidence was needed: 'We need to widen the scope of methods used beyond the randomised controlled trial. In the past it has been the gold standard for research but it is no longer applicable to all the kinds of research questions which need to be answered'.<sup>8</sup>
- It is essential that any new evidence base be founded on an appropriate system for ensuring quality and reliability. The HEA appears to suggest adopting the framework used in the Health Evidence Bulletins produced by the NHS in Wales. This model is based on a medically oriented hierarchy of evidence and does not accommodate broader forms of public health activity (see Section 2.4 below).

- A resolution of the intense debates about ‘what counts’ as evidence will not be achieved by simply recognising that evidence of different types ‘has value in different contexts’.<sup>9</sup> The suggestion that evidence might be assessed on the basis of a ‘judicial principle’ (a balance of probabilities) is interesting, and worthy of further consideration. The suggestion stems originally from Green and Tones, and is further explored in Section 2.4. Green and Tones do not relate the ‘judicial principle’ to any established evidence hierarchy, as the HEA’s proposals seem to do; in fact, they are explicit in calling for a ‘wider evaluative framework ... for assessing evidence’.<sup>10</sup> It is not clear how the ‘judicial principle’ would be compatible with a hierarchy of evidence.
- If a medical model of evidence were adopted, EB2000 would work against joined-up thinking and practice, hindering the mainstreaming of health improvement objectives. Constructing EB2000 around the incomplete evidence base that currently exists could lay the foundations for a distorted and distorting framework, which would perpetuate many of the problems that affect public health today (see Section 2.1 below).

## **Scope**

- A new public health evidence base must be relevant and useful to all stakeholders within the new public health. The references to ‘public health medicine’ and ‘the public health workforce’ in the consultation document need to be clarified and expanded considerably. Consideration should be given to incorporating evidence of direct relevance to all sectors contributing to health improvement, including lay expertise and community groups, in ways that are accessible and meaningful.
- The HEA’s proposals seem to include the public as one audience for EB2000. Notwithstanding the raft of recent Government policies concerned with ensuring open government, access to information and making use of new technologies, it is not clear why this should be a given. A targeted approach to communication may be more appropriate.

## ***Timescale***

- The King's Fund welcomes the conceptualisation of EB2000 as a developing resource. Addressing the issues that this raises – including professional development and training, the research and development infrastructure, and far-reaching organisational changes – will require continuing efforts over a period of years.
- The timescale presented by the HEA is challenging:

*In the first instance the web site will focus on evaluation and effectiveness; best practice and social action research. Up to spring 2000 it will be developed to provide a gateway to other sources of evidence, and disseminate information in an accessible form. In the longer term, it will map evidence of the effectiveness of public health measures to reduce inequalities; the quality of this evidence; gaps in the evidence base and those practices and activities which have no demonstrable impact.*

This may need to be extended to reflect the complexity of the work proposed.

- Above all, it is the ordering of the tasks that needs most urgently to be reviewed. The King's Fund takes the view that it is the latter tasks – mapping the evidence base, and identifying and filling gaps – that are of the greatest immediate value.
- Collating the existing evidence could feed usefully into a mapping exercise. If the early findings are made available through a database, this should be presented as a work in progress. At this early stage, no attempt should be made to ascribe value according to any conceptual or analytical models (even in the interests of 'quality assurance').

### ***Implementing EB2000***

- The HEA has suggested a database as the main delivery mechanism for EB2000. A database, by definition, requires **content**. To be truly effective, however, EB2000 should be at least as much about **process**: the structures and mechanisms that will help evidence to inform practice.
- The King's Fund welcomes the suggestion that the database will be supported by other forms of dissemination activity, such as local and regional implementation teams, seminars and workshops, a telephone hotline and e-mail advice. The findings of the King's Fund's PACE project (outlined in Section 2.5) strongly support the need to adopt a multifaceted approach to implementing change.
- The suggestion that 'local and regional implementation teams' be established is particularly welcome. Such teams could usefully fulfil a wider range of functions than simply supporting EB2000's implementation. The King's Fund's proposals for a system of independent support and advice for public health practitioners – so-called 'critical friends' – are detailed in Section 2.5.

### ***Moving the debate forward***

- The King's Fund welcomes the HEA's commitment to developing EB2000 in consultation with stakeholders within the fields of public health and health improvement.
- This open response and discussion document is offered as a contribution to the process of debate and discussion that will facilitate the development of a shared resource.

## **2. Evidence, policy and practice: a discussion**

### ***Introduction***

Public health is both art and science, but it shouldn't be an act of faith. Too often, the evidence needed to inform decision-making at all levels of practice is hard to come by, of questionable quality and uncertain relevance. This affects the ability of the public health function to operate effectively, and the extent to which it is able to improve health.

Debates about improving the public health evidence base have often focused on the technical and practical difficulties associated with gathering information in a field where simple cause and effect relationships can be impossible to prove. But overcoming the acknowledged failings of the existing evidence base will not be achieved only by technical advances – improved methodology, for instance, or more comprehensive dissemination.

The public health evidence base is concerned with political issues as well as practicalities, including questions of judgement and the nature of the decision-making process. It is these conceptual issues that hold the key to constructing a new evidence base.

This discussion paper explores:

- the need for change
- the scope of the public health evidence base
- the limitations of the existing evidence base
- values and hierarchies.

It argues for a new approach to evidence about public health, one that reflects the full range of public health activity and is accessible to all those who contribute to health

improvement. Suggestions about the development of a new conceptual framework for evidence are offered in the final section.

## 2.1 The need for change

### *Introduction*

The need for a credible, accessible and conceptually sound evidence base for public health has never been more pressing. The Government's new public health strategy, together with other recent developments in the field of public health, have combined to create a climate of change and opportunity.

The lack of an appropriate evidence base for public health represents more than a missed opportunity. A 'better' evidence base would not only be a useful new resource: it would also provide the foundations from which the new public health agenda could be delivered. The lack of such an evidence base, and the ways in which evidence is currently gathered, viewed and used within the field of public health, mean that:

- **decisions are of poorer quality** as the evidence required to ensure quality, effectiveness, efficiency and best use of resources, and to understand and appraise new ways of working, is often unavailable
- **communication is hindered** between the different sectors, disciplines and agencies working to improve health, with different approaches to evidence impeding a shared understanding of health issues and partnership working
- **practitioners lack confidence**, either in their ability to make an impact or in the willingness of colleagues to accept that they have this ability

- **investment is unbalanced**, with funding for research and development bypassing innovation and flowing along well-established channels, sometimes reinforcing biases in the existing evidence base.

### ***What works?***

A Government that demands to know ‘What works?’ is keen to invest in areas where the benefits can easily be quantified. For instance, a new evidence base for public health could do much to ensure that, in relation to cancer, food policies and environmental measures take their place alongside tsars and treatment guidelines, by enabling an assessment of the benefits of prevention alongside care and cure.

NICE was established by the Government as a new Special Health Authority in April 1999, with the aim of reducing unacceptable variations in the quality of health care. NICE is responsible for systematically appraising health interventions before they are introduced into the health service and for developing clear national guidance based on reliable evidence, as well as disseminating Effectiveness Bulletins. All of these functions can be seen to be echoed, potentially, by the Government’s proposals for the new HDA.

A body capable of advising on the effectiveness and benefits of different public health interventions could be a valuable addition to the field of public health. But the task would be somewhat harder than that faced by NICE. In assessing clinical effectiveness NICE is able to draw upon a defined body of evidence that is recognised by most of the major stakeholders affected by its decisions. The relatively underdeveloped and disparate body of knowledge relating to public health does not lend itself readily to such a task.

How would these functions be conducted in the rather messier field of public health? ‘National guidance’ could take the form of advice that certain interventions are of unproven benefit, with recommendations that they should not be invested in. Yet proof of the impact of many forms of public health activity is notoriously difficult to establish.<sup>11, 12</sup>



Is enough known about food co-ops, say, or exercise on prescription schemes, or community gardening initiatives, for recommendations about their application to carry weight? Since much of the evidence concerning both established and newer forms of public health activity is far from incontrovertible, it is vital that a robust, credible evidence base is developed to form the basis for any future rationing decisions.

## 2.2 The scope of the public health evidence base

### ***Introduction***

Given the breadth of evidence required by the new public health agenda, and the range of groups who will require access to it, it is essential that the scope of the evidence base is not constrained by too narrow a set of definitions.

### ***What is public health?***

In the first instance, it is essential that any new evidence base relates to the full range of public health objectives and activities. *Saving Lives: Our Healthier Nation* identifies three central objectives:

- specific disease-based targets for health improvement
- broader goals to improve health and reduce health inequalities
- a series of wider public policy goals.

Figure 1 below sets out the ways in which these objectives relate to existing forms of evidence about public health.

As visions of health have become increasingly broad, the range of activities encompassed by the public health umbrella has widened correspondingly. Initiatives and interventions across a range of sectors have a part to play in improving health, and a growing number are expected to link with the Government's public health strategy. The guidance for round six of the Single Regeneration Budget, for instance,

identifies improving health as one of the four key objectives that bids are required to address and locates the work of the programme within the cross-sectoral drive for health improvement announced in *Our Healthier Nation*.<sup>13</sup>

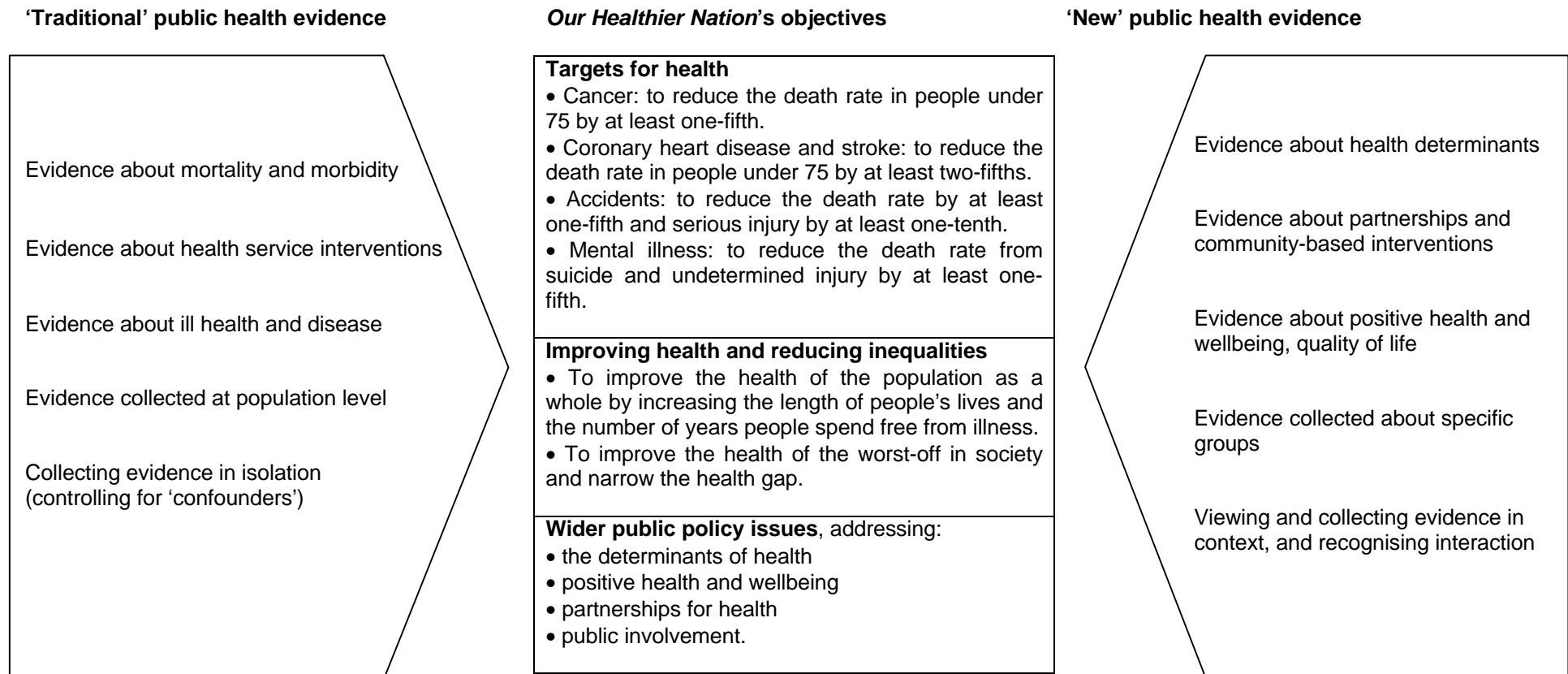
The welcome growth of such broadly based initiatives places a new demand on the public health evidence base. The extent to which regeneration schemes, for example, are able to include realistic health targets among their objectives – and the extent to which these schemes' impact on health can be measured – will be influenced by the evidence that is available to decision-makers.

The public health evidence base should aim to meet this challenge, enabling the links to be made between 'health' and the wide range of activities that impact upon it. Too narrow a definition of public health, or of what constitutes evidence, will work against joined-up thinking, and work against the mainstreaming of health improvement.

A medically oriented evidence base will mean that evidence about health improvement remains the preserve of mainstream public health practitioners, excluding many others within local government or the voluntary and business sectors who have a significant part to play. A new framework for evidence needs to be based on a clear understanding of these different players and functions.

**Figure 1:** Evidence requirements of *Our Healthier Nation's* policy goals

*Our Healthier Nation's* objectives require evidence of different types from a range of sources. 'Traditional' public health evidence, examples of which are shown on the left, will need to be supplemented by newer forms of evidence, shown on the right of the diagram below.



## 2.3 Limitations of the existing evidence base

### ***Introduction***

The breadth of the public health objectives identified above gives an indication of the types of evidence the new evidence base should include. But what does it currently incorporate? The adequacy of the existing evidence base as a foundation for decision-making can be criticised for failing to:

- recognise the broader determinants of health, especially social factors
- explicitly consider issues affecting inequalities in health
- adopt a sufficiently resilient and inclusive conceptual framework for assessing the quality and relevance of evidence.

### ***Evidence in context***

Established approaches to collecting evidence in the field of public health have tended to focus on assessing the impact of interventions delivered through conventional ‘health’ services, such as health education programmes delivered by GPs or health visitors and immunisation programmes. Little robust evidence exists about the effects of interventions designed to address the complex issues that affect health in other settings, such as schools, communities and workplaces.

Increasingly, public health is concerned with social interaction. It encompasses the relationships people have with each other, and extends into homes, schools, workplaces and neighbourhoods. Approaches to evidence that regard such issues as ‘contaminants’ – as many established approaches to evidence do – have only limited application within the new public health. *Saving Lives*, as the HEA’s consultation document notes, recognises that ‘the solutions to ... major public health problems are unlikely to reside solely in biomedical technical interventions or in lifestyle or behavioural approaches’.<sup>14</sup> *Saving Lives* also calls for the development of community-based models to address the underlying determinants of health. But the existing

evidence relates far more to the former (biomedical, lifestyle and behavioural interventions) than it does to the latter (community-based models).

### ***Evidence and inequalities***

The need to enhance the evidence base to ensure better understanding of health inequalities – their causes and the best ways of addressing them – was recognised in the Government’s response to the Independent Inquiry into Inequalities in Health (the Acheson Report).<sup>15</sup>

Birch, commenting on the approach of the Acheson Inquiry, argued recently that the conceptual framework the Inquiry adopted shaped both the scope of the Inquiry and the recommendations that resulted. Birch claims that the resulting approach was inconsistent, amounting to ‘... reviewing the evidence for social inequalities in health and health determinants (in ways that recognise social context) ... and [reviewing] interventions for health improvements (in ways that by and large exclude social context)’.<sup>16</sup>

As public health interventions become increasingly focused on specific groups of people and address inequalities in health as a primary goal, the relevance of research designs that control out socio-economic factors is increasingly being questioned.<sup>17</sup> Because much research has tended to control out such factors, vital evidence is lacking about the most effective ways of reducing the inequalities in health that may stem from them. Turning again to the Acheson Inquiry, despite the comprehensive efforts of the team, as Birch details, for many of the recommendations ‘there is no evidence to suggest that these programmes are particularly favourable to the most disadvantaged groups’.<sup>18</sup>

### ***Is there enough evidence?***

Researchers at the US RAND organisation undertook a broad review of the evaluation and effectiveness research literature, to establish whether it could support evidence-

based decision-making for community-based interventions.<sup>19</sup> Once clinical interventions, such as immunisation programmes or prenatal interventions, were excluded, a search of published US evaluation studies from the past 15 years yielded just 30 examples that met the reviewers' criteria for inclusion. In relation to these, the reviewers encountered great difficulty in comparing studies, largely due to the range of methods – particularly selection of outcome measures – used. Only a minority of the studies reviewed yielded information likely to be of use to decision-makers considering community-based health interventions. In answer to the question 'Is there enough evidence to support an evidence-based approach?' they concluded that the feasibility of applying such an approach, based on the available evidence, should be questioned. Similar questions should be assumed to apply to the English setting, at least until it has been proved that they do not.

## **2.4 Values and hierarchies**

### ***Introduction***

Sociologists of science have drawn attention to the extent to which conceptual frameworks shape approaches to evidence, the ways in which questions are formulated and asked, and the 'answers' that are found.<sup>20</sup> The different professions, disciplines and sectors involved in health improvement apply a wide variety of approaches to evidence gathering. A number of the more widely used approaches are summarised in Box 1.

**Box 1:** Approaches to evidence

- **Behavioural sciences** have been widely used to investigate the impact of health promotion interventions, for example assessing attitudes to risk and personal decision-making. The approach to gathering evidence about behaviour can involve the use of control groups and laboratory investigations. A range of sectors accepts evidence from these sources.
- **Economic evaluation** looks at interventions to see whether they achieve an efficient allocation of resources, i.e. whether the inputs are justified by the outputs. Economic evidence can be used to decide between options on the basis of cost and benefit. Economic evidence is widely recognised but is usually regarded as providing only part of the picture. Recent developments in economic evaluation have concentrated on incorporating broader social factors into the range of issues considered.
- **Epidemiology** is the study of the distribution of diseases, and their determinants, in populations. It has underpinned the development of public health over the last century. Epidemiological techniques have established the link between radon gas and cancer clusters, and the relationship between socio-economic status and childhood accidents, as well as having many other applications. Epidemiological evidence is usually applied at a national level to inform large-scale decision-making, but is increasingly being made use of at local levels.
- **Health impact assessments** (the estimation of the effects of a specified action on the health of a defined population<sup>21</sup>) are to be carried out on all Government policies, *Our Healthier Nation* announced. Health impact assessments will enable a prospective rather than retrospective evaluation of decisions, for example the location of an out of town supermarket, to be made on the basis of indicative evidence.
- **Narrative evaluation, case studies** and **story/dialogue** techniques are increasingly being made use of by community health and development practitioners to capture information about the experiences and insights of individuals, communities and organisations. This type of evidence has not been of high quality in the past, but recently more rigorous methods have been developed and applied to generate powerful and vivid evidence.<sup>22</sup> However, the use of these techniques remains concentrated in nursing, social care and the voluntary and community sector, and has not yet gained wider recognition.

- **Randomised control trials** (RCTs) are an offshoot of epidemiology and offer a very precise way of measuring the effects of a treatment or intervention. Because different people's characteristics – for example, their age, sex, medical history or income – can influence the way in which they respond to an intervention, RCTs look at the responses of a mixed group of individuals to the same intervention. By allocating people randomly to either a trial group (which receives the intervention) or a control group (which does not), scientists are able to measure the effect of the intervention independently of any other factors. RCTs have been almost exclusively used to evaluate medical interventions, although attempts have been made to apply them to community-based interventions.
- **Social scientific** approaches seek evidence about the ways that people, organisations and structures interact. The approach to gathering evidence may involve qualitative or quantitative methods. Social scientific evidence is used extensively by some sectors, including local government and parts of the health service, but still struggles for recognition in parts of the medical establishment.

Within public health, evidence conforming to one particular framework has historically been considered of greater value than other approaches. This framework, known as the 'hierarchy of evidence', was originally devised by the US Task Force on Preventive Care and has subsequently been widely applied, for example in the National Service Frameworks produced by NICE. It was devised to raise the quality of evidence about clinical interventions.

Evidence is graded according to the perceived strength of the research methods used:

- **Type I evidence** – at least one good systematic review, including at least one randomised controlled trial
- **Type II evidence** – at least one good randomised controlled trial
- **Type III evidence** – at least one well-designed intervention study without randomisation
- **Type IV evidence** – at least one well-designed observational study
- **Type V evidence** – expert opinion, including the opinion of service users and carers.



Safeguarding quality and enhancing effectiveness is a laudable aim, shared by most of those involved in health improvement initiatives as well as clinicians. The notion of a hierarchy, however, complicates efforts to evaluate measures that are not susceptible to 'high-ranking' methods. It makes it harder to argue for investment in such measures, or in the development of alternative methods of appraisal that would help to test their effectiveness. Potentially, it can lead to evidence being undervalued or ignored. Speller *et al.* have argued that the rigid criteria applied by many effectiveness reviews mean that 'the selection of studies for inclusion is done on the basis of the quality of the research only, not on the quality of the health promotion intervention'.<sup>23</sup>

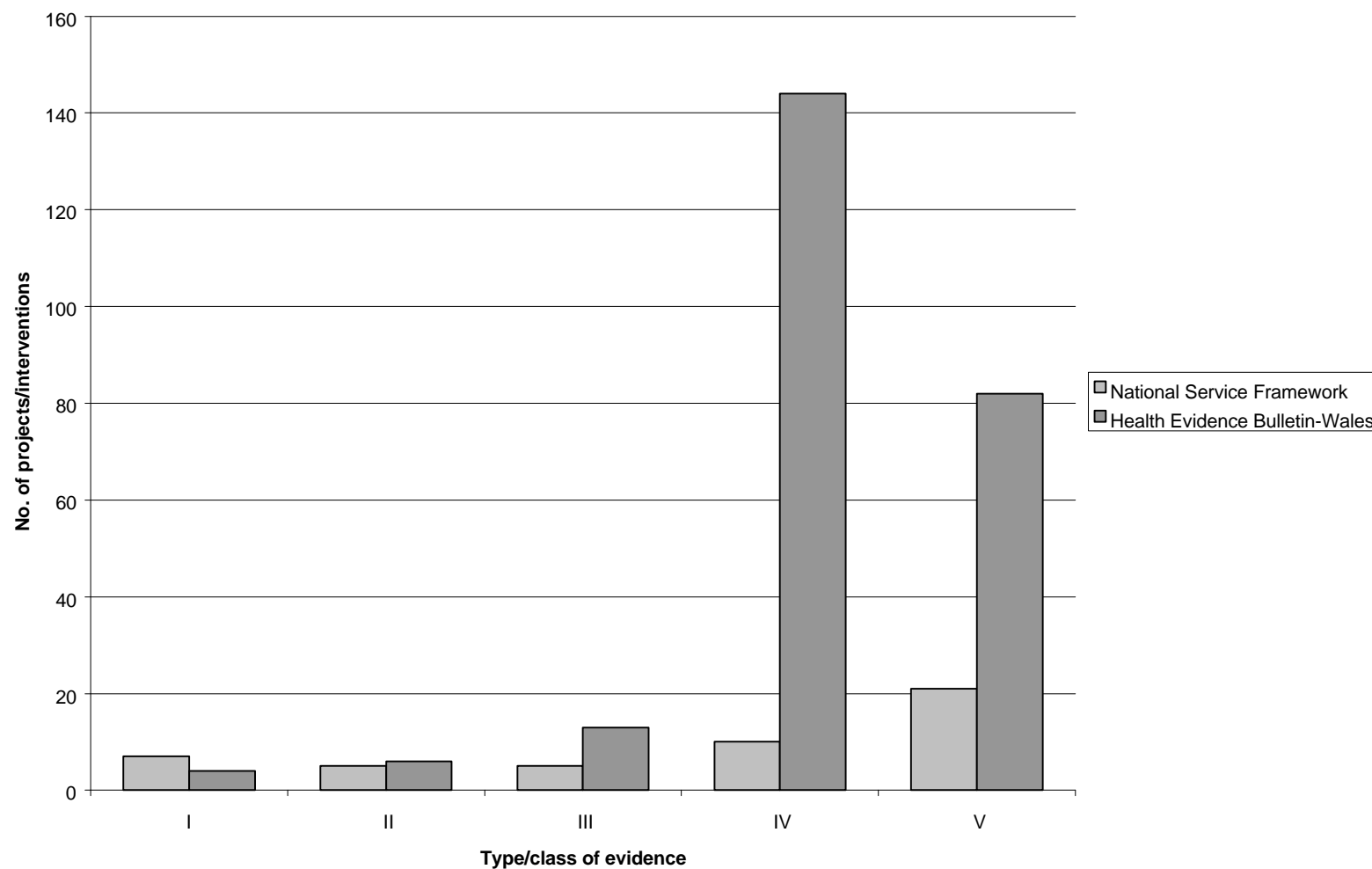
In addition, the hierarchy shown above is best suited to evaluating the quality of evidence relating to the primary prevention of disease and specific health promotion activities, as opposed to complex and/or community-based interventions such as community development or regeneration initiatives.

A rudimentary analysis of two recent reviews of the evidence base (the National Service Framework for Mental Health's recommendations for mental health promotion and the Welsh Health and Evidence Bulletin on Healthy Environments) reveals just how uneven the situation is.

The two documents referred to a total of 297 pieces of evidence. Of these, 40 sources were rated as Type III or above. The remaining 257 were rated as Type IV or V.

This situation raises a number of questions. How is public health to appraise its contribution to health improvement and make sound decisions on the basis of evidence classified as poor, inconclusive or inadequate? How can public health advocate investment in health improvement on the basis of evidence widely regarded as 'weak'?

**Figure 2:** Evidence classification for public health interventions



### ***A question of judgement***

Green and Tones have argued for the adoption of a wider evaluative framework for assessing evidence about health promotion, based on a ‘judicial principle’.<sup>24</sup> This approach recognises that since so little evidence about health promotion is incontrovertible, evidence is best seen as providing illumination rather than proof. Rather than seeking certainty, decision-makers will do better to establish the ‘balance of probabilities’ – or whether there is ‘reasonable doubt’ about an intervention’s effectiveness.

Green and Tones’ recommendations were, however, only concerned with the field of health promotion. The ‘judicial principle’ could feasibly be more widely applied, to aid in reconciling and weighing evidence from diverse sources where direct comparisons are not possible. However, it does require at least some evidence to be available in the first place. Any ‘judge’ considering novel public health initiatives, such as participatory arts and health schemes, could reasonably demand a recess for further reports to be compiled.

## **2.5 Towards a new, shared framework**

### ***Introduction***

In place of a hierarchy of evidence, it should be possible to accommodate different kinds of evidence, acknowledging their respective strengths in appropriate settings. Since evidence carries little weight with those who have no confidence in it, the key to successful change lies in developing a common approach that all parties can endorse – from community activists to national and local government officials, health service managers and clinicians. In this section we explore the potential for a shared conceptual framework for evaluating public health measures and identify the key issues that need to be worked through to inform this process. Proposals for practical action in the immediate future are also put forward, drawing on the discussions that

took place at the *Our Healthier Nation: Evidence, policy and practice* symposium organised by the King's Fund.

### ***The potential for a new, shared framework***

A new, shared framework for evidence should aim to fulfil a variety of functions. An integrated approach to generating evidence for public health is best informed by a shared conceptual framework – a set of guiding principles – rather than prescriptive criteria. Its development provides an opportunity to clarify:

- **common policy goals and health improvement objectives**, promoting ownership and clarifying the roles and contributions of different sectors and disciplines, rather than highlighting professional differences
- **points of agreement** about the strengths and weaknesses of different forms of evidence, and the ways these should be assessed
- **shared beliefs and values** about the principles that should inform judgements about different types of evidence.

The process of identifying and enunciating these issues should enable all players to develop a sense of ownership and common purpose. The common policy goals and objectives have already been discussed in Section 2.2. Some points of agreement and shared beliefs and values are outlined below.

### ***Points of agreement***

The development of a new conceptual framework will rest upon establishing a mutual agreement about the nature of the challenge and the rationale for a common approach. It should be possible to forge an agreement based on the following points.

- Implementing the new public health agenda and securing health improvement requires a wide range of activities, many depending on partnerships between

sectors and agencies, with responsibilities shared between individuals, community-based organisations and national government.

- It is neither possible nor desirable to subject all of these activities to the same methods of appraisal.
- There are several distinctive approaches to evidence gathering, which employ different methods and serve different ends. Some seek to provide proof, others to provide insights and illumination. All have strengths as well as weaknesses. All attempt to deepen understanding of what works and what does not.
- Different forms of evidence are required to answer different questions. A single set of criteria or a hierarchy that grades evidence once and for all will not assist in matching method to purpose. Evidence of different types will assume more or less relevance and value in different situations, and any framework should reflect this.
- It is not always possible or necessary to collect evidence about outcomes, either because of the long-term nature of an intervention or because of the difficulty in establishing cause and effect. Intermediate and process indicators also have value.
- The investment in evidence gathering should be commensurate with the scale of the intervention.
- The value of an intervention should be judged according to its impact on health and not simply on the quality of the research design used to evaluate it.
- A combination of different methods can often be combined to provide a more rounded picture.
- The evidence base as it currently stands is patchy and uneven. Some less well-established methods require further development.

### ***Shared beliefs and values***

The relationship between goals and activity could be strengthened by channelling evidence about health improvement through a set of common principles. At the *Our Healthier Nation: Evidence, policy and practice* symposium, participants identified six guiding principles to underpin the development of an integrated evidence base for public health.

- **See health improvement in the round:**
  - recognise the full range of influences on health (economic, social and environmental)
  - legitimise the diversity of public health activity that addresses them.
- **Recognise and value diverse evidence:**
  - achieve wider recognition for evidence of different types
  - promote understanding of the strengths and limitations of different types of evidence.
- **Balance precision and innovation:**
  - strike a balance between the need for proof, and the need for creativity
  - promote realism over perfection and recognise 'good enough' standards of evidence.
- **Secure broad participation and partnership:**
  - incorporate relevant evidence about shared concerns (e.g. housing, community safety or the fear of crime); this should help to make partnerships meaningful rather than symbolic
  - recognise the value of evidence about partnerships, including process issues concerning the ways they work and the factors contributing to their success
  - clearly state the value of participation, especially the active involvement of communities in generating evidence.
- **Achieve an integrated process:**
  - build in evidence from the beginning, rather than tagging it on at the end
  - make it plain that evidence of a range of types is required, so that all who contribute to health improvement realise they have a part to play.
- **Build skills, confidence and competence at every level:**
  - strengthen the skills and competence of practitioners at all levels to generate and interpret evidence

- work to build mutual confidence so that the different disciplines can accept and value evidence produced by others.

## ***Next steps***

Three central issues must be addressed before the development of a new, shared framework can become a reality.

### **1. An inclusive debate**

Developing a shared framework will involve tackling vested interests and deeply held views. An inclusive and transparent debate needs to take place, involving all parties at all levels of activity. Weighing and assessing the value of evidence is essentially a matter of judgement – a political as well as a technical process. Who is to be involved in these decisions at a strategic level?

However judgements are made, they are potentially open to dispute and challenge. If the public health evidence base is to prove equal to this, the decision-making process will need to be characterised by transparency (with clearly identified criteria) and inclusivity (involving a full range of stakeholders, including lay representatives).

The construction of a new evidence base, and the conceptual framework to inform it, should form part of a continuing process. The new HDA could play a key role in facilitating debate and ensuring wide understanding of the issues it raises.

### **2. Building the knowledge base**

The way that research into public health issues is commissioned and supported has a huge impact on the shape and structure of the evidence base. Historically, research councils and funding bodies associated with the field of health improvement have tended to be medical in focus, leading to the accumulation of a high quality but essentially narrow body of knowledge. This issue has already begun to be addressed through the development of the new research and development strategy for public health.

Certainly the NHS's own R&D strategy needs to take a much broader view of health and ensure that evidence about the full range of *Our Healthier Nation's* objectives becomes available. But the wider issue of the continuing disparity between levels of support for research into 'medical' questions and resources for 'social' research of various kinds remains. In the past, much research into non-traditional public health activity relied on 'bending' existing funding streams, camouflaging the full extent of this imbalance.

As a first step, a review of **all** the resources currently invested in obtaining evidence about public health could be conducted – looking well beyond the Medical Research Council and academic institutions into areas with research bases of their own, such as housing and community safety. The new Health Development Agency would be well placed to conduct the review, which should help to:

- identify areas of duplication and gaps in the existing evidence base
- inform research commissioning within and outside the NHS, helping to ensure complementary agendas
- quantify the need for research into developing and testing new methods of assessment, as well as delivery.

### **3. Developing public health capacity**

At the *Our Healthier Nation: Evidence, policy and practice* symposium, participants identified a need for a system of independent support and advice. Experienced, independent advisors were called for to support those involved in public health activities, especially at community level. Working with projects and organisations by invitation only, the King's Fund believes these skilled advisors could act as 'critical friends'. Their functions could include:

- conducting evaluations
- gathering evidence
- identifying indicators and appropriate progress measures
- advising on which methods and approaches to apply in what circumstances
- identifying short, medium and long-term objectives
- providing a link to developments elsewhere
- giving guidance and help to think through aims and processes.



**Box 2:** The critical friend model

'Critical friend' approaches are not new. The King's Fund's Health Quality Service and, more recently, local government's Improvement and Development Agency (I&DeA) have shown the potential benefits.

The I&DeA Local Government Improvement Programme works by establishing teams of reviewers – credible, senior people who combine in-depth knowledge with a degree of detachment – who do not have close links with the area under review. The review teams visit local authorities by invitation and work with staff there to carry out a four-staged process:

- a diagnostic review of the organisation's achievements
- analysis of the gap between current achievements and benchmark goals
- drawing up an improvement plan
- support for improvement – suggesting sources of practical help, advice and information.

The approach is based on collaboration, and creating a positive atmosphere is seen as vital. The process is often a valuable experience for reviewers, as well as for the organisations involved, providing opportunities for learning and personal development. But the review teams have been instrumental in confronting uncomfortable organisational truths.

Designed for large organisations, the model would need careful adaptation before it could be applied to the health sector, particularly small community-based interventions. Rather than taking place over a single week, for example, the involvement may need to take place on an intermittent basis over a period of time. And rather than being focused primarily on performance, the review would need to encompass health targets and outcomes. But elements of the basic approach, with its emphasis on culturally sympathetic support, collaboration and spreading good practice, could have direct relevance for public health practitioners.

An independent advisory function would help to ensure that practitioners at all levels develop the confidence and ability to use a full range of techniques for producing evidence, and also provide a 'quality control' service, helping to push up standards. Advisors could operate through local universities, for example, or through the new regional public health observatories. It would be useful if research were commissioned into models developed in other sectors, drawing on the experience of

bodies such as the New Opportunities Fund and the Improvement and Development Agency.

The importance of resources other than the 'evidence' itself was confirmed by the King's Fund's Promoting Action on Clinical Effectiveness programme (PACE).<sup>25</sup> PACE was established in response to concerns about the difficulties of implementing change in clinical practice (i.e. translating theoretical research evidence into practical change). The programme provided a national focus to support the development of knowledge and understanding about how to implement evidence-based practice. Sixteen local projects were set up in spring 1996 to look at implementing evidence-based practice across a range of clinical topics, and a network of more than 500 people working in and with the NHS was established.

PACE concluded that a multifaceted approach using a number of linked activities was most likely to be successful. The experiences of PACE underline the importance of seeing the development of a comprehensive evidence base for public health not as a single resource, but as a continuing organisational development issue.

## References

1. Gillies P. *Evidence Base 2000: Evidence into Practice*. Discussion document. London: Health Education Authority, 1999.
2. Secretary of State for Health. *Saving Lives: Our Healthier Nation*. London: The Stationery Office, 1999.
3. Gowman N. *Our Healthier Nation Symposium: Evidence, policy and practice*. London: King's Fund, 1999.
4. Gowman N 1999. *ibid*.
5. Jackson C, Pitkin K, Kington R. *Evidence-Based Decision making for Community Health Programs*. RAND. [www.rand.org/publications/MR/MR933/MR933.pdf/](http://www.rand.org/publications/MR/MR933/MR933.pdf/) (downloaded 11 June 1999).
6. Gillies P 1999. *op cit*. 15.
7. Gillies P 1999. *ibid*. 17.
8. Secretary of State for Health 1999. *op cit*. 139.
9. Gillies P 1999. *op cit*. 17.
10. Green J and Tones K. Towards a secure evidence base for health promotion. *Journal of Public Health Medicine* 1999 21(2): 133–39.
11. Buck G and Morgan A. The contribution of health promotion to meeting targets: questions of measurement, attribution and responsibility. *Health Promotion International* 1997; 12(13): 239–50.
12. Luck M and Jesson J. *Evaluation of Community Health Development*. Bath: Community Health UK, 1996.
13. Department of the Environment, Transport and the Regions. *Single Regeneration Budget. Round 6 Bidding Guidance*. [www.regeneration.detr.gov.uk/srb/srb6/guid/1.htm](http://www.regeneration.detr.gov.uk/srb/srb6/guid/1.htm) (downloaded 4 January 2000).
14. European Commission 1997. In: Gillies P 1999. *op cit*.
15. Department of Health. *Reducing Health Inequalities: An Action report*. London: The Stationery Office, 1999.
16. Birch S. The 39 Steps: The mystery of health inequalities in the UK. *Health Economics* 1999; 8: 301–08.
17. See, e.g. Speller V, Leamouth A, Harrison D. The Search for Evidence of Effective Health Promotion. *British Medical Journal* 1997; 315: 361–63; Birch S. The 39 Steps. *op cit*.

18. Birch S. The 39 Steps. *op cit*.
19. Jackson *et al*. *Evidence-Based Decision-making*. *op cit*.
20. Petersen A, Lupton D. *The new public health: health and self in the age of risk*. St Leonards, NSW: Sage, 1996.
21. Scott-Samuel A. Assessing how public policy impacts on health. *Healthlines* 1997; 47: 15–17.
22. LaBonte R and Feather J. *A Story/Dialogue Method for Health Promotion Knowledge Development and Evaluation*. Toronto: Centre for Health Promotion, undated.
23. Speller *et al*. The Search for Effectiveness. *op cit*.
24. Green J and Tones K. Towards a secure evidence base for health promotion. *op cit*.
25. Dunning M, Abi-Aad G, Gilbert D, Hutton H and Brown C. *Experience, Evidence and Everyday practice: creating systems for delivering effective health care*. London: King's Fund, 1999.