NEW DEAL FOR COMMUNITIES: THE NATIONAL EVALUATION
SCOPING PHASE

COMMUNITY HEALTH INITIATIVES: RECENT POLICY DEVELOPMENTS & THE EMERGING EVIDENCE-BASE

LINDA BAULD, JANE MACKINNON AND KEN JUDGE
UNIVERSITY *OF* GLASGOW
DEPARTMENT OF PUBLIC HEALTH
UNIVERSITY OF GLASGOW
1 LILYBANK GARDENS
GLASGOW
G12 8RZ

TEL / FAX 0141 330 3559

HEALTH PROMOTION POLICY UNIT, UNIVERSITY OF GLASGOW I

Community Health Initiatives: Recent Policy Developments & The Emerging Evidence-Base

Executive Summary

This document represents a first attempt to provide a review of policy developments and an introduction to the evidence base in relation to the health-related goals of NDC partnerships. There is a vast amount of literature in this area. As a result, this review aims to merely highlight key findings of relevance to NDC partnerships and to provide clear guidance about the best places to turn for more detailed information. It will need to be updated as the national evaluation of NDCs progresses.

It is readily apparent that NDC partnerships have many opportunities to improve the health of their populations by influencing and/or changing the social determinants of health in multiple ways. From this perspective it would make sense to prepare a review of the ways in which tackling the root causes of health inequalities can contribute to improved population health and health equity. But the primary aim of this paper is to review for an NDC audience the lessons to be learnt from what are largely health-sector interventions.

The review consists of four main sections:
- A brief review of the *key health policy developments* in recent years, focussing on the post 1997 period.
- An overview of the nature and scope of the *general evidence base* in terms of interventions to improve health in disadvantaged communities.
- A review of the nature and scope of *specific interventions* related to particular health problems or issues.
- Finally, we reflect on what the evidence base reveals for NDC partnerships and their planned activities, and identify some early *lessons and implications* for the evaluation team.

Key Policy Developments

Since the election of the Labour Government in May of 1997 a number of approaches have been used to change the emphasis of health policy from one that is primarily focused on sickness services to one that places greater emphasis on population health improvement. Developments post-1997 can be divided into three main categories: NHS modernisation; Public health and inequalities; and, specific initiatives and programmes including:
- Health Action Zones
- Healthy Living Centres
- NHS Direct
- Smoking Kills

- Tackling Drugs
- Sure Start
- Sure Start Plus
- Accident Prevention
- National Service Frameworks

Many recent policy developments and the initiatives described here share common principles and values. Firstly, there is a central emphasis placed on the importance of working in partnership. A second important feature to emerge from these developments is the emphasis on engaging the local community in health improvement efforts. Another objective of recent initiatives is to seek to achieve sustainable change by influencing mainstream programmes. Finally, the importance of having a strong evidence base on which to build activities is another key feature of recent policy initiatives. Not only is this true at programme level, but also in the setting of national targets and standards.

The Evidence-Base
There is a huge amount of research evidence relevant to the health domain of the NDC evaluation, and the work of NDC partnerships. This falls into two main categories. The first is general evidence about interventions to improve health and reduce health inequalities at the community level. The second is evidence related to Health Promotion Policy Unit, University of Glasgow iv specific health problems or issues (such as drugs misuse or early childhood interventions) and effective ways to address them.

General Evidence
There are currently very few evaluation studies of interventions that focus on economically disadvantaged areas as the unit of analysis. What does exist, however, is four types of general evidence, which can inform the implementation and evaluation of efforts to improve health in disadvantaged areas:

- evidence from studies that have reviewed a range of research findings relating to health improvement or health promotion in deprived communities and have identified key characteristics of successful interventions.
- evidence relating to effective ways to tackle health inequalities.
- evidence concerning access to health services in deprived areas and mechanisms for improving access.
- existing evidence regarding the role of community participation in health improvement efforts is reviewed, as it is of particular relevance to NDCs.

Specific Health Interventions

In addition to general evidence regarding efforts to improve health in disadvantaged communities, there is a much more sizeable body of literature relating to specific health interventions. This is potentially a vast area for review. Thus in order to narrow the field somewhat we have used the review of NDC delivery plans to identify the *main* categories of interventions NDCs are aiming to invest in. These include:

- Early childhood interventions
- Smoking cessation
- Mental health
- Teenage pregnancy
- Accident prevention
- Drug prevention and treatment
- Physical activity
- Healthy eating
- Coronary heart disease

In relation to each of these specific health interventions, the extent and quality of evidence does vary. We know a great deal, for instance, regarding models of smoking cessation, but less about methods to prevent drug abuse or teenage pregnancy. Gaps are also evident in relation to the general evidence. These gaps in both bodies of literature can be grouped around the following themes:

- Uncertainty about the efficacy of many health promotion interventions.
- Limited knowledge about the longer-term impact of community-level health interventions.
- The specific ways in which community involvement/participation contributes to population health improvement.
- The most effective ways to improve the health of specific populations, such as ethnic minority communities and young people, including young smokers and teenage parents.

Emerging Lessons

The review of recent policy developments and the emerging evidence base reveals some important lessons for both the evaluation team and NDC partnerships.

Lessons for the Evaluation Team

Because of the lack of firm evidence of effectiveness of health interventions in deprived communities in the UK, the NDC evaluation needs to make sure that the health-related activities and any health benefits (both subjective and objective) of the initiative are captured.

Methodologically there are, however, a number of challenges. The evidence-base is

weak in relation to a number of health interventions often because the methods selected for evaluation are not rigorous enough.

Emerging experience from both the HAZ and Scottish health demonstration project evaluations suggests that theory-based evaluation is most useful at the beginning of an evaluation, and as an overarching framework for research within which a range of methods can be employed.

At the same time, there is a need for well-designed cohort and panel surveys to further develop the evidence base. These need to include intermediate measures of health change, as substantive health outcomes (in terms of population health change) can literally take decades to be realised. Intermediate measures such as changes in lifestyle and particularly self-perceived health questions (which are an important predictor of improvements in health status) need to be included. Secondary benefits of health interventions should also ideally be tracked.

An additional important lesson for evaluation is the need to be selective. Some evaluations try to measure change in too many ways or across too many interventions and thus emerge with few substantive findings.

Partly because of the need to be selective, building links with local evaluators who may be able to engage in more in-depth study of the health-related elements of NDCs will be important.

Lessons for the Partnerships
Despite significant gaps in some aspects of the evidence-base, there are important messages for NDC partnerships in terms of which types of health-related activities are most likely to yield benefits for communities. For instance, it is clear that 'comprehensive' interventions are more likely to be successful than those focussing on one particular issue or population group with specific types of services being offered. For example, in preventing teenage pregnancy the strands between sex education in schools, availability of contraceptive advice and products, easy access to health care services etc all need to be combined for effective action.

Partnerships need to consider carefully the robustness of their approach before investing in an intervention. If it is in a new area, then it is crucial that local or national evaluation efforts be brought on board to monitor progress and report on outcomes, potentially adding to the evidence-base.

This review has also outlined a number of national developments such as health inequalities targets and national service frameworks. NDC partnerships need to ensure that the interventions they choose to invest in take account of these developments and are informed by them.

Although most, if not all, NDCs are well aware of the health impact of non-health interventions it is essential that concerted efforts are made to be explicit about how

attempts to change the socio-economic circumstances of neighbourhoods are expected to yield health gain Unless very determined attempts are made to articulate prospective pathways and their expected consequences that go beyond the level of specific projects then valuable opportunities for learning about social change processes will be lost.

Perhaps the most important message from the evidence base for NDC partnerships is the fact that they will need to be selective about the interventions they choose to invest in. The dangers associated with a scattergun approach need to be resisted. An over-proliferation of relatively small projects is less likely to result in health gain than some well-planned, evidence-based and comprehensive interventions that respond to local needs and priorities in ways that have some prospect of delivering significant outcomes.

A Cautionary Preface
This document represents an early draft of work that we anticipate will be in progress for some time to come. It represents a first attempt to provide a review of policy developments and the evidence base in relation to health. It forms part of the scoping stage of the national evaluation of New Deal for Communities.

The brief for this review suggests that it should consist of a number of different elements as set out Box 1.

Box 1   **Review of Policy Developments & the Evidence Base**

Policy context: the implications of new developments for area-based initiatives
- what have been the key policy developments in the domain relevant to area-based regeneration programmes?
- how do these developments relate to overarching NDC objectives - effective partnership working, community involvement, changing mainstream services, evidence-based learning etc.?

The nature and scope of the current evidence base
- What *is* the evidence base? have there been major government-led evaluations or a series of smaller, one-off studies?
- is the domain specific evidence base distinct and discrete - or does it lik with the evidence base of other domains?
- how comprehensive/extensie is the evidence base:
- what are the main gaps in the evidence base? Why do such gaps exist?
- has the nature and scope of the evidence base changed significantly in recent years?
- is the evidence base likely to change in the future? are further evaluations in process or planned?

What does the evidence base reveal?
- can the evidence base suggest 'what has worked, for whom and in what circumstances?
- ...and 'what hasn't worked, for whom and in what circumstances?
- how do the 5 Theories of Change ourlined in section 2 of the Research Proposal fit with the evidence base? do any other theroies of change emerge as pertinent:
- are there clear lessons emerging from the evidence base?
- what are the main omissions, inconsistencies or conflicting messages?

Lessons for the Evaluation Team
- what are the key lessons for the Evaluation Team to emerge from the review of the evidence base?
- are there examples of innovation or good practice that the 'central' Evaluation Team should take on board?
- what are likely to be the main problems in data collection and evaluation?
- what methods might help to overcome these difficulties?
- are there any other evalutions in process or being plannid that the research team might collaborate with?

Lessons for the Partnerships
- what are the key lessons for partnerships to emerge from the evidence base?
- are there any examples of innovation of good practice that should be more widely disseminated amon Partnerships?
- does the evidence base suggest whast might be the main obstacles to successful delivery and partnership working in the NDCs?
- how does the evidence base suggest they might be overcome?

Health Review of Evidence

At first sight the brief seems very clear, but meeting the requirements specified is much more problematic. The difficulties we have encountered in responding to the brief arise both from the size of the task and the very limited resources available to undertake the work.

The size of the evidence-base that has potential relevance to the health-related goals of NDC partnerships is nothing short of vast. Whole teams of people are currently in the process of devoting many years to attempts to review and synthesise different areas of health policy and practice. Some of this effort has been documented, but much of it is still at the work in progress stage. For our part, we have been asked to review and to extract lessons from this enormous body of knowledge in 20-30 person days. This is quite simply impossible.

What we have been able to do is to provide an overview of some of the key features of the emerging evidence base, to highlight some of the findings in selected areas of relevance to NDC partnerships and to provide clear guidance about the best places to turn for more detailed information. We hope and believe that such an overview will be of some assistance to a number of colleagues, but we have no doubt whatsoever that if such documents are to be useful in the future then continuing investment will have to be made. We set out some recommendations about future possibilities in the final section of the paper.

Introduction

Good health is an irreplaceable resource. Yet it can be in scarce supply for individuals living in economically disadvantaged communities. A large body of research evidence demonstrates that poor living and working conditions have an impact on health. These conditions are a product of income, education, employment, housing and other factors. Differences in health status are apparent using a range of measures. In relation to infant mortality, for example, while overall mortality rates for children aged 1-15 have declined since 1979, social class differences in mortality have widened. In addition, mean birth weight is lower for babies whose fathers are in manual social classes; and children in manual classes are more likely to suffer chronic sickness than those in non-manual classes (Law, 1999). For adults, the chances of premature death increase in a step-wise gradient from social class I (professional) to social class V (unskilled) (Blane, 1999). When area differences are examined, there is a marked difference in life expectancy at birth depending on whether you live in the most prosperous quintile of English local authority areas - age 77 for men and 81 for women - or the most deprived - aged 74 for men and 79 for women (DH, 2001b).

Action to narrow this gap in health status requires intervention at a number of levels. This is because the determinants of health are multi-layered. These range from genetic and biological differences to lifestyle patterns, the availability of social support, living and working conditions and socio-economic and environmental factors. There is now a well-established literature exploring these layers of influence, which form part of the social model of health.

Figure 1. Social Model of Health
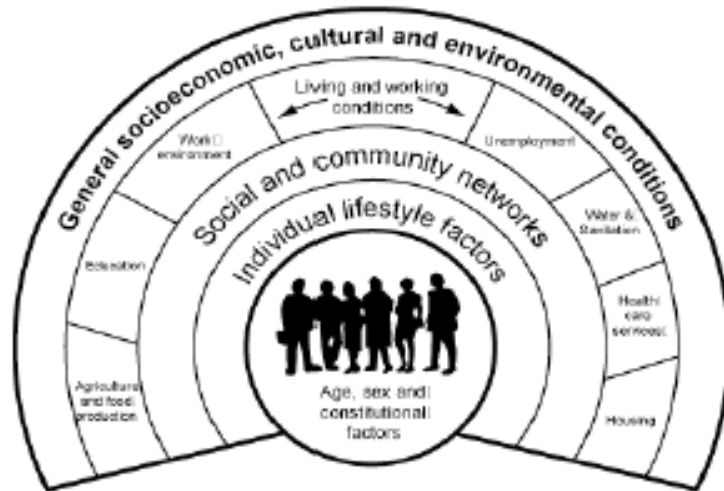
Source: Whitehead, 1995

The social model has been described in a number of ways, but one of the most widely used models, which is illustrated in Figure 1, depicts layers of influence. The inner layer consists of factors that are 'fixed' such as age and sex, which is surrounded by lifestyle factors that can be either health enhancing or health damaging. The next layer is the interaction of the individual with family, friends and others around them. Wider influences on individual health are related to living and working conditions, including access to essential services and facilities. Overarching all these layers is the set of economic, cultural and environmental conditions, many of which have a bearing on every other layer. Because of the multi-faceted nature of the determinants, a number of different forms of action are needed. Central to health improvement efforts, particularly at the community level, is the alleviation of poverty. Thus employment, income maintenance and social security policies are crucial (Shaw et al, 1999). Similarly, educational interventions have a vital role to play in improving life chances and therefore health (Blane et al, 1996). Adequate housing and improvements to the physical environment also have a role – particularly in relation to respiratory health and accident prevention, for example (Thomson et al, 2001). Thus cross cutting interventions, which have little to do with health services per se, are the most important mechanisms for health improvement.

It is readily apparent that NDC partnerships have many opportunities to improve the health of their populations by influencing and/or changing the social determinants of health in multiple ways. For example, achieving success in terms of increasing job opportunities, reducing crime, improving housing and raising educational attainment levels might all have positive impacts on health. In pursuing their health-related objectives, therefore, NDCs should be encouraged to be vigilant in their search for

evidence about the best ways of improving the wider social determinants of health. From this perspective it would make sense to prepare a review of the ways in which tackling what are commonly referred to as the root causes of health inequalities can contribute to improved population health and health equity. For the present, however, we have not ventured into such territory. The primary aim of this paper is to review for an NDC audience the lessons to be learnt from what are largely health-sector interventions. We have not done so in the belief that the local health sector will be the one that necessarily has the greatest impact on reducing health inequalities. Rather we have started with the health sector for two simple reasons. First, one has to start somewhere! Secondly, and more persuasively, it is clear that there are many ways of intervening to achieve NDC health objectives that **do** lie within and/or are closely related to what is traditionally seen as the territory of the health sector.

Against this background, the review consists of four main sections:

- A brief review of the main *health policy developments* in recent years, focussing on the post 1997 period.
- An overview of the nature and scope of the *general evidence base* in terms of interventions to improve health in disadvantaged communities.
- A review of the nature and scope of *specific interventions* related to particular health problems or issues.
- Finally, we reflect on what the evidence base reveals for NDC partnerships and their planned activities, and identify some early *lessons and implications* for the evaluation team.

Key Policy Developments

Since the election of the Labour Government in May of 1997 a number of approaches have been used to change the emphasis of health policy from one that is primarily focused on sickness services to one that places greater emphasis on population health improvement. Developments post-1997 can be divided into three main categories:

- NHS modernisation
- Public health and inequalities
- Specific initiatives and programmes

Modernisation

The 1997 white paper *The NHS: Modern, Dependable*, ushered in new Labour's first reforms to 'modernise' the health service. Modernisation is a process of reform running across all government departments. It aims for more joined-up and strategic policy making to develop high quality, efficient and user-focussed services (DH, 1997). Modernisation in the health service began with a shift from the competition of the Thatcher and Major years towards more collaborative approaches, most obviously

Health Review of Evidence

apparent in the abolition of GP fund-holding and replacement with Primary Care Groups. Modernisation was also about a more responsive health service, designed around the needs of the patient with a clear emphasis on patient and public involvement (DH, 1999c).

Modernisation efforts have involved a range of reforms that we will not attempt to summarise here at length. Important developments such as new performance management frameworks for NHS organisations and the introduction of clinical governance and accountability measures have been initiated. Three key elements of modernisation are, however, immediately relevant to NDCs. These are the development of broadly-based health improvement programmes, legislative changes to encourage partnership and the structural reform of the NHS that is currently underway.

Health Improvement Programmes (HimPs) were established in April 1999 as a vehicle for improving local health, setting strategies and shaping local health services (DH, 1999a). Although most HimPs have been developed as part of core health authority business (following meetings with other organisations) some specific funding has been made available in those areas demonstrating progress in meeting their HimP objectives. This has taken the form of the 'Health Improvement Programme Performance Scheme', providing around £1/2m a year to successful areas for three years. This money is to be shared with partners in the NHS and the wider community, further promoting partnership working. This scheme was aimed at recognising health communities who are *"making progress from a low base, tackling entrenched problems of ill-health, deprivation and poor or fragmented services"* (Department of Health, 1998). HimPs have now been replaced by Health Improvement and Modernisation Plans (HIMPs), which will have a similar remit to the original HimPs with the addition of incorporating modernisation into the planning process. The HIMP Development Group has been assigned the task of ensuring that HIMPs are well placed to implement the NHS Plan (DH, 2001d) and can underpin some of the work of Local Strategic Partnerships.

In response to a long history of problems in joint working between health and social services, New Labour's modernisation plans have involved changes to bring down the 'Berlin Wall' between these two sectors. This began post 1997 with a series of policy changes contained in the NHS and social services white papers and in a consultation document entitled Partnership in Action (DH, 1999b). This document indicated that legislative changes would be required to make mechanisms for improved collaboration - such as pooled budgeting and joint commissioning- a reality. These changes came in the form of the 1999 Health Act. The implementation of this Act has played an important role in the integration of services and their delivery, particularly for groups such as older people and people with learning disabilities.

Perhaps the single most important document relating to modernisation of the health service is the *NHS Plan*. This was published in June 2000 and sets out New Labour's vision for reform in the years to come (DH, 2000b). Although the plan makes reference to health inequalities, the determinants of health and public health issues, it is largely focussed on service issues. For instance, it addresses the problem of access to care and puts forward plans to improve the distribution of GP's and primary care staff based on weighted capitation. This has potentially important implications for more economically deprived communities, where access to health professionals and adequate facilities is often inadequate. We return to the issue of access to care later in this review.

The NHS Plan is also about structural reform of the health service. It emphasises the role of PCGs, and their shift to Primary Care Trusts, as originally set out in the 1997 white paper. PCTs are at the heart of plans to modernise the health service, as the key local commissioners and providers of care. Implementation of the NHS Plan is now well underway, facilitated by the publication of *Shifting the Balance of Power within the NHS* (DH, 2001a). This document sets out in more detail the significant organisational changes that will be required for modernisation. Along with PCTs at

the centre of the service, the 95 existing Health Authorities are to be replaced with about 30 Strategic Health Authorities (StHA's). These new StHA's will pass on the responsibility of service planning and commissioning to the PCT's and NHS Trusts and then take a more strategic role in the development of local health services and performance management. In addition, the eight DH regional offices are to be abolished and replaced with four regional directors of health and social care.

What this significant structural reform means for local communities is as yet unclear, but it currently involves a vast amount of upheaval in the health service that could temporarily affect the ability of some local health organisations to work in partnership with initiatives such as NDCs. This is despite the fact that the *NHS Plan* specifically pledges that the NHS will play a key part in the implementation of the *National Strategy for Neighbourhood Renewal*. The reforms are due to be implemented by April 2002, but at the time of writing, PCTs were still in the process of formation in some parts of the country, and front-line staff and managers in many parts of the health service were facing considerable uncertainty about the future.
Health Promotion Policy Unit, University of Glasgow 7

Public Health and Inequalities

Soon after New Labour was elected in 1997, an independent inquiry into inequalities in health, led by Sir Donald Acheson, was established. Prompted by a growing body of research demonstrating the extent of health disparities in the UK, (Benzeval et al, 1995) this inquiry was the first government-sponsored investigation of the issue since the publication of the Black Report in 1980 (Townsend et al, 1992). The Acheson inquiry reported in 1998. The review examined aspects of the life course, the socioeconomic determinants of health and health-related behaviours It explicitly recognised the link between poverty and poor health and called for more equitable and democratic services, including wider use of community-based approaches. Following the publication of the Acheson report, a cross-governmental Action Plan was released that outlined the action needed to address inequalities (DH, 1998d). This report emphasised the need for concerted, co-ordinated action to address the causes as well as the consequences of health inequalities, which would require action across a wide range of government departments and organisations. This report is described in Box 2.

Box 2 Reducing Health Inequalities: An Action Report

The Acheson Inquiry made 39 recommendations to tackle health inequalities and the problems associated with them. The Action report details the cross-Government response to the inquiry. It outlines plans for creating a fairer society by raising living standards and tackling low incomes, building healthy communities and tackling inequalities. In relation to more specific issues the action report also looks at problems associated with education and early childhood years, employment, housing and homeless people, reducing crime and transport and mobility. Thus the main focus of the Action Report is on addressing the determinants of health. Public health is another topic for action with specific areas including nutrition, fluoridation, tobacco and alcohol, mental health and teenage pregnancy. Finally the action report looks at specific issues for the NHS. In order to reduce inequalities in all of these areas there is an emphasis on cross-sector working at Government, regional and local level. Partnership working will be necessary at a number of levels, in particular through the work of national and local initiatives such as New Deal for Communities, Primary Care Groups, Health Action Zones and Healthy Living Centres.

The public health white paper *Our Healthier Nation* (OHN) was published the following year (DH, 1999a). OHN also acknowledged that the root causes of ill health are extremely varied and must be tackled together. The white paper described a tenyear strategy for improving population health, including specific targets for reducing levels of illness and avoidable death from cancer, coronary heart disease, stroke, Health Promotion Policy Unit, University of Glasgow 8 accidents and mental illness in the general population. No national targets for health
inequalities were set at this stage, but OHN did outline the requirement for local targets to be set and met. In order to achieve these, a number of strategies and initiatives would play a part, including Health Action Zones and HimPs. In addition, the NHS would need to work with a variety of agencies and groups to achieve change; OHN outlines the government's commitment to "…a new balance in which people, communities and government work together in partnership". Other government publications for local government and social services followed OHN, and similarly emphasised the importance of partnership and working with local communities (DETR, 1998, DH, 1999a).

This early emphasis on public health and health inequalities placed a great deal of faith, and responsibility, in local agencies, new initiatives and communities themselves. At least to some extent, this encouraged the development of local solutions to local health problems, within a developing performance management framework for the NHS, local government and other partner agencies (Bauld et al, 2001). Later in the government's first term and into its second term the focus shifted towards greater central control and a stronger emphasis on NHS modernisation.

The institutional context for delivering public health has been subject to review as part of the modernisation process. A review of the public health function has recently been completed by the Chief Medical Officer, as has a significant inquiry into public health

conducted by the health select committee. The findings of the committee emphasised the importance of strengthening the public health leadership at all levels, as did the CMO report (DH 2001c). One of the key messages from the report was the importance of learning from previous initiatives, from both the successes and the failures.

In relation to reducing health inequalities, the first national targets were announced by the Secretary of State for Health, Alan Milburn, in February 2001. These relate to infant mortality and life expectancy.

---

1 Infant Mortality (deaths in the first year of life)

Starting with children under one year, by 2010 to reduce by at least 10 per cent the gap in mortality between manual groups and the population as a whole.

The aim of this target is to reduce premature death amongst infants born to parents in manual social classes, in comparison to the UK population overall. The second national health inequalities target relates to life expectancy.

---

2 Expectations of Life

Starting with HA's, by 2010 to reduce by at least 10 per cent the gap between the quintile of areas lowest life expectancy at birth and the population as a whole.

Changes in life expectancy between different groups can only be achieved through intervention at a number of levels, as reflected in the social model of health that we outlined at the beginning of this review.

Following the announcement regarding the national targets, a consultation document was released, which aimed to initiate discussion regarding the best mechanisms for achieving the government's objectives. This document – *Tackling Health Inequalities: Consultation on a plan for delivery* - is at the time of writing still out for review. The consultation is aimed at a wide variety of partners from NHS organisations to community groups, academics, trade unions and schools, as well as relevant partnerships such as HAZs and NDCs. The most recent development in this area is the publication of a report discussing the development of a health poverty index that is expected to underpin the priority across government to the reduction in health inequalities (Dibben et al, 2001).

Specific Initiatives and Programmes

In addition to the general health policy developments already outlined, there are a number of specific initiatives or programmes that have been introduced since 1997.
Health Review of Evidence

Health Promotion Policy Unit, University of Glasgow 10
We have selected those that are of most relevance to NDCs and neighbourhood renewal more generally.

- Health Action Zones
- Healthy Living Centres
- NHS Direct
- Smoking Kills
- Tackling Drugs
- Sure Start
- Sure Start Plus
- Accident Prevention
- National Service Frameworks

Health Action Zones

HAZs were the first area-based initiative to be established by the New Labour government. Covering a third of the English population, the first wave of HAZs (eleven sites) was established in April 1998 and a second wave (15 sites) in April 1999. HAZ areas include some of the most deprived parts of England and cover a wide range of urban and rural areas, from Tyne and Wear and Merseyside, to Cornwall and the Isles of Scilly, and North Cumbria. They also vary widely in their size and complexity. HAZs were established as part of the policy drive to tackle health inequalities and improve the health of the population. They are investing in a wide range of activities; an initial mapping exercise conducted as part of the national evaluation identified over 200 programmes and 2000 separate projects (Judge et al, 1999). These cover a wide range of issues including recent government priorities such as CHD, Cancer and Mental Health. HAZs are also addressing teenage pregnancy, smoking, drugs and targeting population groups such as minority ethnic communities, children and older people.

HAZs were provided with a relatively modest amount of money – under 1% of the overall NHS budget (Bauld et al, 2001). However, this initial investment was intended to encourage the development of multi-agency partnerships and investment in

Community participation. HAZs were intended to *lead the way in breaking down organisational barriers* (DH, 1999a). This was helped by the additional impetus of freedoms and flexibilities, which included the piloting of pooled budgeting and joint commissioning in some areas, in advance of the 1999 Health Act.

In their short history HAZs have encountered difficulties but have also achieved some real successes. These are outlined in reports from the national evaluation commissioned by the DH, which began its work in January 1999 (Judge et al, 1999). Further details can be found on the HAZNet website at http://www.haznet.org.uk. As
Health Review of Evidence

an initiative HAZs have been identified as a point of contact for NDCs, particularly in relation to developing partnerships. HAZ's may provide important learning for NDCs.

Healthy Living Centres
The Healthy Living Centre initiative was launched in January 1999 with the aim of promoting good health, targeting disadvantaged areas and groups and reducing inequalities in health (DH, 2000d). Healthy Living Centres (HLCs) will be funded to form a network throughout the UK with £300 million of lottery money, with £232m specifically for HLCs in England. HLCs are expected to be accessible to 20 per cent of the most disadvantaged sectors of the population by 2002 (DH, 2001b). As with the HAZ initiative, HLCs will aim to address the wider determinants of health and contribute to reducing inequalities. HLCs will also develop services aimed at reducing smoking, improving physical activity and dietary advice, and provide health information and advice to local people.

A key element of HLCs is that they will involve the local community in the planning of the projects. This will be done in partnership with a wide range of organisations from the health and local authority sectors, and voluntary and community groups. HLCs are also intended to support the implementation of national and local health strategies including Health Improvement Programmes (DH, 2000d). Research projects have been commissioned to evaluate HLCs in England by the Department of Health and for the UK as a whole by the New Opportunities Fund. The evaluations have been designed to explore issues of strategic importance and to contribute lessons to support

Statutory and voluntary sector agencies regionally and locally (http://www.tavinstitute.org).

NHS Direct
One of the key aims of recent policy developments has been to reduce inequalities in access to health care services. As part of the drive to improve access but also to get people to take responsibility for improving their own health *NHS Direct* was launched. This is a nurse-led telephone and internet service providing information and advice on a wide range of health problems and issues (DH, 2000b). NHS Direct now covers all of England. The online service (http://www.nhsdirect.nhs.uk) provided by NHS Direct is an interactive guide to health based on controlled and accredited information sources.

Smoking Kills
In Britain today around 27 per cent of the population are smokers. There is a large evidence base to demonstrate the adverse effects that smoking has on health. It accounts for a fifth of all deaths in the UK (Peto et al, 1994). In addition to the costs associated with the avoidable loss of human life, smoking also places considerable pressure on the resources of the NHS. An estimated 284, 000 patients in England are

Health Review of Evidence

admitted to NHS hospitals each year with smoking-related diseases (Godfrey et al, 1993).

Growing evidence of these human and economic costs led to the Government publishing a White paper on tobacco, *Smoking Kills* (DH, 1998b). The overall aim is to reduce the number of people smoking by 1.5 million by the year 2010. One important means of achieving this target is the development of a UK wide system of smoking cessation services and clinics. These will be particularly targeted towards individuals living in disadvantaged communities and groups such as young people and pregnant women. The white paper also outlines plans for wider tobacco control measures such as banning tobacco advertising and tackling cigarette smuggling.

The first step towards reducing the numbers of smokers has been for the NHS to provide a comprehensive smoking cessation service nationwide. This has included the provision of buproprion (Zyban) on prescription from June 2000 followed by the availability of Nicotine Replacement Therapy (NRT) products on prescription from April 2001 (DH, 2001b).

In addition to these pharmacological interventions and following the recommendations of the White paper, a series of smoking cessation services were established. Evidence has shown that smoking behaviour is related to socio-economic status and consequently higher smoking rates are found in more disadvantaged sections of the population. In order to target these higher risk groups of individuals the smoking cessation services were initially provided through the Health Action Zone initiative, as the smoking prevalence in HAZ communities is known to be amongst the highest in the country (Adams et al, 2000). In 1999/2000 a total of £10 million was invested in the HAZ's to set up their smoking cessation services. These services were rolled out to all Health Authorities during 2000/01 and 2001/02 with an additional investment of £20 million for each year (DH, 2001b). Additional funding is also being made available to support pregnant women to stop smoking.

Evidence from DH monitoring and the national evaluation (which we discuss later in this review) suggests that smoking cessation services have met their early targets for reaching smokers and helping them to quit. However, there are concerns that these services will suffer from the turbulence associated with structural reform in the NHS, at least in the short to medium term (Raw et al, 2001).

Tackling Drugs to Build a Better Britain
Drug abuse is a growing problem. Targets have been set to reduce the number of people under the age of 25 reporting the use of class A drugs, and to increase the numbers of drug misusers in treatment programmes (DH, 2001b). The NHS Plan contains a commitment to set up a new National Treatment Agency. The commitments in the NHS Plan build on the government's ten-year strategy to tackle

drug misuse described in *Tackling Drugs to Build a Better Britain* (Home Office, 1998; updated 2000). This long-term approach was based on a combination of

Enforcement and prevention to reduce the amount of harm to individuals and society caused by the misuse of drugs (HO, 1998). There are four key elements to the strategy. The first two are the provision of treatment for misusers and the fight to block the availability of drugs to individuals. The third element is to help young people resist drug misuse and reach their full potential in society. The final element of the strategy is to protect communities from drug-related anti-social and criminal activities. In all of these strategies, Drug Action Teams (DATs) are identified as a key agency for taking forward work at the local level.

Drug misuse is, at least in part, a product of wider social and economic factors. For this reason some specialist programmes have been established, such as the 'progress2work' initiative launched in August 2001 (HDA, September 2001). This initiative is to receive £40 million over three years to help drug misusers find long term employment. Tackling drugs misuse has also become an important part of the HAZ initiative, as each HAZ has been provided with two years pump-priming money to establish prevention programmes (specifically aimed at vulnerable young people) in their area. Other initiatives such as Healthy Living Centres and now NDCs are aiming to work with DATs and other local agencies to take forward work on drug prevention and treatment activities.

Sure Start

The Sure Start initiative is a cross-Government programme established as part of the drive to tackle child poverty and social exclusion. It was set up to help a range of statutory, voluntary, community and private sector agencies to work together to improve services focused around the specific needs of families and children in some of the most deprived areas of England (DH, 2000b). The main aim of the initiative is to work with parents and children to promote the development of pre-school children - particularly disadvantaged children – to give them the best possible start before they go to school.

An investment of more than £1 billion has been committed for Sure Start between 1999 and 2004. The programme has four overall objectives:

• To improve social and emotional development
• To improve health
• To improve children's ability to learn
• To strengthen families and communities

As with other area-based initiatives the Sure Start programme is based on the principals of partnership working and involving communities. Sure Start is led by local partnerships and works directly with individuals and communities through a wide range of projects. Sure Start has a national evaluation, which was commissioned

in January 2001 to study the efficacy and cost-effectiveness of the programme in reaching its goals. Details of the evaluation can be found at http://www.surestart.gov.uk

Teenage Pregnancy and Sure Start Plus

England has one of the highest teenage conception rates in the developed world and the highest in Western Europe (Social Exclusion Unit, 1999). This has a number of important consequences. Babies born to teenage mothers have death rates that are 50% higher than the national average. Young mothers are also more likely to experience difficulties with their health and economic status and are therefore more likely to become socially excluded.

Part of the national strategy for tackling teenage pregnancy is set out in a 1999 Social Exclusion Unit report. It outlines the target of cutting the rate of teenage conceptions by half in under-18's by 2010. The SEU strategy focuses on four themes:

- a national campaign to change the culture around teenage pregnancy
- better prevention of teenage pregnancy
- better support for teenage parents and their children
- joined-up action to oversee the programme nationally and locally

Implementation is, as with other initiatives, dependent on interagency partnerships and community involvement at the local level. It is intended that health and education will work together to improve knowledge of and access to contraception. Better access to services for teenage mothers is expected to contribute towards decreasing the rates of infant mortality. There will also be emphasis on the social support needed by young mothers not only in caring for their child but also in ensuring they themselves are supported in continuing education or employment. Teenage pregnancy co-ordinators have been jointly nominated by health and local authorities and are now in post in every area of England to help implement the strategy at a local level.

Sure Start Plus has been established to address teenage pregnancy in areas of greatest need. The initiative is intended to provide personal, co-ordinated support for pregnant teenagers and teenage parents under 18. Sure Start Plus aims to reduce the risk of long-term social exclusion and poverty from teenage pregnancy (www.haznet.org.uk). A total of twenty Sure Start Plus pilot sites have been established in areas with high teenage pregnancy rates (DH, 2000a). Each of the sites will provide support to teenagers who are pregnant through personal advisors who will help to provide access to childcare and help young parents to continue with their education, training or employment.

Accident Prevention

The Government first outlined its cross-departmental aims for an accident prevention programme in *Saving Lives: Our Healthier Nation*. These were to:

- reduce the death rates from accidents by at least one fifth by 2010
- reduce the rate of serious injury from accidents by at least one tenth by 2010

The groups being targeted include children up to the age of fifteen, particularly those

from manual and unskilled households, young people aged 16-24 years at high risk of being involved in road traffic accidents and older people who are at risk of stumbling or falling (DH, 2000). Accident prevention requires cross-cutting activity, and thus a wide range of departments and agencies are involved in implementing the strategy. The five key themes to be tackled are housing, the environment, transport, product safety and safety at work. A National Task Force for accident prevention was established in November 2000 to help report on progress.

Accident prevention is an important component of HIMPs, but a recent review of them by a group of children's organisations reported that they focussed almost solely on road safety issues (NSPCC, 2001). Recommendations were made for more of an emphasis on creating safer neighbourhoods for children and for prevention of accidents in the home.

National Service Frameworks (NSF's) are also important vehicles for the accident prevention programme. The NSF for older people has an emphasis on the prevention of falls (DH, 2001f). The NSF for Children is due to be released in 2002 and it is likely that this strategy will also contain an accident prevention element.

National Service Frameworks
National Service Frameworks (NSF's) set out national standards and define desirable service models for a specific service or care group (DH, 1999d). Each of the NSF's has been developed by an expert panel, which includes representatives from the health sector, social care providers, local authorities, voluntary agencies and the private sector. There are currently three National Service Frameworks. They are Mental Health (September 1999), Coronary Heart Disease (CHD) (March 2000), and Older People (March 2001). The NSF for Diabetes is due for publication this year and the NSF for Children will be launched in 2002.

The NSF's set down standards that are based on the evidence and knowledge base available, and are supported by service models and examples of good practice. In addition to this the NSF's set out the importance of working in partnership with a wide range of organisations and agencies. They also emphasise that service providers need to engage with local communities, both in terms of aiming to meet the needs of users and carers and involving them in planning.

The first NSF to be published related to Mental Health (up to age 65). This set out standards covering the following five areas:

- mental health promotion
- primary care and access to services
- effective services for people with severe mental illness
- individuals who care for people with mental health problems
- action necessary to achieve the target to reduce suicides

The CHD NSF addresses the clinical aspects of the disease and also emphasises the need for organisations to work together to tackle the broad determinants of health. The main issues covered in the NSF include:

- Reducing heart disease in the population
- Preventing CHD in high risk patients
- Heart attack and other acute coronary syndromes
- Stable angina
- Revascularisation
- Heart failure
- Cardiac rehabilitation

NSFs are key documents for HAZs, NDCs and other area-based initiatives because they set out national standards and provide useful examples of evidence-based practice.

Overview
This brief summary of recent health policy developments highlights a number of common themes. First, there is a central emphasis placed on the importance of working in partnership. The primary emphasis is on partnerships between agencies. The belief is that if the health of the population is to be improved this cannot be done by single government departments or other statutory organisations in isolation from each other. In turn local agencies, primarily health and local authorities, have to work together. This aspect of partnership has been undoubtedly assisted by the 1999 Health Act, which removed some legal barriers by introducing pooled budgeting and joint commissioning. Most policy developments in the health field also acknowledge the importance of the voluntary sector, and in some cases, the private sector. But specific suggestions regarding how the health service should work effectively with these types of organisations is notably absent from most national policy documents. Partnership is assumed to be the way forward, but precisely how partnerships should be configured and who should be involved is in most cases something left to the discretion of local initiatives or programmes.

A second important feature to emerge from these developments is the emphasis on engaging the local community in health improvement efforts. It is acknowledged that if sustainable change is to be achieved and services are to be successful they must be developed with the needs of the community at their centre. A number of initiatives such as Health Action Zones and Sure Start have already been working towards this. HAZs in particular have built upon a long tradition of community development in some areas as well as previous initiatives with a community participation focus, such as Healthy Cities. Likewise NDC partnerships will be able to engage with existing community networks as well as possibly learn from other area-based initiatives in this regard.

Another objective of recent initiatives is to seek to achieve sustainable change by

influencing mainstream programmes. Recent developments, most notably HAZs, smoking cessation services, drug prevention programmes and other initiatives with short term funding, have been encouraged to build in sustainability. The extent to which these initiatives will succeed in extending their work beyond the specified time frame will be something national and local evaluations will hopefully reveal. Early evidence from HAZs suggests that some areas have already been successful in mainstreaming particular programmes, while others are struggling to do so (Bauld et al, 2001).

The importance of having a strong evidence base on which to build activities is another key feature of recent policy initiatives. Not only is this true at programme level, but also in the setting of national targets and standards. The national inequalities targets and the NSF's were developed with explicit reference to relevant evidence. In other areas, such as drug prevention and teenage pregnancy, there is perhaps less robust evidence available (particularly with reference to working with particular groups and communities) but policies do aim to reflect what learning is available. The Health Development Agency has a clear role to play here, in that (in partnership with the Department of Health) it is developing a fairly comprehensive database on UK evidence in relation to health promotion and health improvement that can be accessed on-line.

The General Evidence Base

There is a huge amount of research evidence relevant to the health domain of the NDC evaluation, and the work of NDC partnerships. This falls into two main categories. The first is general evidence about interventions to improve health and reduce health inequalities at the community level. The second is evidence related to specific health problems or issues (such as drugs misuse or early childhood interventions) and effective ways to address them. We review the general evidence in this section, and then turn to specific interventions.

There has been considerable investment in recent years in interventions to improve health in deprived communities in the UK, as the policy context set out above illustrates. Despite this range of activities, however, there are currently very few evaluation studies of interventions that focus on economically disadvantaged areas as the unit of analysis. In other words, there is very little robust UK evidence regarding how to effectively improve the health of a community as a whole. What does exist, however, is four types of general evidence, which can inform the implementation and evaluation of efforts to improve health in disadvantaged areas. The first of these is evidence from studies that have reviewed a range of research findings relating to health improvement or health promotion in deprived communities and have identified key characteristics of successful interventions. The second is evidence relating to effective ways to tackle health inequalities. The third relates to evidence concerning access to health services in deprived areas and mechanisms for improving access. Finally, existing evidence regarding the role of community participation in health

improvement efforts is reviewed, as it is of particular relevance to NDCs.

Improving Health In Disadvantaged Areas

There is relatively little convincing research evidence about how to improve health in disadvantaged communities. The number of interventions that have been thoroughly evaluated and have demonstrated positive change over time for communities as a whole is extremely limited. Some good international evidence exists; examples include heart health interventions such as the Finnish North Karelia project and the Stamford and Minnesota heart disease prevention programmes in the USA (MacAlister, 1982, Fincham, 1992). But the UK evidence base is slim. This is not so much because community-based health improvement efforts have not taken place, but rather because evaluation has either not occurred or has not been conducted in a manner that provides conclusive evidence. Initiatives such as the Healthy Cities Programme and most recently Health Action Zones have and are yielding benefits, but it is difficult if not impossible to demonstrate that they have resulted in health gain. This is because evaluation faces a number of barriers, including:

- *Short time scales* – evaluation usually measures change over too short a period to observe improvements in health status
- *Process* – often as a result of short time-scales, most evaluations focus on process issues.
- *Paradigm wars* – health promotion interventions in particular often exclude experimental evaluation designs on the basis that they are inappropriate. The result is research which is subsequently excluded from systematic reviews on the grounds that it is not 'robust' enough
- *Inadequate programme design, leading to inadequate evaluation* – if interventions do not have well-specified aims, intermediate and final outcomes, it is difficult for evaluators to know what to measure and how to measure it.
- *Community as a unit of measurement* – there are inherent difficulties in evaluating change at the community level, relating to difficulties identifying comparison areas, fluid populations, a changing policy context, and other factors.

These barriers are thoroughly addressed in a very recent review of approaches to evaluating complex community-based health interventions conducted at the Tavistock Institute (Hills and Blackburn, 2001). We reflect on the relevance of these challenges for the NDC evaluation later in this review. Suffice to say at this point that this means that the evidence base to inform NDC health improvement efforts *overall* is slim. However, there are some important studies and reviews in this area and their findings are worth summarising.

In the UK, one of the only examples of a large-scale community-based intervention to improve health (in this case heart health) that was evaluated using a traditional (quasiexperimental) design was the *Heartbeat Wales* programme (Nutbeam et al, 1993, Tudor-Smith et al, 1998). This was a health promotion intervention implemented across Wales by the Welsh Office and Health Education Council between 1985 and

1990. The program aimed to reduce the incidence of coronary heart disease in the Welsh population and also achieve related health improvement in diet, smoking, physical activity, hypertension control and other areas. It was evaluated using a quasiexperimental design which had a matched population outwith Wales as the control group.

The results from this study have engendered significant controversy. The results did show consistent progress in Wales in reducing behavioural risk for heart disease during the period when the intervention took place. The types of projects and approaches involved have contributed to building the evidence base around CHD prevention, which we return to later in this review. However, similar changes were observed in the control area. This observed lack of 'impact' as defined by the measures used has led some observers to conclude that health promotion interventions of this type are ineffectual (Ebrahim and Davey Smith, 1998). However, the researchers who conducted the Heartbeat Wales evaluation argue that the lack of observed change was due to contamination of the control region (Nutbeam et al, 1993). While Heartbeat Wales was being implemented, similar health promotion programmes were being introduced in England, including in the reference area.

What the findings from this comprehensive community intervention reveal is more about lessons for evaluation than for practice – and we shall return to this point later in this review. Traditional experimental designs can be inappropriate when aiming to capture the benefits (or lack of) arising from community-based health interventions that are being implemented within a broader, rapidly changing health policy context.

Where more practical evidence relating to the *characteristics* of successful interventions is available is in general reviews of the literature. These are also few in number. One of the earliest, conducted by Bunton and colleagues in 1994, reviewed evidence relating to interventions to improve health in economically deprived areas. The authors reviewed a range of British and American studies and concluded that interventions that appeared to produce the most benefit fell into four main categories (Bunton et al, 1994):

1 Those interventions that work with community support and participation
2 Those that offer a service that has previously been unavailable or under-utilised, particularly screening programmes.
3 Those that provide information that has not previously been available, such as those that concentrate on dietary advice.
4 Direct policy action at national or local level to influence health behaviour, such as raising the price of cigarettes or making car seat belt wearing mandatory.

In 1996, Arblaster and colleagues conducted a systematic review of the literature, and expanded the list of factors that research suggests *contribute to successful outcomes in improving the health of disadvantaged groups* (Arblaster et al, 1996). Their list is considerably more detailed than that provided by Bunton et al, because they cast their

net wider to look at studies aimed at specific sub-groups within disadvantaged communities. They identified a list of 14 factors, which we summarise very briefly here.

1 *Intensive approaches* – a number of studies suggest that vigorous or intensive approaches work – for instance Tudor Hart et al (1991) describe intensive interventions in primary care to address a wider range of health problems such as high blood pressure, smoking and obesity.

2 *Community Commitment* – this characteristic is similar to that identified by Bunton and colleagues. A wide range of evidence suggests that the community where the intervention is taking place needs to support the project and be directly involved in its implementation

3 *Multi-disciplinary approaches* – the involvement of a number of agencies can facilitate the adoption of different strategies. For example, Davidson et al (1994) in the USA report positive results from the 'Safe Kids' initiative, which used a network of agencies to improve play areas, involve children and adolescents in safe, supervised activities and provide injury/violence prevention education and safety equipment. In the UK, a range of research evidence (including Ebrahim and Davey-Smith in Arblaster et al, 1996) supports the promotion of local health alliances as well as changes in national legislation to achieve healthier eating, reductions in smoking, the promotion of exercise to reduce the risks of CHD and stroke.

4 *Multi-faceted interventions*. Several successful projects employed a combination of interventions to improve the health of deprived populations. Arblaster and colleagues cite Dannenberg et al (1993) who found that, in relation to the use of bicycle helmets, combining education and legislation was more effective than education alone.

5 *Face-to-face interactions* – Arblaster and colleagues outline some of the evidence that supports face-to-face contact with service users rather than group interventions, although they do state that this depends on the type of intervention and the targeted groups. As smoking cessation studies have shown (Raw et al, 1998) individual support is highly effective for some clients (pregnant women for example) while group support is both effective and cost effective for others (such as heavily addicted smokers).

6 *Settings* – the appropriate setting for health improvement efforts does depend on the context. For instance, many successful interventions involve home visiting (such as early childhood interventions). Others need to be sited in community settings where people are most likely to access them. Research suggests that the efficacy of interventions can be heavily influenced by whether the right setting was selected.

7 *Prior needs-assessment to inform intervention* design. Some studies reported a form of needs assessment of the target group to allow tailoring of the intervention. For example, Arblaster and colleagues cite the example of a study by Colver et al (1982) that identified hazards in family homes before providing specific advice on preventing domestic accidents.

8 *Ensuring interventions are culturally appropriate*. A range of studies both in the UK and abroad emphasise the importance of services or projects tailored to the needs of particular populations. We address this point below in relation to access to services. Arblaster et al cite specific studies that found a significant rise in uptake of screening

services, for example, when culturally appropriate information and trained staff were provided.

9   *The importance of the agent in delivering the intervention* – The people who deliver a project or service may be as important as the intervention or setting. non-professional volunteers can in some cases improve uptake. One example cited in the Arblaster review is a study by Freeborn et al (1978) where trained outreach workers were recruited from disadvantaged communities to encourage appropriate use of ambulatory care services by other low-income families.

10 *Training those delivering the intervention.* Again in relation to volunteers or lay workers– the importance of adequate training for these individuals, or indeed for professionals providing new services, is emphasised in the literature.

11 *Support materials* – Arblaster et al outline slightly ambiguous evidence in relation to the use of support materials (such as videos and books) to deliver health service interventions to disadvantaged groups. The right kinds of support materials will be context specific. Inappropriate provision can have adverse effects, such as excluding those with poor literacy or language skills.

12 *Developing skills* – some of the interventions identified in the review aimed to develop skills that might facilitate the adoption of more health promoting activity. In other words, providing individuals with better knowledge (relating to sexual health or physical activity, for instance) about lifestyle changes that could improve health

13 *Provision of material support and resources* – There is considerable research evidence to suggest that uptake of an intervention can be improved if resources that are important to the target group are provided. For example, carers of individuals with dementia are more likely to take advantage of support groups if respite care is provided. Similarly, the Arblaster review cites evidence that suggests that free transportation can improve uptake of antenatal and child health services amongst women living in poor rural areas. There is evidence to suggest that citizens' advice bureaus in health service settings can help people in disadvantaged groups to gain greater access to advice and resources (Paris and Player, 1993, Burton and Diaz de Leon, 2002)

14 *Provision of prompts and reminders to attend* – finally, the Arblaster review cites evidence that suggests that uptake of and adherence to interventions can be significantly improved by the use of prompts and reminders. They cite one study that found that attendance rates for a scheduled mental health assessment were higher with a postal and telephone reminder 1 or 2 days ahead.

Tackling Health Inequalities

Another important source of evidence is the emerging literature on tackling health inequalities. Since the early 1990s there has been a rapid expansion in the number of studies aiming to describe, analyse, and in a minority of cases, offer solutions to, the problem of inequalities in health. This literature can inform NDC health programmes and their evaluation, both in terms of determining effective ways to intervene and offering some insight into appropriate evaluation methods. A number of relatively recent reviews now exist that we can draw on. The earliest is the book by Benzeval, Judge and Whitehead (1995) examining policy options for tackling inequalities in health. The range

of evidence accumulated to inform the 1998 Independent Inquiry into Inequalities in Health, chaired by Donald Acheson, is also valuable (Gordon et al, 1999), as is a review by Whitehead (1999). Perhaps most useful of all are two systematic reviews - one by Arblaster et al (1996) and a second by Petticrew and MacIntyre (2001).

All the evidence suggests that knowledge regarding effective ways to reduce health inequalities is sparse. Part of this is explained by the difficulty of defining 'effectiveness' in relation to inequalities. As Petticrew and MacIntyre point out in their forthcoming review, interventions can only be considered successful when they are at least as effective for the lowest socio-economic group as for the highest, and should be considered ineffective when the intervention yields greater benefits for the higher socio-economic groups. In other words, interventions that are effective in general health terms may be ineffective in reducing health inequalities (Petticrew and MacIntyre, 2001). This is a particularly important distinction to make when reviewing interventions that rely on access to health services in some form. Because higher socio-economic groups generally have greater access to formal services, they are more likely to benefit from an intervention delivered in this way than other groups (Whitehead, 1999).

In identifying effective interventions, systematic reviews of the literature have highlighted the fact that the most promising action often has little to do with traditional 'health' related activities and much more to do with addressing the determinants of health. Petticrew and MacIntyre provide a list of interventions which evaluation has demonstrated are effective in reducing inequalities. These are shown in Box 3.

Box 3. Effective interventions to address inequalities in health
1. Structural measures such as free school milk and meals and water fluoridation
2. Heating installation in damp, cold homes
3. Home injury prevention in children
4. Health education in children
5. Improvements in accessibility of health care services
6. Many home visiting interventions
7. Support to young mothers from ethnic minority groups
8. Some aspects of mental health promotion
9. Social, financial and psychological support during pregnancy and childbirth
10. Dietary interventions in pregnancy

Source: Petticrew and MacIntyre, 2000.

One point worth emphasising is that the vast majority of interventions listed in reviews and highlighted by the Acheson inquiry as 'promising' require investment at a number of different levels. Benzeval and colleagues (1995) identified four such levels of intervention:

Health Review of Evidence

- Improving the physical environment
- Addressing social and economic factors
- Reducing barriers to adopting a healthier lifestyle
- Improving access to appropriate and effective health and social services

Thus not surprisingly, the health inequalities literature emphasises the importance of multi-agency, multi-faceted investments if real progress is to be made towards narrowing the health gap. Some of the structural interventions required may be difficult or impossible for NDC partnerships to implement, as regional or national policy changes are required. But other promising multi-agency interventions, such as intensive home-visiting or dietary programmes, should be possible and indeed are being implemented in NDC areas. Many of these have a relatively solid evidence base that will be touched upon in the next section relating to specific health interventions.

Access to Health Services
The third strand of general evidence needed to inform health improvement efforts in NDC areas relates to access to care. There is long-standing evidence of the 'inverse care law' operating in economically disadvantaged areas of the country. In areas where the need for health services is greatest, there is often the poorest supply or quality of provision (Tudor Hart, 1971).

In relation to primary care, there are lower numbers of GPs (and attached practice staff) per head of population in more deprived areas compared with more affluent areas (Benzeval and Judge, 1996). In addition, research suggests that a significantly higher proportion of people in health authorities with more deprived populations put off a visit to a GP because of inconvenient hours (NHS Executive 1999). There are problems with primary care in inner cities in particular. Here there are more singlehanded older GPs who have fewer facilities and staff in their practices, practices with poor quality premises and staff with higher workloads in a more stressful environment, and practices that are less likely or able to respond to new initiatives (Bolden, 1981). Recruitment and retention of staff is problematic particularly in inner cities. These problems are longstanding and appear to be worse in London than elsewhere (Boyle and Smaje 1993, Boyle and Hamblin 1997).

There is lower take-up of all types of preventive care in deprived communities and among black and ethnic minority populations (Majeed et al 1994). Some of this is likely to be due to the health care seeking behaviour among these groups, some to access problems (partly due to language barriers and a lack of information), and the capacity of GP practices to provide the care, particularly in inner city areas.

Large scale quantitative studies show that there is no gross inequity in use of GP care (apart from preventive care), after accounting for need (O'Donnell and Propper, 1991), but smaller scale qualitative studies show that there *are* barriers to care once in the GP surgery (Goddard and Smith 1998, Carr Hill 1999). People from different

Health Review of Evidence

socio-economic groups, and black and ethnic groups are treated differently in a way that reflects wider societal stereotypes. This may result in delays in diagnosis, appropriate treatment, and timely referral (Kai 1999).

In relation to secondary care, the evidence is less straightforward concerning A&E and outpatient services because of lack of routinely collected data and research (Dixon 2000). Resources for inpatient care are in theory distributed equitably across the country according to need (although the measure is under review). However, how other resources, such as beds, staff or other facilities are distributed according to need is generally not investigated or known. In contrast to primary care, deprived inner city areas are more likely to be served by prestigious teaching hospitals.

Large-scale surveys show that the use of inpatient care between people from different socio-economic groups, and between white and black and ethnic minority groups is broadly equitable (O'Donnell and Propper 1991, Smaje and LeGrand 1997). However in specific locations and for specific conditions, lower rates of investigation and treatment of CHD, and delays in referral have been found in more socio-economically deprived populations and among black and ethnic minority groups (Dixon 2000). Survival rates for breast and colon cancer may be lower in more deprived populations, and death in hospital after heart attack higher.

Furthermore, there is evidence to suggest that analysis by 'need' categories that assume homogeneity in health status *within* these categories may be biased. The number and complexity of health disorders within each need category has been shown to be greater in poorer groups than in more affluent groups. Thus it is possible that real inequities are being masked. Lower utilisation of preventive care and health promotion services is linked to deprivation at an area level and to poorer socioeconomic circumstances at an individual level (Goddard and Smith 1998).

Two recent comprehensive literature reviews about access to health services in deprived areas of England provide relatively up to date evidence both about the extent of the problem and some solutions to address it (Goddard and Smith, 1998, Dixon, 2000).

These reviews conclude that there could be a much stronger focus on equity in delivery of health care in the NHS. This would involve routine monitoring of the 'inputs' available to populations, the accessibility of services, and the use of care particularly for people from different socio-economic groups, people living in deprived and non-deprived areas, and people from black and ethnic minority groups.

For some black and ethnic minority groups, language differences, lack of interpreting services or advocacy still presents significant barriers to accessing appropriate treatment, for example for CHD. Again this is an area in which NDC partnerships may be able to work with local health services to develop access strategies. Research evidence suggests that interpretation services, advocacy training and the employment

of individuals from ethnic minority groups in key frontline services can have a beneficial impact impact on access (Bhopal and Samin, 1998, Nazroo, 1997).

It is also worth noting that two new systematic reviews relating to access to services for black and ethnic minority groups will be published near the end of November 2001. These were initially commissioned for the NHS Executive in London and will provide a useful contribution to the evidence-base (Atkinson et al, 2001, Community Health Sciences Research Group - Barts and the Queen Mary's School of Medicine and Dentistry, 2001).

The reviews conducted by Goddard and Smith and by Dixon outline the need for much more research in relation to access to care, and also provide a number of suggestions relating to routine data collection at local and national level.

Many of the issues relating to access to care, such as the distribution of primary and secondary care staff and facilities, are matters for regional and national government, a fact which is apparent in policy recommendations offered by recent reviews. This means that in relation to access to care issues, NDC partnerships can only make a partial contribution. What the evidence base does suggest however is that, at the local level, key aspects of service delivery (such as adequate information, out-reach services and staff training) can make a difference, particularly in encouraging uptake of preventative services (Whitehead, 1999).

Community Participation for Health
As we outlined earlier in this review, community participation or involvement is one of the fundamental underpinning principles of the New Deal for Communities initiative. It is also an important component of many other recent programmes specifically intended to improve health, particularly Health Action Zones and Healthy Living Centres. It is thus worth asking the question – what is the connection between community participation and the achievement of positive health outcomes?

Two recent reviews provide a good synthesis of much of the UK evidence regarding community participation for health, from two slightly different perspectives. Smithies and Hampson were commissioned by the HEA to conduct a review of 'good practice' that resulted in a number of outputs, most notably a final report which is available from the HDA's Evidence-Base (Smithies and Hampson, 1999). The very recent Tavistock Institute report (Hills and Blackburn, 2001) also makes an important contribution in that it charts recent UK history of community participation as part of health projects and outlines the methods and some findings of evaluation efforts. There are also a number of other useful sources, most notably publications from the Scottish Centre for Community Development (Barr and Hashagen, 2000, SCDC, 2000).

There are a number of difficulties inherent in attempting to distill 'key lessons' with regard to community participation. Central to these are questions about *who*

constitutes the community in an intervention area, and *what constitutes community participation*. As Hills and Blackburn point out in their review, a community-based intervention does not necessarily include purposive attempts at community engagement, and when it does, these attempts can range from consultation to sustained community development activities. A third difficulty concerns the extent of evaluation efforts in the area and the approaches and methods used. This final difficulty is worth explaining in more detail, as it provides important background information about why it is hard to say 'what works' in relation to community participation for health.

As Hills and Blackburn outline, there have been a growing number of communitybased health programmes with a community participation focus in recent years, many of them begun as a result of the 'Health for All' network and a number of other initiatives at local and national level. These projects have been under pressure to evaluate and show 'results' often because community participation was or is regarded as peripheral to 'real' health improvement efforts. Despite a range of published and unpublished evaluations, little systematic evidence, of the kind included in healthrelated literature reviews, exists. In part this is because the emphasis has been on developmental and participative models of evaluation. Because of the nature of community development work in particular, other more traditional evaluation models have been viewed as inappropriate. The ABCD guidelines developed by Alan Barr and colleagues at the Scottish Community Development Centre are a good example of the type of approach used. This model emphasises evaluation as the key to effective practice – in order to produce improved programme design and generate community learning- rather than the main focus being evidence of 'impact'.

What the growing body of published evaluations from community participation for health projects does suggest is that engaging with community members in a meaningful way is an important *determinant* of success. In other words, communitybased health improvement projects are more likely to be successful in reaching target groups and developing and sustaining the intervention if they have invested in community engagement. Studies that adopt a community development perspective explicitly argue that the design, delivery and, in some cases, evaluation of projects are better conducted by community members themselves.

In order to foster successful community participation in health programmes, Smithies and Hampson developed a series of 'good practice guidelines' based on regional and national workshops, meetings of an expert panel and questionnaires sent to over 200 existing projects across England (Smithies and Hampson, 1999). They identified factors that helped or hindered community participation efforts. Although the authors themselves emphasise that the resulting guidelines do not represent an exhaustive list of 'what works' to develop and sustain community participation for health, they do provide a useful framework for project design, and local and national evaluation. An abbreviated version of their guidelines is shown in Box 4.

Box 4 Community Participation for Health: Good Practice Guidelines

Good practice requires:
Clear and realistic role and remit- projects need to work within a wide definition of health, establish health as an important community issue, and need to have a realistic remit based on the time and resources available, as well as the history of community/users the project is working with.
Adequate and appropriate resources to meet the project remit- secure, adequate and long term funding are required, as well as appropriate premises, staff with community development kills and committed and properly supported volunteers/activists.
Adequate and appropriate management and evaluation to support the project-effective and supportive management by people with time, skills and experience; clearly defined structural arrangements between projects and key agencies; community involvement in project management and decision making; and adequate monitoring and evaluation to inform project planning/development.
Recognition of the importance of the wider environment within which projects are operating- building on past experience of communities and local agencies while harnessing local political support and linking projects to new national policy developments; strong interagency links and partnership working at local and district/city wide levels.
Building in long-term sustainability- linking community health projects into the wider change agenda; projects need to be able to show results; community capacity should be built in terms of skills, networks etc; organisational development for local agencies to make sure they have the knowledge to support effective community participation work and build the needs of the community into their planning; and seeking sustainability should be an integral and ongoing part of project work.

Source: Smithies and Hampson, 1999

Evidence Relating to Specific Interventions

The second body of evidence relevant to NDCs relates to specific health interventions. This is potentially a vast area for review. Although the focus should be on community-level interventions, it is fair to say that broader evidence relating to, for instance, disease prevention or treatment in the general population, could be useful for NDCs. Thus in order to narrow the field somewhat we have used our review of delivery plans to identify the *main* categories of interventions NDCs are aiming to invest in.

- Early childhood interventions
- Smoking cessation
- Mental health
- Teenage pregnancy
- Accident prevention

Health Review of Evidence

- Drug prevention and treatment
- Physical activity
- Healthy eating
- Coronary heart disease

This is not an exhaustive list. Because of the vast amount of potentially useful information, we have had to be highly selective in what is included here. Thus instead of even attempting to summarise the evidence base, we merely touch on some of the main issues and direct the reader to the best systematic reviews in the area. Many of these reviews can be accessed via the HDA's Evidence base at http://www.hdaonline. org. Another significant source of information is the University of York's Centre for Review and Dissemination (CRD). One particularly useful meta-review from there, *Evidence from Systematic Reviews of Research Relevant to Implementing the 'Wider Public Health' Agenda,* is cited in a number of the sections that follow (CRD, 2000).

Early Childhood Interventions
The Government is currently engaged in a drive towards tackling child poverty and social exclusion and improving the health and life chances of young children. This is being done through a wide range of initiatives at a national and local level and across numerous Government departments. A recent review of Health Improvement Programmes in England by the NSPCC and other children's organisations has recommended a more co-ordinated approach to improving children's health in order to help develop consistent approaches across the country. In terms of the evidence base available there are a number of areas that relate to early childhood interventions:

- health promotion interventions
- care programmes
- children at risk
- home visiting

There is also a significant body of evidence relating to childhood accidents, which we briefly mention in a subsequent section on accident prevention.

In relation to health promotion, there is a range of evidence relating both to infants and small children, as well as those of school age. As part of the former Health Education Authority's health promotion effectiveness reviews, two useful systematic reviews relating to studies of infants and young children were conducted in this area. The first related to the effectiveness of interventions to promote healthy feeding of infants less than one year of age (HEA, 1998a). The majority of studies included in this review were aimed at the promotion of breast-feeding and the results of effectiveness were mixed. The review concluded that there is a need for more good quality research as it is known that good diet at this age may influence health status as infants and in later life. A second review examined the effectiveness to promote healthy eating in pre-school children aged 1-5 years (HEA, 1998b). Although the

Health Review of Evidence

studies did show some evidence of success the quality of data available was mixed and there was a lack of evidence originating from the UK.

Health promotion interventions in schools are increasingly common, and there is some evidence to support the strength of this approach. A review by Lister-Sharp et al (1999) reports that there is evidence of positive impact in some health promotion initiatives in schools and goes on to note implications for future practice and recommendations for future research. Some of the specific health promotion interventions in this setting have aimed to address smoking, drug misuse and diet. These have reported some success in preventing the uptake of smoking amongst young people (Effective Health Care, 1999) and a second review is currently underway by the Cochrane Collaboration (Thomas et al, research in progess). Implications of drug misuse interventions in schools are mentioned below, as are those relating to diet. A review of recent more comprehensive policies around 'health promoting schools' is still being developed and further evaluation is needed before the pros and cons of this type of intervention can be judged (Lister-Sharp et al, 1999).

Another set of evidence relating to early childhood interventions focuses on care programmes and resulting behaviour and development. Two useful reviews have been conducted by Zoritch et al (1998, 2000). The first of these found evidence that day care promotes children's intelligence, development and school achievement (Zoritch et al, 1998). Long-term follow up in these studies was however less conclusive (Zoritch et al 1998). The second review argued that evidence that pre-school day care programmes were effective was complicated by most trials combining the day care with some form of parental training, therefore it was difficult to separate the two interventions. Again the review pointed to significant methodological weaknesses and the need for well-designed research for future policy in the UK (Zoritch et al, 2000).

Some evidence concentrates on children at risk. One review looks at the long-term effects of preschool programmes on children living in poverty and at risk of school failure (Schweinhart, 1994). The studies in this review were all based on quasiexperimental designs and results suggest that high-quality programmes do produce long-term benefits. A second review by Mentore (2000) also found early intervention programmes to be effective for at risk children. A review of parent-training programmes reported that there was a positive effect of these programmes on the behaviour of children aged 3 to 10 years.

A number of reviews have also been conducted to look at the effectiveness of home visiting to help children and their families. A review by Weiss in 1993 reports that home visits are important but that the success of a programme also relies on other factors such as community services and the ability of the family to connect with these. A systematic review of domiciliary visiting by Elkan et al (2000) found evidence of improvements in parenting skills and the quality of the home environment and health as well as behavioural improvements for the children and mothers. However, the study reports any findings to be inconclusive in a number of other areas such as child abuse, uptake of preventive health measures and reduction in hospital admissions. The

reliability of much of the data is also questioned as many studies were too small and therefore lacked sufficient power to detect the effects of interventions. The report goes on to conclude that whilst home visiting does have some benefits there is a need for further research in this area to provide more conclusive evidence about the effectiveness and cost-effectiveness of home visiting. Once again there is a reported lack of evidence within Britain. Many of the studies regarding early childhood interventions refer to two main problems. The first is the lack of research in many areas. The second is lack of rigour in some of the methods used.

Future sources of evidence about early childhood interventions may include the results of programme evaluations that are currently in progress. The Sure Start initiative aims to improve the health and well-being of families and children before and from birth. As part of the initiative a National Evaluation is being conduced by a team based at Goldsmith's College, University of London. A second, smaller health demonstration project in Scotland aimed at young children is the Starting Well project based within two deprived areas of Glasgow. This project aims to promote the health and well-being of young children and their families and to develop more enhanced, integrated services in these areas. An evaluation of the project is being conducted at the University of Glasgow. Further details of the project and the evaluation can be obtained at http://www.dph.gla.ac.uk/hppu

Smoking Cessation
Smoking is the single largest cause of preventable ill health and disease in the UK. Approximately 2,300 people in the UK are killed by smoking every week (DH, 1998b). It is estimated that 28 per cent of men and 26 per cent of women are regular smokers. Smoking behaviour is strongly related to socio-economic status, and smoking prevalence is highest in the semi-skilled manual occupation groups (Callum, 1998). Smoking is also expensive for society: smoking-related disease costs the NHS in England an estimated £1.5 billion annually to treat (Buck et al, 1997).

Perhaps due to the scale of the problem, the evidence-base relating to smoking cessation and wider tobacco control issues is extensive. We know a great deal about how to effectively help people stop smoking, and to a lesser extent how to prevent tobacco use in the first place.

A useful summary of the evidence-base and guidelines for smoking cessation interventions can be found in a supplement to the journal Thorax (Raw et al, 1998), which was recently updated (West et al, 2000). This is the best single source as it makes use of updated Cochrane reviews supplemented by individual studies. The evidence suggests a tiered approach to cessation, with particular forms of intervention recommended for specific groups of smokers. The starting point is opportunistic advice from GPs, including prescribing - commonly NRT or buproprion (Zyban)- and referral if required to specialist services. These services provide behavioural support (groups or one-to-one) for smokers who want help with stopping and using effective medication wherever possible (West et al, 2000). These services can be provided in a

range of settings – primary care, hospitals, and in the community. The guidelines emphasise the importance of adequately trained advisers, but these do not necessarily have to be health professionals. Where the evidence base is less conclusive is in relation to helping pregnant women quit, reaching young people (although there are some reviews, such as Sowden and Arblaster, 2001) and targeting smokers living in deprived communities. In relation to this last group, however, the new smoking cessation services are showing some positive results and the national evaluation is specifically examining the issue.

The development of services in HAZs in year one was evaluated and a report is available at www.haznet.org.uk (Adams et al, 2000). Smoking cessation services across all health authorities are currently being evaluated and a final report is due in March 2003 (details can be found at http://www.dph.gla.ac.uk/hppu). In addition, qualitative studies in Scotland and a recent review by the HDA have highlighted promising models of service provision (Amos et al, 1998, Richardson, 2001).

Mental Health
Addressing mental health issues is a priority for many of the NDC partnerships. Mental health problems are not uncommon in the general population (problems such as anxiety and depression affect one in six adults in the UK) but are particularly prevalent amongst individuals living in economically disadvantaged circumstances (Patel and Knapp, 1998). Rates of mental ill health are consistently associated with poverty and deprivation, as are factors such as poor housing and overcrowding (NHS Centres for Review and Dissemination, 1997).

A National Service Framework for Mental Health recognises existing gaps in services and variations in the standard of provision. It also emphasises a need to improve the co-ordination of care between a range of different agencies including social services, housing, education and employment as well as the NHS (University of York, 2000). The NSF identifies seven standards for services, each of which are supported by a review of relevant research evidence. This means that the NSF is an important framework for NDC projects aiming to address mental health issues. In particular it emphasises the importance of targeting local services on groups at high risk (for instance children with poor social and economic circumstances who have experienced adverse life events). It provides information about the types of services that can make a difference at local level, including 24 hour and crisis services, and home care to prevent hospital admission (Department of Health, 2000b, Joy et al, 2000). In particular it sets out challenges for Primary Care Trusts, which again is of relevance to NDCs given that they will be key health partners at the local level.

Above and beyond the NSF, the evidence base regarding effective ways to improve mental health in disadvantaged communities is mixed. There is a relatively wide range of research available regarding different conditions and effective treatment, in particular pharmacological interventions. But the evidence-base regarding health promotion or social interventions is less robust. This is evident from the most recent,

extensive systematic review conducted by Adams and Gilbody (2000) as part of the CRD report relating to the 'Wider Public Health' agenda, which identifies a number of areas for government action and outlines the available research evidence to support intervention

Relatively strong evidence exists regarding the mental health benefits of some of the activities that NDCs are planning to invest in. For example, these include the following:
• Promoting physical activity – studies have demonstrated that regular exercise can reduce mental illness
• Work with HimPs to develop local mental health initiatives on prevention, better identification and treatment for particular groups – one study found that home-based social support for pregnant women at high risk of depression improves the mental health of mothers and children, while another found that social support and cognitive behavioural training in unemployed people can improve mental health and employment.
• Psychosocial rehabilitation within community support has been found to be successful in reducing symptoms, medication compliance, preventing relapse and reducing the use of hospitals for people with severe mental illness. Studies have also found that this type of support is cost effective.

In some areas, however, the evidence base is not as strong. For example:

• Encouraging the use of open spaces for leisure and cultural events in the community – there was no evidence identified to suggest this has mental health benefits
• Development of healthy living centres – there were no systematic reviews identified here, although this is probably because it is too early for evidence to have been gathered.
• Suicide prevention programs for young adolescents can be used to improve knowledge about suicide, but they have not been shown to lead to any change in levels of depression or coping skill
• Screening of older clients in care homes has not been demonstrated to have any effects on mental health.

Finally, the CRD review suggests that improving mental health can be achieved through action focussing on the determinants of health. For example:

• Develop job and volunteering opportunities for people with mental health problems – studies have found that supported employment within a real working environment is more supportive than sheltered workshops in helping severely mental ill people to obtain sustainable employment, while other studies have shown that community care team management can increase the likelihood that people with mental health problems are able to work.
• Promote healthy schools – Curriculum-based suicide prevention programmes have been found to improve suicide-related knowledge and increase self-esteem

Health Review of Evidence

- The development of local initiatives to reduce crime and violence-research has found that interventions such as improved street lighting and CCTV can be effective in deterring crime and thus reduce perceptions of danger and feelings of stress.

Teenage Pregnancy

The evidence base in relation to supporting teenage parents is relatively slim. Important lessons can be learned however from general interventions to improve the well-being of young mothers and their children, some of which were mentioned above in relation to early childhood interventions. Other useful sources are the mental health literature around supporting vulnerable young people and also evidence around helping young mothers or single parents into education or employment, which may be touched upon by other NDC evaluation domain reviews.

In relation to preventing teenage pregnancy, there is a growing evidence-base and there are a small number of systematic reviews that have been conducted. In addition to earlier relevant reviews such as one examining the effectiveness of sexual health promotion interventions for young people (Peersman et al, 1996), there is a range of more recent evidence. In 1999 the then HEA provided an international review of the evidence regarding reducing the rate of teenage conceptions using data from Europe (HEA, 1999). Part of the CRD's 'Wider Public Health' systematic review focuses on education and this section contains a useful summary of studies examining effective forms of sex education. Most recently the HDA has put together an update of key characteristics for effective interventions (HDA, 2001).

The HEA's review of European evidence examines the factors that have contributed to Britain's high rate of teenage conception and considers the evidence surrounding effective public health interventions. It argues that a focus both on reducing the incidence of abortion and unintended teenage births is important. Evidence suggests that attempts to reduce conceptions are improved when they take place alongside attempts to reduce sexually transmitted diseases. The review also points out that comprehensive action – in other words programmes that aim to improve contraceptive provision and sex education while facilitating access to services – is more effective than projects that focus on just one type of intervention. Interestingly, in contrasting sex education across Europe the review emphasises that the 'spirit in which sex education is offered and delivered appears to be more important than the specific approach adopted' (HEA, 1999). When the atmosphere in which advice is offered is open and the information provided is unambiguous, the intervention can be more effective.

The CRD review summarises other relevant studies and thus provides a useful guide to where the evidence-base is weak (for example, there is no evidence to suggest that abstinence-only programmes delay the onset of intercourse or pregnancy) as well as highlighting where the evidence is more robust (increasing the availability of contraceptive clinics for young people is associated with reduced pregnancy rates, for example).

The HDA effectiveness review contains a number of clear recommendations for policy and practice. These are summarised in Box 5.

Box 5   **Preventing Teenage Pregnancy: Recommendations**

The provision of sex education should be linked to access to contraceptive services. All interventions on sex education, including school-based programmes, should aim to empower young people… and [promote] a positive and open view of sex and sexuality, while being culturally sensitive.

Sustained programmes should:
- When focusing on a single aspect of sex education, such as information about contraception, provide links to relevant support services
- Be clearly thought through, based on theory, evidence of effectiveness and local needs assessment
- Improve mainstream provision, as well as identify and target local vulnerable groups
- Know and use the local context to inform work
- Include active learning techniques, such as group work, discussion and role play.
- Address social and media issues about sex, contraception and pregnancy
- Be in place before young adolescents become sexually active
- Reinforce value messages such as 'permission to say no'.

Service provision could be improved within traditional settings and expanded to include dedicated young people's services meeting local needs.
Agencies working with young people could work towards integrating services, and ensure that
links with a variety of service areas and support are in place.
As well as providing accurate information, programmes could include discussion of the positive aspects of young people's relationships and sexualities.
Programme and service staff should have adequate training and be recruited for their dedication and enthusiasm for working with young people, and their ability to deliver services
without personal judgement.

Source: HDA, 2001.

Accident Prevention

Accidents are responsible for a total of 10,000 deaths per year (Department of Health, 1999a) in England. Many of these deaths are preventable and the numbers of injuries resulting from accidents could also be minimised. Although there has been a significant reduction in the numbers of children killed in road accidents in the last twenty-five years, accidental injury in general is still the main cause of death in children and young people in England, Europe and America. It is the largest single cause of hospitalisation of children. The main causes of accidents are road traffic injuries, drowning and fires and burns (Towner et al, 2001). For this reason the
Health Review of Evidence

Government has made accident prevention a key theme in its health improvement agenda. The key aims, which were introduced in *Saving Lives: Our Healthier Nation* (DH, 1999a), are to reduce death rates from accidents and the rates of serious injury by 2010. The strategy will focus on children up to the age of fifteen, young people aged 16-24 and older people.

Two useful sources of evidence about accident prevention are a systematic review by Towner and colleagues (2001) and the wider public health agenda review (CRD, 2000). The main focus of the evidence is around road safety. This is consistent with the high numbers of children killed and injured on the roads each year. Although the majority of the evidence specifically relates to the protection of children, the themes covered will also lead to the protection of the wider population. Many policy changes, particularly in other European countries, have demonstrated some success in preventing road traffic injury. These include strategies such as measures against driving whilst under the influence of alcohol, speed restrictions, and the use of seatbelts and helmets (WHO, 2001; Towner et al, 2001). There is a vast amount of evidence regarding accident prevention within the transport sector. This is too large a topic to develop further in this short review but a useful source is the World Health Organization report on *Transport, Environment and Health* (2000).

Effective measures to prevent injuries in the home mainly relate to regulation of domestic appliance/product design and the use of appropriate safety equipment. Some studies highlighted in the review by Towner et al (2001) have demonstrated that the loan of safety equipment to low income families can lead to a reduction in accidents (Thompson et al, 1998, Clamp and Kendrick, 1998). Regulation of product design for fridges, freezers and plastic bags has also been found to lead to a reduction in entrapments and suffocations (Krauss, 1985, Sorenson, 1976). Simple changes in packaging have also led to a reduction in child poisonings (Woolf et al, 1992; Krug et all, 1994).

Another set of prevention strategies are based on education and training. Many of these relate to the general population rather than children specifically. The evidence for these educational interventions is varied and they show mixed results. Some show an increase in knowledge level but the evidence of their effectiveness in reducing the number of accidents on the road, in the workplace and in the home is less well documented (Towner et al, 2001; CRD, 2001). Similarly, education and health promotion packages to promote the use of bicycle helmets have demonstrated mixed results (Morris and Trimble, 1991; Pendegrast et al, 1992, Puczynski and Marshall, 1992).

Older people are a high risk group for accidents and much work has been done in relation to the prevention of falls to reduce death, injury and hospitalisation. The estimated cost to the NHS of one hip replacement is £12,000 making fall prevention in older people an area of considerable economic consequence. There is a large amount of data showing older people are at a high risk of death from falls and also of

serious injury as osteoporosis can leave many older people with weaker bones. Over 85% of fatal falls in the home in England and Wales are in people aged 65 and over (Effective Healthcare, 1996). Consequently much of the evidence around accident prevention in older people is related to the prevention of falls. A recent study by the Department of Trade and Industry reports the results of interviews conducted with 157 older people living in their own homes (DTI, 2000) Although most individuals were aware of hazards in the homes many still had unsafe homes. A significant number (87%) of those interviewed reported never having been given any information on stair safety, highlighting an area for future health promotion.

The CRD review of accidents contains valuable information relating to older people. There is also a large amount of evidence reviewed in 'Preventing Falls and Subsequent Injury in Older People' (Effective Health Care, 1996). A number of interventions have been studied for their effectiveness in reducing falls and the death and injury resulting from them. Some interventions reported a reduced risk of falls in groups assigned to an exercise or balance group (Province et al, 1995, Wolf et al, 1993). Many other studies included in the EHC review, however, did not provide good evidence of the effectiveness of exercise in reducing falls in older people. A number of reports highlight the effectiveness of home assessments and surveillance (EHC, 1996), and one study showed a significant reduction in falls when getting out of bed with the introduction of a simple bed alarm system to call for assistance (Tideiksaar, 1993). The EHC review also goes on to look at dietary interventions and measures such as hip protectors, as well as looking at the implications for the health service, and for future research (EHC, 1996).

Drug Prevention and Treatment

Drug misuse in the UK is a widespread problem that affects not only the drug user but also their families and the wider community. It poses a serious threat to the health of the individual user. In addition to the physical problems that result from drug misuse there may also be social, behavioural and psychological health problems (Gossop and Marsden, 1998). There is also a cost to communities and society as a whole because of drug-related crime. As illegal drugs are now more widely available than ever, and children are increasingly exposed to them, there is a significant amount of concern about the problem. Initiatives are currently underway nationwide to implement the ten year strategy contained in *Tackling Drugs to Build a Better Britain* (Home Office, 1998).

The drugs misuse literature falls into two main categories: prevention and treatment. Again, the CRD wider public health agenda is useful here, particularly in relation to prevention (CDR, 2000). It starts by pointing out that studies define prevention at a number of different levels. Some are primary prevention activities, such as drug crop eradication (Smart, 1976; Farrell, 1998). However, neither of the studies in this area reported that these measures have a significant impact on the cultivation of illegal drugs or the subsequent use by individuals. Much more of the prevention literature focuses on school-based prevention programmes. The Health Education Authority

commissioned a review of health promotion interventions aimed at young people (White and Pitts, 1997). The review found that many studies were not evaluated adequately enough to claim success of the interventions. They also highlight the need for more tailored programmes to meet the specific needs of individuals or groups of young people. Similar conclusions to those identified by White & Pitts were reported in a review of prevention research by Schaps et al (1980).

In relation to many programmes within and out with schools one of the key findings was the need for long-term follow-ups in order to further assess the effectiveness of a programme. A number of reviews did, however, find some evidence of effectiveness. Interactive programmes were found to be better at preventing drug misuse, as were those that aimed to cultivate the social skills of young people to build confidence (Tobler and Stratton, 1997; Tobler et al, 1999). A review conducted by Hanson (1992) concluded that programmes consisting of a comprehensive range of elements and looking at social influences are most successful in preventing the onset of substance abuse. However, another review looking at education as an intervention concluded that although there was a positive effect on knowledge and attitudes of young people there was no evidence to suggest a change in drug-using behaviours of students (Bangert, 1988). In the area of drug prevention it is also worth noting that the Department of Health is in the process of commissioning a national evaluation of the prevention pump-priming projects set up across England (in HAZ areas) since 1999. This evaluation, likely to report in late 2003, may provide additional evidence.

The second strand of evidence relating to drug misuse relates to treatment. One review of the literature concluded that compulsory treatment of substance misuse disorders could be effective in reducing substance misuse (Sowers and Daley, 1993). The first large-scale, multi-site, prospective follow-up study of drug misuse conducted in the UK is the National Treatment Outcome Research Study (NTORS) (www.ntors.org.uk). The NTORS builds on and develops research into drug misuse treatment effectiveness carried out by four major American studies: the Drug Abuse Reporting Programme; Treatment Outcome Prospective Study; Methodone Maintenance Evaluation study; and Drug Abuse Treatment Outcome Study (Gossop and Marsden, 1998). The NTORS report does highlight that there are significant problems associated with generalising results from other countries to the UK due to differences in the characteristics of misusers and differences in the treatment they receive.

However, in their UK research NTORS looked at four treatments that were delivered in either a residential or community treatment setting. In total over 1000 people were recruited from fifty-four treatment programmes. The one-year follow up reports a number of key findings: substantial improvements in the use of a number of illegal drugs; abstinence rates improved; and, clients still using drugs were doing so less frequently and in smaller amounts. There was also an impact on the criminal behaviour of some clients. These results therefore have benefits not only for the individual but also for society. Further details of key findings can be found at

www.doh.gov.uk/ntors. As this study was carried out in the UK it also has important implications for transferable lessons and policy development.

Physical Activity

Physical activity has widely acknowledged health benefits. Research has shown that it can decrease the risk of coronary heart disease (CHD) and other health problems. As a result, physical activity forms a key element of the government's drive to improve the health of the nation. *The NHS Plan* contained a commitment to support local action to promote physical activity in the population (DH, 2000b). This was underpinned by an emphasis on physical activity in the National Framework for CHD, described earlier in this review. The Health Development Agency (HDA) recently published *Coronary Heart Disease: Guidance for implementing the preventive aspects of the National Service Framework* giving details of effective interventions (HDA, 2000).

Physical activity is also an important element of the National Service Framework for Older People (DH, 2001f). It emphasises the importance of activity for maintaining good health and preventing accidents, although research into the benefits of exercise in preventing falls in older people has yielded mixed results (see Accident Prevention). A recent review of interventions for preventing falls was published as part of the Cochrane library series (Gillespie et al, 2001). The results showed that some interventions- such as moderate weight bearing exercise to increase muscle and bone density- are likely to be effective, but that less is known of their role in preventing fall-related injuries. There is also evidence available regarding the benefits of physical activity on the mental health of individuals (see mental health section of this review). Evidence relating to other effective interventions for specific health conditions includes cardio-respiratory fitness, for which continued intervention and multiple components are best (Simons-Morton et al, 1998). However other areas of research have yielded less conclusive results, such as a review of the evidence of the effectiveness of exercise therapy for low back pain which did not find that any specific exercise was an effective treatment (Tulder et al, 2001).

Another type of physical activity intervention is that of 'exercise on prescription'. These are schemes to which individuals are referred by primary care staff to promote fitness. A review conducted by Riddoch and colleagues found that these schemes led to small but meaningful improvements in physical activity patterns (HDA, 1998d). The main effects on the patients, however, were found to be principally of a social and psychological nature. A review of primary care-based physical activity intervention studies by Eakin et al (2000) did yield some positive results, although this varied between studies. The most effective interventions were those that were tailored to the needs of the participant and supplemented with written information. The review did highlight the need for longer-term outcomes to be evaluated. Physical activity interventions in the workplace have been tried but the evidence examined in a review by Dishman and colleagues (1998) showed that the scientific quality of the studies was relatively poor and therefore no conclusions could be drawn as to the effectiveness of the interventions. Wendell and colleagues reviewed physical activity interventions in low-income, ethnic minority, and populations with disability (1998). They reported that research that involves the community at all steps in the design and implementation of the intervention shows the most promise for promoting behaviour

change, but highlighted the need for further research relating to these population groups. In addition to direct physical activity interventions there have been a number of interventions that have aimed to increase people's knowledge and awareness of the benefits of physical activity. The 'Active for Life' health promotion campaign conducted across England was assessed for effectiveness in improving knowledge of physical activity and increasing reported levels of individuals taking part in the activity. The campaign was found to have no significant effect on either (Hillsden et al, 2001). A second similar review drew on physical activity interventions using mass media, print media, and information technology (Marcus et al, 1998). Although massmedia messages were well remembered they had little to no impact on physical activity behaviour. As with the review by Eakin and colleagues (2000), the studies that were more tailored to a specific target audience were more effective. One of the key messages from this review was the need for caution assuming the benefits of mass-media interventions. There is a need for consideration of access issues, as socially disadvantaged groups may not have access to the new forms of communication technology used in these studies.

Healthy Eating
A healthy diet can have a number of health benefits. It can help to protect against diseases including CHD and various cancers. Poor nutrition can also lead to low birth weight and poor weight gain in the first year of life. This may then lead to problems such as heart disease later in life. In recent surveys of younger people the DH and the Food Standards Agency (FSA) have found worrying links between low income and poor nutrition coupled with low levels of exercise (DH, 2001b). In a drive to tackle this and problems with diet in the entire population the Government set out an action plan to improve diet and nutrition in the *NHS Plan* (2000b).

The evidence relating to nutrition can be categorised into research related to specific diseases and to health promotion for the general population and specific target groups. There is a large amount of research that links a healthy diet to the increased chances of preventing diseases such as CHD and cancer. For instance, it is known that diets high in saturated fats and cholesterol increase the risk of CHD (Clarke et al, 1997; Hooper et al, 2001). The Hooper review of reduced or modified dietary fat for preventing cardiovascular disease found that trials where individuals were involved for more than two years showed significant reductions in the rate of cardiovascular events. A recent review of dietary interventions by the Scottish executive (2001), however, was inconclusive regarding the effectiveness of the interventions studied as they were largely based on weak or insufficient evidence.

Health promotion interventions to promote healthy eating have focussed on both the general population and specific targeted groups. A review by Roe et al at the University of Oxford looked at interventions in the general population in a range of settings including schools, the workplace, primary care settings and in the community (HDA, 1997). Some specific groups targeted have been elderly people, minority ethnic groups and pregnant women. One review found there is currently insufficient

evidence available to inform nutritional recommendations for elderly people (Fletcher and Lake, in HDA 1998a). Effective interventions to promote healthy eating in minority ethnic communities were identified in one review, but as most of the studies were from America there was a concern about generalisability of the results in the UK. Little research had been undertaken in the UK and no long-term follow-up studies of the study population had been undertaken. A third group to be studies are pregnant women and women of childbearing age. A review looking at dietary interventions for pregnant women and women of childbearing age also reported mixed evidence and called for further research in the UK, particularly longitudinal studies (van Teijlingen in HDA, 1998b).

Coronary Heart Disease
Coronary Heart Disease (CHD) is the main cause of premature death in the UK, costing the NHS a total of around £1 billion each year (HDA, 1997). For these reasons preventing and treating CHD is one of the government's key priorities. The National Service Framework (NSF) for Coronary Heart Disease was published to take this agenda forward at a national and local level. The NSF for CHD is underpinned by evidence so is a crucial vehicle for developing local practice.

The CHD related evidence-base is potentially vast, but falls into three main categories: prevention, treatment and access to care. Some of this evidence has been addressed in other parts of this review. For instance, material relating to the prevention of CHD through smoking, physical activity and healthy eating has already been touched upon in the relevant sections. In addition, the Heartbeat Wales community health promotion programme aimed at reducing the risks of cardiovascular disease is discussed in the 'general evidence' section of this review.

Research suggests that effective prevention of CHD requires action at a number of levels. The first is national policy. For instance, there is a range of evidence to suggest there is a higher prevalence of cardiovascular disease amongst people of a lower socio-economic status. The Acheson report and other research related to tackling inequalities has suggested that policy action to increase household incomes, improve access to education, and address the other determinants of health is the most effective way to make a meaningful contribution to reducing health inequalities (Gepkins and Gunning, 1996, DH, 1998).

Prevention can also be achieved through medical intervention. By managing blood pressure in at risk populations, the odds of developing CHD can be reduced (Macmahon, 1994; Mulrow et al, 2001). This can be further enhanced by ensuring that health professionals give the correct advice to individuals and that efficient prescribing is in place. A number of studies examining these issues are highlighted in a review by Rees and colleagues as part of the CRD wider public health agenda review (CRD, 2000). This review also points out the importance of ensuring that medical staff are adequately trained in the necessary interventions for reducing the risk of CHD in patients.

Health promotion can also contribute to prevention. The majority of the research in this area examines specific interventions in relation to diet, physical activity and smoking or particular population groups such as older people or school age children. We have touched on some of this evidence in other parts of this review. The recent review of CHD interventions conducted by the Scottish executive (2001) examines the use of psycho-educational and cognitive behavioural interventions. There is considerable evidence that these types of interventions are effective. The same review also pointed out that individualised prevention programmes are more effective. In contrast, the evidence relating to multiple risk factor interventions is less conclusive (Scottish Executive, 2001). Such initiatives aim to combine a wide range of interventions including those focussing on diet, smoking and weight reduction and often include the use of mass media as an educational tool. Evidence of efficacy in relation to these interventions is limited, particularly concerning longer-term outcomes. Some types of educational interventions can however have an impact. For instance, one study by Ebrahim et al (2001) suggests that interventions that use personal or family counselling and education, with or without the use of drug treatment are more effective in reducing risk factors and consequent morbidity and mortality in high risk populations.

The second category of evidence related to CHD is the *treatment* of individuals. In some cases prevention and treatment overlap, as in the case of medically controlled blood pressure. Another treatment found to be highly effective in high-risk groups is the use of low-dose aspirin (Collins et al, 1996; NHS Centre for Reviews and Dissemination, 1995). There are a number of other specific pharmaceutical interventions that are effective interventions for CHD (CRD, 2000). In addition to drug treatment, CHD can be treated by surgery. The evidence-base relating to the strengths and weaknesses of different surgical interventions is fairly robust (Yusuf et al, 1994; Sim et al, 1995). Following treatment and in particular surgery, the rehabilitation of patients is a crucial part of recovery. Evidence has shown that cardiac rehabilitation programmes are effective in improving the recovery and survival rates of heart attack or heart surgery patients (Hotta, 1991).

A third category of evidence relates to access to services for both screening and treatment. Individuals living in economically disadvantaged areas as well as those from ethnic minorities generally have poorer access to health services relevant to prevention and treatment of CHD. However, the access to care literature specifically relating to CHD is limited, and most studies again fail to demonstrate beneficial longer-term outcomes. However, there is some evidence related to specific interventions; for instance, a review by the NHS CRD in 1995 reported that the use of focussed targeted, bilingual staff and improved referral systems could improve access to healthcare services for minority ethnic communities (NHS CRD, 1996). Emerging findings from a number of local and national initiatives may also provide evidence of the effectiveness of improved access to care and a variety of interventions in reducing the rates of CHD in the population. For instance, new initiatives currently underway, such as the provision rapid access chest pain clinics and defibrillator schemes in

public places will be evaluated (DH, 2001). In addition, one of the four Scottish health demonstration projects focuses specifically on a community-based intervention to tackle CHD - *Have a Heart Paisley*. Further details of the project and the evaluation can be obtained at http://www.dph.gla.ac.uk/hppu.

Lessons

As this review has shown, the health-related evidence base relevant to NDC projects is potentially vast. However, the range of evidence does vary in its scope and robustness. There are real gaps, which can be grouped around the following themes:

- Uncertainty about the efficacy of many health promotion interventions.
- Limited knowledge about the longer-term impact of community-level health interventions.
- The specific ways in which community involvement/participation contributes to population health improvement.
- The most effective ways to improve the health of specific populations, such as ethnic minority communities and young people, including young smokers and teenage parents.

Despite these weaknesses, it is worth noting that most of the evidence that we have reviewed here, both in relation to general evidence to improve health in disadvantaged communities, and studies relating to specific health problems, is very recent. The evidence base for partnership entities such as NDCs that wish to improve health in their communities is growing at a steady pace. This is at least in part due to the fact that health research, in line with health policy, has shifted in recent years towards more emphasis on the study of health inequalities and wider public health issues. Research relating to health promotion is also growing.

Important new sources of evidence are emerging. In the health policy section of this review we identified evaluations that have been commissioned by the DH or other organisations of major policy initiatives such as HAZs, Sure Start, Healthy Living Centres and smoking cessation. These evaluations are underway and are producing reports. Perhaps most importantly they will contribute to the evidence-base surrounding effective ways to improve health at the community-level. A range of other relevant research is underway, both within statutory agencies (such as the HDA) and research organisations. Details of the relevant studies currently underway as part of the DH policy research programme can be found through the national research register at http://www.update-software.com/national.

The policy and research literature summarised for this review highlights important lessons that need to be considered as the NDC initiative develops. These lessons fall into two main categories: lessons for the evaluation team; and, lessons for NDC partnerships.

Lessons for the Evaluation Team
Because of the lack of firm evidence of effectiveness of health interventions in deprived communities in the UK, the NDC evaluation needs to make sure that the health-related activities and any health benefits (both subjective and objective) of the initiative are captured.

Methodologically there are, however, a number of challenges. The evidence-base is weak in relation to a number of health interventions often because the methods selected for evaluation are not rigorous enough. Most studies have been fairly small scale, many have used only qualitative methods or have involved participative/action research approaches in isolation from other methods, and most have been conducted within a very short time scale. This means that these types of studies are normally excluded from reviews, and certainly from systematic reviews, which attempt to distill key evidence. That does not mean that these types of methods are not useful. In many cases they can contribute to improved programme planning or specification that improves 'evaluability'. However, in isolation, evidence from this type of research is not often generalisable. Thus other types of methods need to be used as well.

The benefits of a theory-based approach to evaluation are beginning to be recognised in the health improvement literature, as the recent review by Hills and Blackburn, cited in this review, points out. Theory-base approaches as particularly valuable for improving programme design and developing well-specified aims and objectives within interventions. In addition, they can contribute to overcoming some of the problems of attribution that arise from the largely qualitative methods employed in the evaluation of some community-based health interventions. However, emerging experience from both the HAZ and Scottish health demonstration project evaluations suggests that theory-based evaluation is most useful at the beginning of an evaluation, and as an overarching framework for research within which a range of methods can be employed.

Surveys constitute a particular important method for health-related research at the community level, ideally with a longitudinal element. This review has highlighted the absence of before and after studies, and the extremely limited literature that outline the longer-term health benefits of health interventions. There is a need for welldesigned panel surveys to further develop the evidence base. These need to include intermediate measures of health change, as substantive health outcomes (in terms of population health change) can literally take decades to be realised. Intermediate measures such as changes in lifestyle and particularly self-perceived health questions (which are an important predictor of improvements in health status) need to be included. Secondary benefits of health interventions should also ideally be tracked. For example a study of physical activity programmes cited above found that the intervention resulted in small and meaningful changes in physical activity patterns but the main benefits observed were of a social and psychological nature (Riddoch et al, 1998).

Health Review of Evidence

An additional important lesson for evaluation is the need to be selective. Some evaluations try to measure change in too many ways or across too many interventions and thus emerge with few substantive findings. Due to the size of the NDC initiative, the national evaluation will have to take a highly selective approach to which types of health-related interventions it chooses to examine in more depth. Our experience with HAZs (with over 2,000 separate projects in existence) suggests that one fruitful approach is to select tracer topics to follow through across multiple sites. These could focus on particular population groups or types of interventions. Whatever the approach, selectivity will be crucial.

Partly because of the need to be selective, building links with local evaluators who may be able to engage in more in-depth study of the health-related elements of NDCs will be important. We would recommend that two types of web-based discussion groups, possibly with associated meetings, be set up to facilitate this. The first should be either an overall, or a domain specific, mailbase for local and national evaluators. The second should be themed discussion groups (ie, mental health) for national and local evaluators as well as professionals and NDC community members interested or involved in health issues.

Lessons for the Partnerships
As the literature highlighted in this review demonstrates, there is a vast amount of material that NDC partnerships can draw on to inform their health-related activities. All the evidence suggests that 'comprehensive' interventions are more likely to be successful than those focussing on one particular issue or population group with specific types of services being offered. In other words, in preventing teenage pregnancy the strands between sex education in schools, availability of contraceptive advice and products, easy access to health care services etc all need to be combined for effective action.

Some interventions, particularly around health promotion, drug prevention, smoking cessation in young people and other areas, have a less well-developed evidence base. Partnerships need to consider carefully the robustness of their approach before investing in an intervention. If it is in a new area, then it is crucial that local or national evaluation efforts be brought on board to monitor progress and report on outcomes, potentially adding to the evidence-base.

Complementarity is also important. This review has outlined a number of national developments such as health inequalities targets and national service frameworks. NDC partnerships need to ensure that the interventions they choose to invest in take account of these developments and are informed by them. This particularly important as key local health partners, particularly PCTs, will be focussing on these priorities due to performance management requirements. Local documents that will reflect the national context will include Himps and HAZ plans. NDC partnerships should be familiar with these and consider how their desired outcomes relate to these strategies. Although most, if not all, NDCs are well aware of the health impact of non-health

interventions it is essential that concerted efforts are made to be explicit about how attempts to change the socio-economic circumstances of neighbourhoods are expected to yield health gain. In part this can be achieved through local health impact assessment, which NDC partnerships themselves can and should invest in. But more strategic thinking about how cross-domain investments might deliver outcomes combined with a rigorous process of appraisal over time is absolutely essential. In our experience, the specification of plausible and realistic strategic change pathways represents a very serious challenge for local partnerships. Unless very determined attempts are made to articulate prospective pathways and their expected consequences that go beyond the level of specific projects then valuable opportunities for learning about social change processes will be lost.

Finally, as with the lessons for evaluation outlined above, NDC partnerships themselves will need to be selective about the interventions they choose to invest in. The dangers associated with a scattergun approach need to be resisted. An overproliferation of relatively small projects is less likely to result in health gain than some well-planned, evidence-based and comprehensive interventions that respond to local needs and priorities in ways that have some prospect of delivering significant outcomes.

Next Steps for the Review
As we stated at the outset, this document is very much a first attempt to respond to the brief specified as part of the scoping stage of the NDC evaluation. We are acutely conscious that much more could be done to extract and summarise learning of value to the NDC and wider neighbourhood renewal community. But the size and complexity of the evidence base means that this can only be done through a process of review. We believe this process should have four main components.
Firstly, successive versions of documents like this need to be reviewed by experts in the field to help with the process of selecting the most important and relevant material.

Secondly, there is a need for review by practitioners who are charged with leading regeneration initiatives at the local level. We need to know how useful they find documentation of this kind and what is missing that would be of particular value to them.

Thirdly, the review needs to be updated on a regular basis. New knowledge is being generated at an enormous rate. Careful thought needs to be given as to how much resource should be invested in keeping this document up to date and how its contents can best be disseminated. Nevertheless, whatever value it might have will soon diminish unless it is maintained.

Finally, given the gaps in existing knowledge about how best to intervene to improve the health of disadvantaged communities, NDCs provide a valuable opportunity for learning. The evaluation of the interventions and processes being developed by local

NDC partnerships can help generate new evidence. However, it is likely that only a relatively small number of these investments can be evaluated in any very comprehensive fashion. For this reason, very careful thought needs to be given to where scarce research resources should be invested as part of the main NDC evaluation.

References

Adams, C, Bauld, L., and Judge, K. (2000*) Leading the Way: Smoking Cessation Services in Health Action Zones*, Health Promotion Policy Unit, University of Glasgow, available at: http://www.haznet.org.uk

Adams, C. and Gilbody, S. (2000) A National Contract on Mental Health, *Evidence from Systematic Reviews of Research Relevant to Implementing the 'Wider Public Health' Agenda*. NHS Centre for Reviews and Dissemination, York.

Amos, A., Crossan, E., and Gaunt-Richardson, P. (1998) Women, low income and smoking: developing a bottom up approach, in Doyal, L. (ed) *Women and Health Services*, Open University Press, Buckingham.

Arblaster, L., Lambert, M., Entwistle, V., Forster, M., Fullerton, D., Sheldon, T., and Watt, T. (1996) A Systematic Review of the Effectiveness of Health Service Interventions Aimed at Reducing Inequalities in Health, *Journal of Health Services Research and Policy*, 1, 2, 93-103.

Atkinson M, Clark M, Clay D, Johnson M, Owen D, Szczepura A (2001) *Systematic Review of ethnicity and health service access for London*. Final Report to NHS Executive London.

Bangert Drowns RL (1998) The effects of school-based substance abuse education--a metaanalysis. *Journal of Drug Education*, 18(3):243-64.

Barr, A., and Hashagen, S. (2000) *ABCD Handbook: a Framework for Evaluating Community Development*, Community Development Foundation, London.

Bauld, L., Judge, K., Lawson, L., MacKenzie, M, MacKinnon, J., and Truman, J. (2001) *Health Action Zones in Transition: Progress in 2000*, Health Promotion Policy Unit, University of Glasgow. Report submitted to the Department of Health, available at: http://www.haznet.org.uk.

Benzeval, M., Judge, K. and Whitehead, M. (1995) *Tackling Inequalities in Health: An Agenda for Action*, The Kings Fund, London.

Benzeval, M., Judge, K. (1996) Access to health care in England: continuing inequalities in the distribution of GPs, *Journal of Public Health Medicine* 18(1), pp33-40.

Bhopal R. and Samin A. (1988) Immunisation uptake of Glasgow Asian children: paradoxical benefit of communication barriers, *Community Medicine* 10, pp.215-220. Bhopal. R. (1997) Is research into ethnicity and health racist, unsound or important science, *British Medical Journal,* 314, 1751-1756.

Blane, D. (1999) Adults of working age, in Gordon, D., Shaw, M., Dorling, D., and Davey Smith, G. (eds) *Inequalities in Health: The evidence presented to the Independent Inquiry into Inequalities in Health*, Policy Press, Bristol.

Blane, D., White, I., Morris, J. (1996) Education, social circumstances and mortality, in Blane, D., Brunner, E., Wilkinson, R. (eds) *Health and social organisation: towards a policy for the 21st century*, Routledge, London.

Bolden K.J. (1981) *Inner Cities*, Occasional Paper 19, Royal College of General Practitioners, London.

Boyle S. and Hamblin R. (1997) The health economy of London: a report to the King's Fund London Commission. London: King's Fund.

Boyle S. and Smaje C. (1993) Primary health care in London: quantifying the challenge, London: King's Fund.

Buck C, Godfrey C, Parrot S, Raw M. (1997) Cost effectiveness of smoking cessation interventions*., Health Education Authority, London.*

Bunton, R., Burrows, R., Gillen, K., and Muncer, S. (1994) *Interventions to Promote Health in Economically Deprived Areas: A Critical Review of the Literature*, Report to the Northern Regional Health Authority.

Burton, S., and Diaz de Leon, D. (2002) An Evaluation of Benefits Advice in Primary Care – Camden and Islington HAZ, in Bauld, L., and Judge, K. (eds) *Learning from Health Action Zones*, Aeneas Press, forthcoming.

Callum C. (1998) *The Smoking Epidemic,* Health Education Authority, London.

Carr-Hill R.A. (1999) The need for general medical services: a literature review. University of York.

Cave, B., Curtis, S., Coutts A., Aviles, M. (2001) *Health Impact Assessment for Regeneration Projects: Selected Evidence Base*, Queen Mary College, University of London.

Clamp M, Kendrick D. A randomised controlled trial of general practitioner safety advice for families with children under five years. *British Medical Journal* 1998, 319:1576-79.

Clarke R, Frost C, Collins R, Appleby P, Peto R. (1997) Dietary lipids and blood cholesterol: a quantitative meta-analysis of metabolic ward studies. *British Medical Journal* 314:112-17.

Committee on Health and Behaviour (2001) *Health and Behaviour: The Interplay of Biological, Behavioural and Soceital Influence*, Institute of Medicine, National Academy Press, Washington. http://books.nap.edu/books/0309070309/html

Community Health Sciences Research Group - Barts and the London / Queen Mary's School of Medicine and Dentistry (June 2001) *Systematic reviews of access to and uptake of healthservices by ethnic groups: Cardiovascular disease / Mental Health*. Final Report to NHS Executive London

CRD (2000) *Evidence from systematic reviews of research relevant to implementing the "wider public health" agenda.* NHS Centre for Reviews and Dissemination http://www.york.ac.uk/inst/crd/wph.ht. August 2000.

Davidson, L., Durkin, M., Kuhn, L., O'Connor, P., Barlow, B., Heagarty, M.C. (1994) The impact of the Safe Kids Healthy Neighbourhoods Injury Prevention Program in Harlem, 1988-1991. *American Journal of Public Health,* 84, 580-586.

Davies, J.K., and Kelly, M.P (1993) *Healthy Cities: research and practice*, Routledge, London.

Department of the Environment, Transport and the regions (1998) *Modernising Local Government*, The Stationery Office, London.

Department of Environment Transport and the Regions (2000) Local Strategic Partnerships, Consultation Document, http://www.detr.gov.uk/regeneration/consult/partship/index.htm

Department of Environment Transport and the Regions (2001) Local Strategic Partnerships Government Guidance, http://www.local-regions.detr.gov.uk/lsp/guidance/index.htm

Department of Health (1997), *The New NHS. Modern. Dependable*, The Stationery Office, London.

Department of Health (1998a) *Modernising Social Services*, The Stationery Office, London.

Department of Health (1998b) *Smoking kills: a white paper on tobacco*. The Stationery Office, London.

Department of Health (1998c) *Independent Inquiry into Inequalities in Health*. The Stationery Office, London.

Health Review of Evidence

Department of Health (1998d) *Reducing Health Inequalities: An Action Report*. The Stationery Office, London.
Department of Health (1999a), *Saving Lives: Our Healthier Nation*, The Stationery Office, London.

Department of Health (1999b) *Partnership in Action: New Opportunities for Joint Working between Health and Social Services*, The Stationery Office, London.

Department of Health (1999c) *Patient and Public Involvement in the New NHS*, The Stationery Office, London.

Department of Health (1999d), *National Service Framework for Mental Health*, http://www.doh.gov.uk/nsf/.

Department of Health (2000a*) Tackling Teenage Pregnancy: Action for Health Authorities and Local Authorities*, Department of Health Guidance, January 7th, 2000.

Department of Health (2000b) *The NHS Plan: A Plan for Investment, A Plan for Reform*, The Stationery Office, London. http://www.doh.gov.uk/nhsplan/default.htm

Department of Health (2000c), *National Service Framework for Coronary Heart Disease*, http://www.doh.gov.uk/nsf/coronary1.htm

Department of Health (2000d). *Healthy Living Centres*. http://www.doh.gov.uk/hlc.

Department of Health (2000e). *Revised DH Guidance for New Deal for Communities*.

Department of Health (2001a) *Shifting the Balance of Power within the NHS*, The Stationery Office, London. http://www.doh.gov.uk/shiftingthebalance/

Department of Health (2001b), From Vision to Reality*, The Stationery Office, London.*

Department of Health (2001c), The Report of the Chief Medical Officer's Project to Strengthen the Public Health Function, *The Stationery Office, London.*

Department of Health (2001d). *Health Improvement and Modernisation Plans.* http://www.doh.gov.uk/himp.

Department of Health (2001e). Letter to Regional Office HIMP Leads. Health Improvement and Modernisation Plans (HIMPs): Requirements for 2002. 2nd October.

Department of Health (2001f), National Service Framework for Older People*, The Stationary Office, London.*

Health Review of Evidence

Department of Trade and Industry 2000. *Avoiding slips, trips and broken hips. How do older people use their stairs?* http://www.dti.gov.uk

Dibben, C., Sims, A., Noble, M., Hill, A., Goldacre, M., Surrender, R., Goodwin, N., Lloyd, M., Wright, G. and Smith, G. (2001), *Health Poverty Index Scoping Project*, http://www.sepho.org.uk/publications/hpi_report.pdf

Dishman RK, Oldenburg B, O'Neal H, Shephard RJ. Worksite physical activity interventions. *American Journal of Preventive Medicine* 1998; 15(4): 344-61.

Dixon J. (2000), *What is the hard-evidence on the performance of 'mainstream' health services serving deprived compared to non-deprived areas in England?* Report for the Social Exclusion Unit

Eakin, EG, Glasgow, RE, Riley, KM. Review of primary care-based physical activity intervention studies: effectiveness and implications for practice and future research. *The Journal of Family Practice* 2000; 49(2): 158-68.

Ebrahim, S., and Davey-Smith, G. (1998) Effects of government policies on health behaviour must be studied, Letter in the *British Medical Journal*, 317, 886.

Elkan R, Kendrick D, Hewitt M, Robinson JJA, Tolley K, Blair M, *et al*. The effectiveness of domiciliary health visiting: a systematic review of international studies and a selective review of the British literature. *Health Technology Assessment* 000;4(13).

Farrell G. A global empirical review of drug crop eradication and United Nations' drug crop substitution and alternative development strategies. *Journal of Drug Issues 1*998;28(2):395-436.

Fincham, S (1992) Community Health Promotion Programmes, *Social Science and Medicine*, 35, 3, 239-249.

GFA Consulting and Holden McAllister Partnership (2000) *A Training Programme for Neighbourhood Renewal Implementation Support Advisers*, GFA Consulting, London.

Gillespie LD, Gillespie WJ, Robertson MC, Lamb SE, Cumming RG, Rowe BH. Interventions for preventing falls in elderly people (Cochrane Review). In :*The Cochrane Library*, 4, 2001. Oxford: Update Software.

Goddard, M. and Smith, P. (1998) *Equity of Access to Health Care*, Centre for Health Economics and NHS Centre for Reviews and Dissemination, University of York.

Godfrey, C., Raw, M., and Sutton, M. et al (1993) *The Smoking Epidemic: A Prescription for Change*, Health Education Authority, London.

Gordon, D., Shaw, M., Dorling, D., and Davey Smith, G. (1999) *Inequalities in Health: The evidence presented to the Independent Inquiry into Inequalities in Health*, Policy Press, Bristol.
Gossop, M; Marsden, J; (1998), *The National Treatment Outcome Research Study*; Department of Health, The Stationery Office, London.

Green, LW and Lewis, F.M (1986) *Measurement and Evaluation in Health Education and Health Promotion*, Mayfield Publishing, Palo Alto, California.

Hansen WB. School-based substance abuse prevention – a review of the state of the art in curriculum, 1980-1990. *Health Education Research* 1992;7:403-30.

Hastings A. (1993) 'General practice in deprived areas: problems and solutions' *British Journal of General Practice*, 43: 47-51.

Hattersley, L. (1997) Expectation of life by social class, in Drever, F., and Whitehead, M. (1997) *Health Inequalities: Dicennial Supplement*, Office of National Statistics, Series DS No.5, London.

Health Development Agency. Health Promotion interventions to promote healthy eating in the general population – a review. *Health promotion effectiveness reviews Summary bulletin* 6 - 1997.

Health Development Agency. Effectiveness of interventions to promote healthy eating in elderly people living in the community. *Health promotion effectiveness reviews Summary bulletin* 8 – 1998a.

Health Development Agency. Effectiveness of interventions to promote healthy eating in pregnant women and women of childbearing age. *Health promotion effectiveness reviews Summary bulletin* 11 – 1998b.

Health Development Agency. Effectiveness of interventions to promote healthy eating in people from minority ethnic groups. *Health promotion effectiveness reviews Summary bulletin* 12 – 1998c.

Health Development Agency. Effectiveness of physical activity promotion in primary care.*Health promotion effectiveness reviews Summary bulletin* 14 – 1998d.

Health Development Agency (2001a) *Coronary Heart Disease: Guidance for implementing the preventive aspects of the National Service Framework*, HDA, London.

Health Development Agency (2001b) *Teenage Pregnancy: An update on key characteristics of effective interventions*, HDA, London.

Health Education Authority (1998a) *Effectiveness of interventions to promote healthy feeding of infants under one year of age*, Health Education Authority, London.

Health Education Authority (1998b) *Effectiveness of interventions to promote healthy eating in pre-school children aged 1-5 years*, Health Education Authority, London. Health Education Authority (1999) *Community Participation for Health: A Review of Good Practice in Community Participation Health Projects and Initiatives*, Health Education Authority, London.

Hills, D., and Blackburn, V. (2001) *Evaluating Community Level Interventions for Health Improvement*, Evaluation Development and Review Unit, Tavistock Institute, London.

Hillsden M, Cavill N, Nanchahal K, Diamond A, White IR. National level promotion of physical activity: results from England's ACTIVE for LIFE campaign. *Journal of Epidemiology and Community Health* 2001; 55(10): 755-61.

Hillsdon M, Thorogood M. A systematic review of exercise promotion strategies. *British Journal of Sports Medicine* 1996;30:84-9.

Hirst M., Lunt N., Atkin K. 'Were practice nurses distributed equitably across England and Wales, 1988-95?' *Journal of Health Services Research and Policy*, 3:31-38.

HM Government (1999); *The Health Act*, The Stationery Office, London.

Home Office (1998), *Tackling Drugs to Build a Better Britain*; The Stationary Office, London.

Hooper L, Summerbell CD, Higgins JPT, Thompson RL, Clements G, Capps N, Smith Davey G, Riemersma RA, Ebrahim S. Reduced or modified dietary fat for preventing cardiovascular disease (Cochrane Review). *The Cochrane Library* 2001; 4.

House of Commons Health Select Committee (2001) Public Health: Second Report*, The Stationery Office, London.*

Innes E. Education and training programmes for the prevention of work injuries: do they work? *Journal of Prevention, Assessment and Rehabilitation* 1997;9(3):221-32.

James WPT, Nelson M, Ralph A, Leather S. Socioeconomic determinants of health: The contribution of nutrition to inequalities in health. *BMJ* 1997;314:1545-53.

Joy, C, Adams, C, Rice, K (2000) *Crisis intervention for severe mental illness*, The Cochrane Library, 1, 2000, Oxford, Update Software.

Judge K, Barnes M, Bauld L et al (1999). *Health Action Zones: Learning to Make a Difference*. http://www.haznet.org.uk.

Health Review of Evidence

Kai J. (1999) 'Minority ethnic community participation in needs assessment and service development in primary care: perceptions of Pakistani and Bangladeshi people about psychological stress', *Health Expectations* 2: 7-20.

Krauss J. Effectiveness of measures to prevent unintentional deaths of infants and children from suffocation and strangulation. *Public Health Rep*, 1985; 100(2): 231-40.

Krug A, Ellis J, Hay I, Mokgabudi N *et al*. The impact of child-resistant containers on the incidence of paraffin (kerosene) ingestion in children. *South African Medical Journal* 1994; 84(11): 730-4.

Law, C. (1999) Mother, fetus, infant, child and family: socio-economic inequalities, , in Gordon, D., Shaw, M., Dorling, D., and Davey Smith, G. (eds) *Inequalities in Health: The evidence presented to the Independent Inquiry into Inequalities in Health*, Policy Press, Bristol.

Leiderkerken, PC, Jonkers, R et al (1990) *Effectiveness of Health Education*, Utrecht; Dutch Health Education Centre, Van Gorcum/Uitgeverij voor Gezondheudsbevaderry, BV Asseen, Netherlands.

Levine, D., Becker, D.M., Bone, L.R., Stillman, F.A, Tuggle, M V, Prentice, M (1992) A partnership with minority populations: a community model of effectiveness research, *Ethnicity and Disease*, Vol2.

Lister-Sharp D, Chapman S, Stewart-Brown S, Sowden A. Health promoting schools and health promotion in schools: two systematic reviews. *Health technology Assessment* 1999; 3(22).

MacAlister, A et al (1999) Theory and action for health promotion: illustrations from the north Karelia project, *American Journal of Public Health*, 72, 42-55.

MacIntyre, S. (1999) Geographical inequalities in mortality, morbidity and health related behaviour in England, in Gordon, D., Shaw, M., Dorling, D., and Davey Smith, G. (eds) *Inequalities in Health: The evidence presented to the Independent Inquiry into Inequalities in Health*, Policy Press, Bristol.

MacKenzie, M., Lawson, L., and MacKinnon, J. (2001) *Evaluation of the Sandyford Initiative: Having your voice heard*, Health Promotion Policy Unit, University of Glasgow.

MacMahon S. *Blood pressure and the risks of cardiovascular disease*. In: Swales JD (ed). Textbook of Hypertension. Blackwell Scientific Publications.Oxford. 1994:46-57.

Majeed A. Cook D.G., Anderson H, Hilton S., et al (1994) 'Using patient and general practice characteristics to explain variations in cervical smear uptake rates', *BMJ* 308: 1272-76.

Marcus Bess H, Owen, Neville, Forsyth, LeighAnn H, Cavill, Nick A, Frindinger, Fred. physical activity interventions using mass media, print media, and information technology *American Journal of Preventive* Medicine 1998;15(4):362-378.
Mentore JL. *The Effectiveness of Early Intervention with Young Children 'At Risk': A Decade in Review*. Ph.D. Dissertation, Fordham University, DAI-B 60/07, p. 3573, Jan 2000.

Millburn MP, Alan (2001) Breaking the link between poverty and ill health*, Speech to the Royal College of Physicians Long-Term Medical Conditions Alliance Conference.*

Morris B, Trimble N. Promotion of bicycle helmet use among schoolchildren: A randomised clinical trial. *Canadian Journal of Public Health* 1991; 82:92-4.

National Society for the Prevention of Cruelty to Children (2001). *Improving Children's Health (2)*. NSPCC National Centre, London.

Nazroo J.Y (1997) *'The Health of Britain's Ethnic Monirities'*. Policy Studies Institute.

Nazroo, J. (1999) Ethic Inequalities in Health, in Gordon, D., Shaw, M., Dorling, D., and Davey Smith, G. (eds) *Inequalities in Health: The evidence presented to the Independent Inquiry into Inequalities in Health*, Policy Press, Bristol.

NHS Centre for Reviews and Dissemination (1997) Mental Health Promotion in high risk groups, *Effective Health Care*, 3, 3.

NHS Centre for Reviews and Dissemination. Preventing falls and subsequent injury in Older People. Effective Health Care *1996;2:(4).*

NHS Centre for Reviews and Dissemination. Preventing unintentional injuries in children and young adolescents. Effective Health Care *1996;2:(5).*

NHS Executive (1999) National Survey of NHS Patients 1998: *General Practice*.

Nutbeam, D, Smith C., Murphy, S and Catford, J. (1993) Maintaining evaluation designs in long term community-based health promotion programs: the Heartbeat Wales case study, *Journal of Epidemiological community Health*, 47, 127-133.

O'Donnell O. and Propper C. (1991) 'Equity and the distribution of NHS resources', *Journal of Health Economics* 10: 1-19.

Paris, J., and Player, D (1992) Citizens Advice in General Practice, *British Medical Journal*, 306, 1518-1520.

Patel, A. and Knapp, M. (1998) Costs of mental illness in England. Personal Social Services Research Unit (PSSRU) *Mental Health Review* 1998, 5, 4-10.

Peersman, G., Oakley, A., Oliver, S., and Thomas, J. (1996) *Review of effectiveness of sexual health promotion interventions for young people*, EPPI-Centre, Social Science Research Unit Institute of Education.
Pendegrast R, Ashworth C, DuRant R, Litaker M. Correlates of childrens bicycle helmet use and short-term failure of school-level interventions. *Pediatrics* 1992; 90(3): 354-8.

Peto, R., et al (1994) *Mortality from smoking in developed countries, 1950-2000*, Oxford Medical Publications, Oxford.

Petticrew, M., and MacIntyre, S (2001) *What do we know about effectiveness and cost effectiveness of measures to reduce inequalities in health?* Issues Panel for Equity in Health (IPEH), Kings Fund, Nuffield Foundation (in press).

Province M, Hadley E, Hornbrook M *et al*. The Effects of Exercise on Falls in Elderly Patients. A Perplanned Meta-Analysis of the FICSIT Trials. JAMA1995;273:1341-7.

Puczynski, M, Marshall, D. Helmets! All the pros wear them. *American Journal of Diseases of Children* 1992; 146: 1465-7.

Raw, M., McNeill, A. and West, R. (1998) Smoking Cessation Guidelines and their Costeffectiveness, *Thorax*, 53, Supplement 5.

Raw, M., McNeill, A., Watt, J. and Raw, D. (2001), National smoking cessation services at risk, *British Medical Journal*, 323, 1140-41

Richardson, K. (2001) *Smoking, Low Income and Health Inequalities: Thematic Discussion Document*, ASH and Health Development Agency, London.

Sallis, JF., Bauman, A. and Pratt, M. Environmental and policy interventions to promote physical activity. *American Journal of Preventive Medicine* 1998; 15(4): 379-397.

SCDC (2000) *Learning, Evaluation and Planning, Scottish Community Development Centre*, Glasgow, http://www.scdc.org

Schaps E, Churgin S, Palley CS, Takata B. Primary prevention research: a preliminary review of programme outcome studies. *International Journal of Addiction* 1980;15:657-76.

Schweinhart LJ. Lasting Benefits of Preschool Programs. *ERIC Digest*. 1994.

Health Review of Evidence

Scottish Executive (2001). *Nursing for Health. The Effectiveness of Public Health Nursing: A review of systematic reviews*. Chapter 11, Diet, 164-176. The Stationery Office, Edinburgh.

Shaw, M., Dorling, D., Gordon, D., and Davey-Smith, D. (1999) *The Widening Gap: Health Inequalities and Policy in Britain*, Policy Press, Bristol.

Simons-Morton, DG., Calfas, KJ., Oldenburg, B. and Burton, NW. Effects of interventions in health care settings on physical activity or cardiorespiratory fitness. *American Journal of Preventive Medicine* 1998; 15(4): 413-430.

Smaje C. and LeGrand J. (1997) 'Ethnicity, equity and the use of health services in the British NHS', *Social Science and Medicine* 45: 485-96.

Smart RG. Effects of legal restraint on the use of drugs: a review of empirical Studies. *Bulletin on Narcotics* 1976;28(1):55-65.

Smithies, J., and Hampson, S. (1999) *Community Participation for Health: A Review of Good Practice in Community Participation Health Projects and Initiatives*, Health Education Authority, London.

Social Exclusion Unit (1999), *Teenage Pregnancies*, The Stationery Office London.

Social Exclusion Unit (2001), *A New Commitment to Neighbourhood Renewal. National Strategy Action Plan*, The Stationery Office London.

Sorenson B. Prevention of burns and scalds in a developed country. *Journal of Trauma* 1976; 16(4): 249-58.

Sowden, A., and Arblaster, L. (2001) *Community interventions for preventing smoking in young people*, The Cochrane Library, Issue 3, 2001.

Sowers WE, Daley DC. Compulsory treatment of substance use disorders. *Criminal Behaviour and Mental Health* 1993;3(4):403-15.

Tannahill, A. (1985) What is health promotion? *Health Education Journal*, 44, 4, 167-8.

Taylor, WC., Baranowski, T. and Young, DR. Physical activity interventions in low-income, ethnic minority, and populations with disability. American Journal of Preventive Medicine 1998; 15(4): 334-343.

Thompson R, Edwards P, Jarvis S, Avery A, Towner E and Walsh S. Childhood accidents: is it time to prescribe safety equipment? *Community Practice* 1998, 71(4):138-40.

Thomson, H., Petticrew, M., and Morrison, D. (2001) Health effects of housing improvement: systematic review of intervention studies, *British Medical Journal*, 323, 187-190.

Tideiksar R, Feiner CF, Maby J. Falls prevention: The efficacy of a bed alarm system in an acute-care setting. *Mount Sinai Journal of Medicine* 1993;60:522-7.

Tobler NS, Lessard T, Marshall D, Ochshorn P, Roona M. Effectiveness of school-based drug prevention programmes for marijuana use. a meta-analysis. *School Psychology International* 1999;20(1):105-37.

Tobler NS, Stratton HH. Effectiveness of school-based drug prevention programs: a metaanalysis of the research. *Journal of Primary Prevention* 1997;18(1):71-128.

Towner E, Dowswell T, Simpson G, Jarvis S. Health promotion in childhood and young adolescence for the prevention of unintentional injuries, Health promotion effectiveness reviews. London: *Health Education Authority* 1996;1.

Townsend, P., Whitehead, M., and Davidson, N, (1992) *Inequalities in health: The Black Report and the Health Divide*, New Edition, Penguin Books, London.

Tudor-Hart, J. (1971) The Inverse Care Law, *The Lancet*, 1, 4-5-412.

Tudor-Hart, J., Thomas, C., Gibbons, B., Edwards, C. Hart, M., Jones, J. (1991) Twenty-five years of case finding and audit in a socially deprived community, *British Medical Journal,* 302, 1509-1513.

Tudor-Smith, C, Nutbeam, D., Moore, L., Catford, J. (1998) Effects of the Heartbeat Wales programme over five years on behavioural risks from cardiovascular disease: quasiexperimental comparison of results from Wales and a matched reference area, *British Medical Journal*, 316, 818-822.

Tulder MW van, Malmivaara A, Esmail R, Koes BW. Exercise therapy for low back pain (Cochrane Review). In :*The Cochrane Library*, 4, 2001. Oxford: Update Software.

University of York (2000) Mental Health: Implementing the National Service Framework, *Health Policy Matters*, Issue 2, May 2000.

Weiss HB. Home visits: necessary but not sufficient. *Future of Children* 1993;3(3)113-28. West, R., McNeill, A., and Raw, M. (2000) Smoking Cessation Guidelines for Health Professionals: An update, *Thorax*, 55,12,987-999.

White, D; Pitts, M (1997), Educating young people about drugs: A systematic review. *Addiction* 1998; 10:1475-87.

Whitehead, M. (1995) Tackling Inequalities: A Review of Policy Initiatives, in Benzeval, M., Judge, K. and Whitehead, M. (eds) *Tackling Inequalities: An Agenda for Action*, Kings Fund, London.

Whitehead, M. (1999) Where Do We Stand? Research and Policy Issues Concerning Inequalities in Health and in Health Care, *Acta Ontologica*, 38,1, 41-50.

Wolf SL, Kutner, NG, Green RC, McNeely E. The Atlanta FICSIT study : Two exercise interventions to reduce frailty in elders. *Journal of the American Geriatrics Society* 1993;41:329332.

Woolf A D, Saperstein A, Forjuoh S. Poisoning prevention knowledge and practices of parents after a childhood poisoning incident. *Pediatrics* 1992; 90(6): 867-70.

World Health organisation (2000). *Transport, environment and health. World regional Publications*, European series, No.89.

Zoritch B, Roberts I, Oakley A. *Day care for pre-school children*. [Cochrane Review]. In: The Cochrane Library, Issue 1, 2000. Oxford: Update Software.

Zoritch B, Roberts I, Oakley A. The health and welfare effects of day-care: a systematic review of randomised control trials. *Social Science and Medicine* 1998; 47(3):317-27.