Coronary heart disease and stroke.

THE HEALTH OF THE NATION

Key Area Handbook

CORONARY HEART DISEASE AND STROKE

DEPARTMENT OF HEALTH

CORONARY HEART DISEASE AND STROKE

CONTENTS

PREFACE

This handbook forms part of a series of Health of the Nation Key Area handbooks. In The Health of the Nation White Paper published in July 1992 the Government said that the National Health Service Management Executive would commission handbooks on possible local approaches to each of the five Key Areas identified in the White Paper Coronary Heart Disease and Stroke, Cancers, Mental Illness, Accidents and HIV/AIDS and Sexual Health.

The aim of the handbooks is primarily to assist managers and directors in purchasing authorities (DHAs, FHSAs and purchasing consortia) to develop local strategies for reducing mortality and morbidity in each Key Area. The handbooks also aim to disseminate widely information about local initiatives to managers and directors in provider organisations and to group together other relevant information. The handbooks may also be of interest to organisations such as local authorities and the voluntary sector which join together with the NHS in alliances for health.

The information in the handbooks is illustrative rather than prescriptive, and it is intended that they should be used as practical guides. NHS managers and others will wish to use the guides selectively and adapt them to suit local circumstances in the light of local priorities and available resources. The handbooks vary in length, structure and content as a result of the differences in subject matter, secondary audiences and the amount of prominence each Key Area has had in the past.

The handbook series is complemented by a range of other documents which the Department of Health has issued in order to help implement the Health of the Nation strategy. A supplement to the Public Health Common Data Set, which contains baseline data on the primary targets was issued in October 1992. First Steps for the NHS, which sets out suggestions for management action for each Key Area, grouped by type of contract or plan, was issued in November 1992. A workshop on Alliances for Health was held in

November 1992 and a report will be published in Spring 1993. In addition, a sub-group of the Minister's Wider Health Group has been established to produce a handbook with guidance on how to form healthy alliances. The Department of Health also plans to publish a discussion document to advance the process of setting local targets.

The production of the Key Area handbooks has been the result of a joint working venture between the Department of Health, the NHS and other organisations. The handbooks could not have been published without the help and advice of colleagues from outside the Department and we are grateful to them for their valuable contribution.

The ultimate purpose of the Health of the Nation initiative is to bring about further continuing improvement in health. The intention of the Key Area handbooks is to contribute to that process.

Comments on this handbook are very welcome and should be sent to Dr G Thoms, Senior Medical Officer, Public Health Division, NHSME, Quarry House, Quarry Hill, Leeds LS2 7UE.

It is intended to carry out an evaluation exercise later in the year based on feedback from users.

Further copies are available from:

BAPS,
Health Publications Unit,
Heywood Stores,
No 2 Site, Manchester Road,
Heywood, Lancashire OL10 2PZ.

CHAPTER 1

INTRODUCTION

INTRODUCTION

1.1 The Health of the Nation White Paper contained a commitment to produce handbooks on possible local approaches to Key Areas within the national strategy. This handbook deals with coronary heart disease (CHD) and stroke. This handbook is not intended to be prescriptive and it is for local managers to draw up their own action plans for meeting targets in their own localities.

CONTENTS

1.2 Chapters 2-4 of the handbook provide essential background facts on CHD and stroke and the burden of ill health they cause, on the business of setting targets and on interventions available spanning prevention, treatment, care and rehabilitation. Chapters 5-10 illustrate the components of and issues involved in putting together a balanced and comprehensive CHD/stroke programme.

1.3 Appendix A is an extract from the Key Area Handbook "Cancers". It provides a detailed account of suggested action to reduce smoking. Appendix B gives guidance to help managers develop local policies for plasma cholesterol testing for people at high risk of CHD, as promised in the White Paper. Appendix C covers both background information and action suggested for physical activity. Appendix D provides useful reading for those wishing to follow up the points made in this handbook in more detail.

ROLE OF THE NHS

1.4 The NHS has a central role to play in achieving the CHD and stroke targets set out in the Health of the Nation White Paper:

- as a champion of public health issues which affect the local population
- as a catalyst for local multi-agency planning and programmes
- as a purchaser and as a direct provider of health promotion services
- as a purchaser and as a direct provider of high quality health care services in primary and secondary care
- as an employer taking forward the Health at Work initiative in the NHS.

1.5 Managers and directors in purchasing authorities will wish to ensure that there is:

- assessment of the local situation, using all the local and national health

information available, to build a picture of the local CHD and stroke determinants, causes and burden

- review of options for intervention
- agreement on locally set aims and targets
- agreement on what action to take in each time period
- a programme which includes action on alliances for health, health promotion, and primary and secondary care
- monitoring and evaluation of progress, including working towards increasingly sound baseline information, in order that local progress can be understood and monitored.

1.6 Managers will also want to ensure that they are:

- adjusting relevant existing local strategies, for example for smoking, obesity, alcohol, fitness, staff training, information, research and development in order to take the Health of the Nation targets into account
- aware of the developing techniques of target setting, including the processes involved in matching and reconciling targets at national and local levels
- aware of the developing knowledge base and expertise relating to the effectiveness and outcomes of treatments and other interventions
- encouraging work to explain and reduce variations in patterns of care, for example clinical policies and guidelines.

1.7 Managers using the handbook will vary in their previous involvement in CHD and stroke programmes. Those with well developed local programmes may already have achieved much of what is suggested. They may wish to ensure that all the suggestions made in the handbook have been considered. Others will be looking for rather more guidance and more in the way of basic facts. The examples of local initiatives are set out separately from the main text to enable managers to make a rapid judgement about relevance to their local situation, and to follow up in more detail using the contact name given.

1.8 This handbook focuses on what managers need to know and the action that they can take. The main effort for managers will be putting into action what can be done on the basis of existing knowledge, using existing effective interventions in prevention, treatment, care and rehabilitation.

CHAPTER 2

CORONARY HEART DISEASE AND STROKE

CORONARY HEART DISEASE AND STROKE

2.1 The achievement of the targets in the Key Area of CHD and stroke will have the biggest impact on health of all the Health of the Nation targets.

BURDEN OF ASSOCIATED ILL HEALTH

2.2 CHD is the single most common cause of death in England in men and women. CHD deaths increase with age, but in men there is a peak between the ages of 55 and 64 after which they decrease. CHD mortality rates are overall twice as high in men as in women (See *figure 1*). CHD was the cause of 26% of all deaths in England in 1991 and accounted for 2.5% of total NHS expenditure.

2.3 Stroke was the cause of 12% of all deaths in England in 1991. Deaths from stroke increase sharply with age in both men and women. Stroke accounts for 4.4% of total NHS expenditure, a higher proportion than CHD, because of the greater burden of prolonged disability and rehabilitation.

Variations

2.4 The figures above are based on average mortality rates but there are important variations between purchasing authorities in the distribution of mortality from these diseases. Some of the major contributors to this variation are:

Geography

Mortality is higher in the north of England. Some of this variation can be explained by differences in the distribution of risk factors such as cigarette smoking and high blood pressure but much of the variation has yet to be explained.

Social class

There is a consistent trend in mortality rates. The lowest rates are in social class I and the highest in social class V. This pattern is similar for both diseases and for both men and women. Some of this variation can be explained by the distribution of risk factors, for instance, cigarette smoking is more common in social class V. However, much of the variation has yet to be explained.

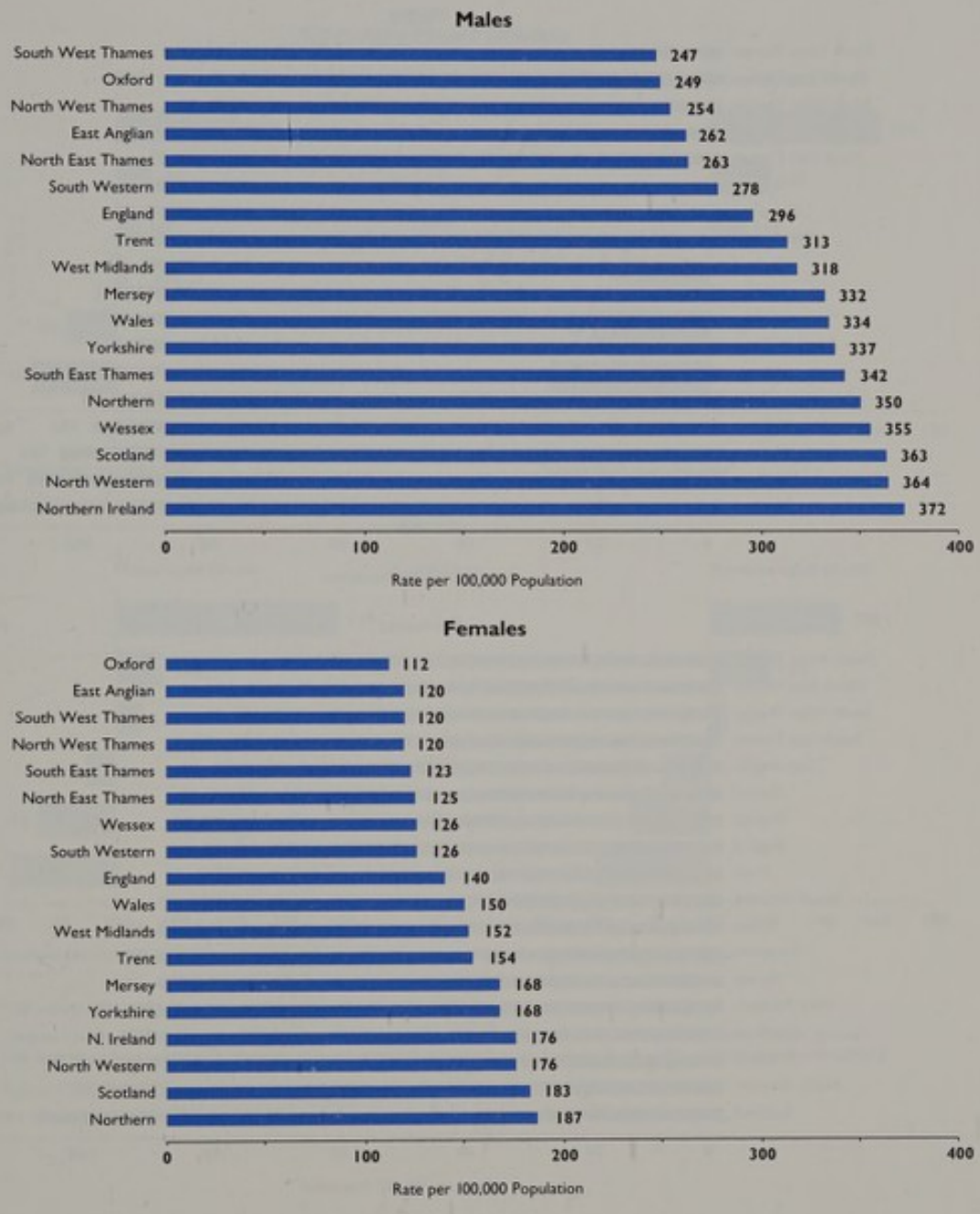
Ethnicity

Mortality varies between ethnic groups. For example mortality from CHD and stroke is higher in people from the Indian subcontinent; and stroke mortality is higher in people from the Caribbean and Africa. The reasons for these variations are not fully understood but they are not wholly attributable to the risk factors described in paragraphs 2.9-2.11.

Figures 1-4 show the regional variation in CHD and stroke death rates and the variation in death rates by social class and ethnic origin.

Death rates* for Coronary Heart Disease
by region of United Kingdom, 1990

Figure 1

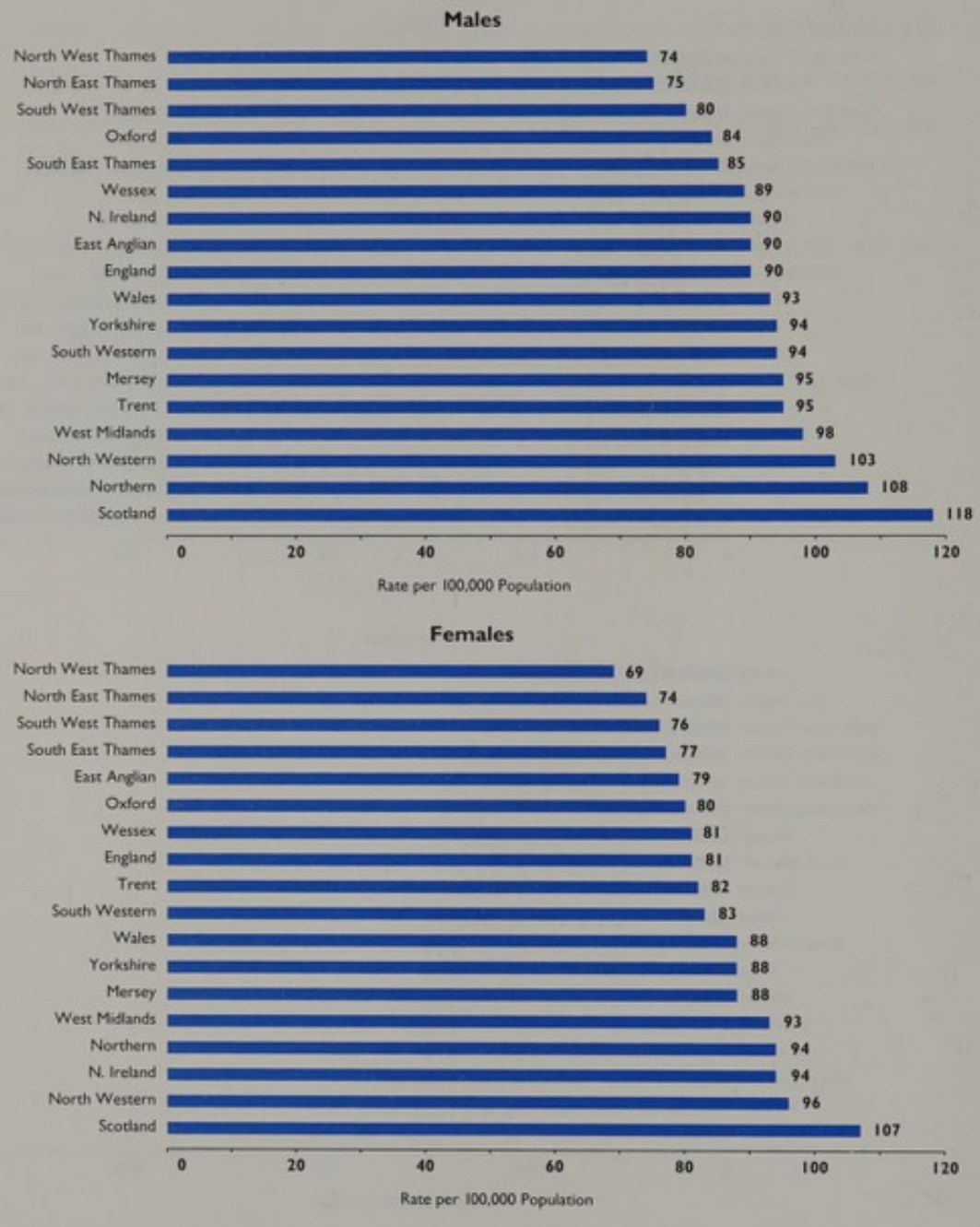


***Rates calculated using the European Standard Population**

Source: OPCS DH5 No 17; Registrar General's Offices of Scotland and N. Ireland

Death rates* for Stroke
by region of United Kingdom, 1990

Figure 2



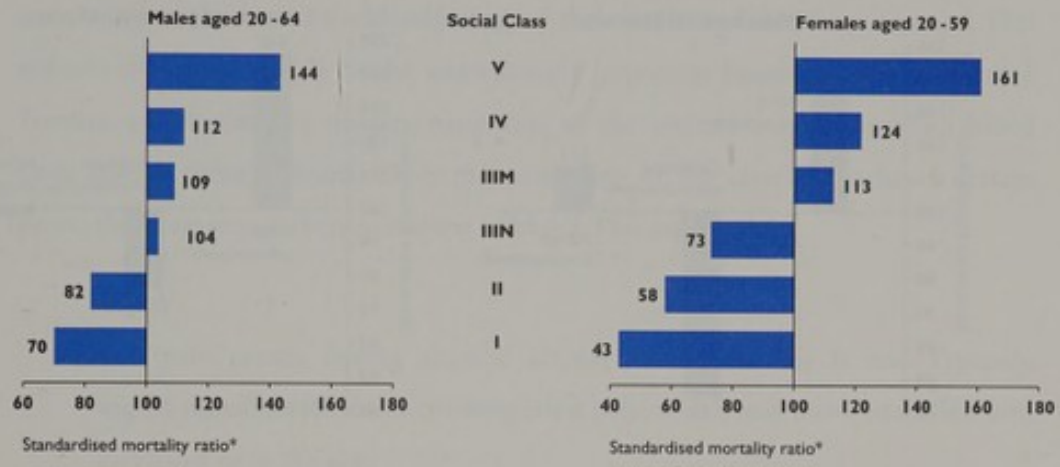
***Rates calculated using the European Standard Population**

Source: OPCS DH5 No 17; Registrar General's Offices of Scotland and N. Ireland

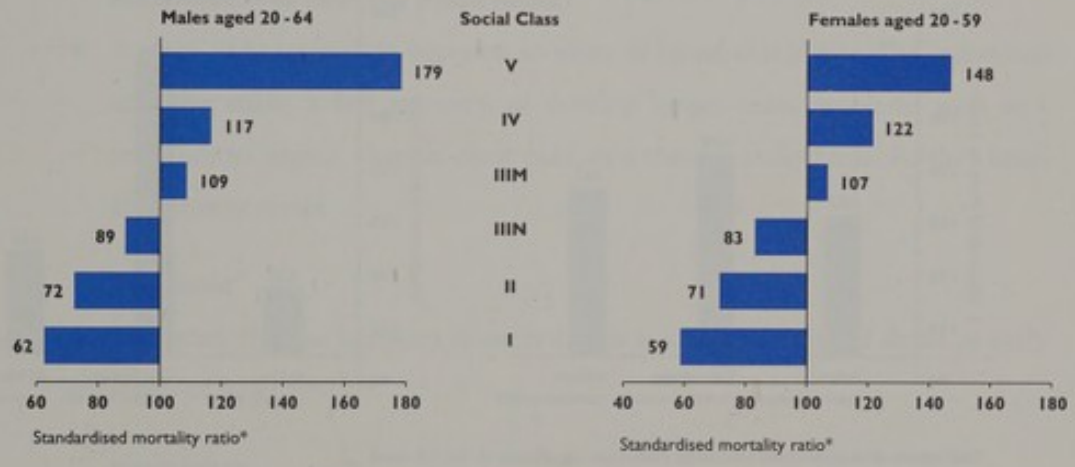
Variations in Deaths by Social Class and Sex, Great Britain 1979 - 83

Figure 3

Coronary Heart Disease



Stroke



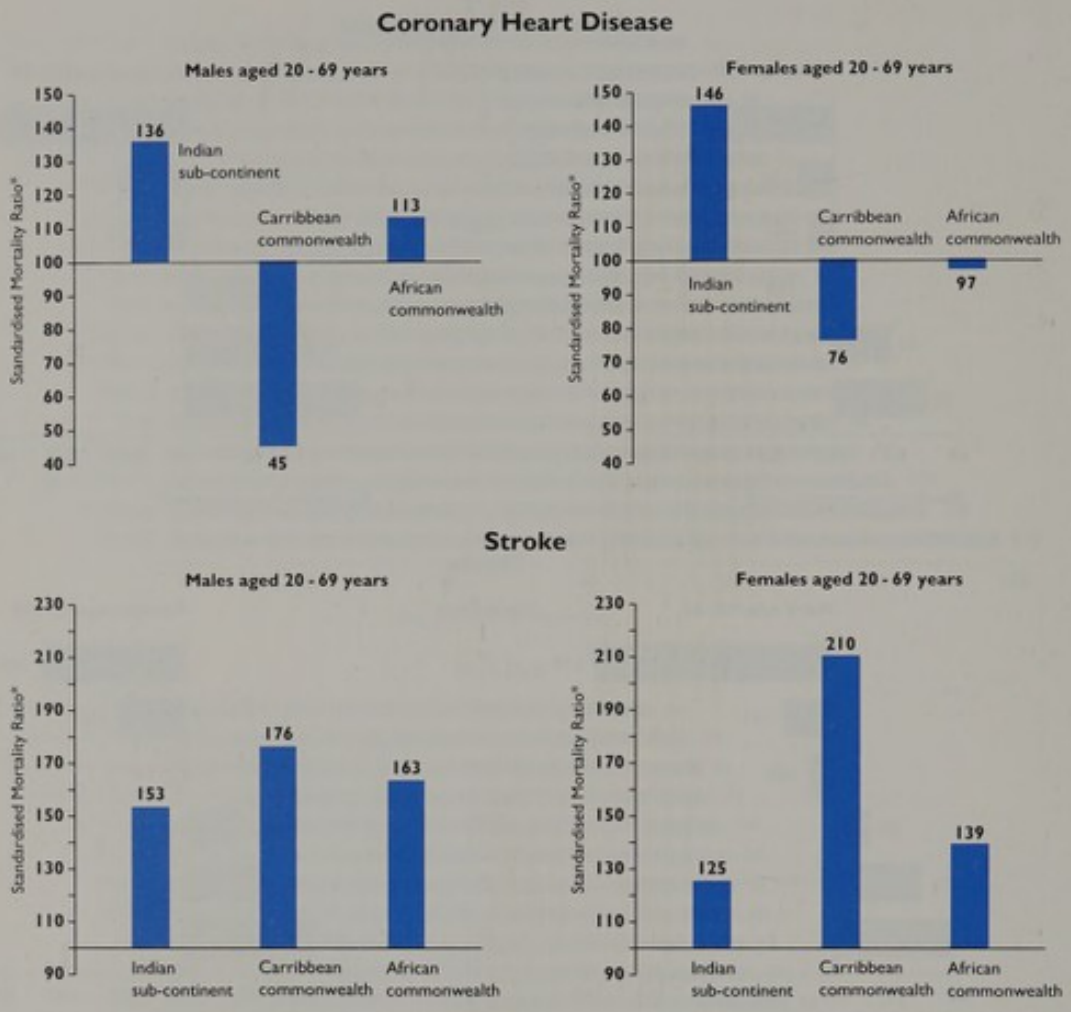
***All values of standardised mortality ratios are significant at the 1% level**

(Note: The standardised mortality ratio is an index which allows for differences in age structure. Values above 100 indicate higher mortality than the average for the population; and values below 100 indicate lower mortality.)

Source: OPCS Series DS No 6 (CHD ICD 410:414 & Stroke ICD 430:438)

Variations in Deaths by Ethnic Origin and Sex
England and Wales 1979 - 83

Figure 4



***All values of standardised mortality ratios are significant at the 1% level**

Source: R Balarajan, British Medical Journal (1991), **302** 560-4

WHAT ARE THE DISEASES?

Coronary Heart Disease

2.5 The heart is supplied with blood via the coronary arteries. CHD is caused by the narrowing of the arteries and stiffening of their walls by hard, fatty deposits. This reduces the blood supply to the heart muscle (a process known as atherosclerosis). Further, and sometimes sudden, narrowing of the arteries may occur when blood clots around these deposits. Once the narrowing of the arteries reaches a certain point, the heart muscle becomes short of blood. This may lead to:

Angina

- This pain occurs during physical activity and sometimes at rest. Typically, angina manifests itself as a crushing chest pain, which may move to the left arm and hand, or to the jaw.

Acute Myocardial Infarction (Heart Attack)

- A piece of heart muscle becomes so short of blood that it dies. The individual may die, make a full recovery, or develop longer term problems such as a tendency to angina, chronic chest pain, or a chronic arrhythmia. Further heart attacks may occur.

Arrhythmia

- The heart rhythm becomes disturbed. It is a common cause of death in early stages of heart attack.

Heart failure

- The heart fails to pump as well as it should. It can occur suddenly, or be a long term problem.

2.6 The underlying process leading to narrowing of the coronary arteries begins in childhood. The disease itself does not usually become apparent until middle age, by which time 25% of men show some evidence of heart disease and one in five of this group is severely affected.

Stroke

2.7 Stroke is a generic term used to describe the result of disturbance to brain function caused either by inadequate blood supply (cerebral infarction), or by direct damage caused by bleeding into brain tissue (cerebral haemorrhage). Stroke can lead to death, or to varying degrees of impairment and disability.

2.8 Twenty per cent of patients having a first stroke will have had a prior transient ischaemic attack (TIA). This is a temporary interruption of the blood supply of the brain which results in symptoms lasting less than 24 hours. The risk of a stroke in the first year after a TIA is 12%.

WHAT ARE THE RISK FACTORS?

2.9 Effective programmes that tackle the risk factors for CHD will also encompass the risk factors for stroke. The four major risk factors are:

Smoking

- A risk factor for both CHD and stroke, and estimated to account for up to 18% of CHD deaths and up to 11% of stroke deaths. For those who smoke, stopping smoking is the single most effective means of reducing risk for CHD.

Raised blood pressure (Hypertension)

- A risk factor for both CHD and stroke. Controlling hypertension is the single most effective means of reducing the risk of stroke. Other factors such as excess alcohol consumption, obesity and excess salt contribute to hypertension.

Raised plasma cholesterol

- The level of plasma cholesterol is a major determinant of CHD risk and is itself related to the amount of fat in the diet. The average plasma cholesterol level in England is high on the international scale. Most people at risk have plasma cholesterol levels that are either mildly elevated or moderately elevated and only a minority have very high levels. (See Appendix B for further details).

Inadequate physical activity

- A direct risk factor for CHD. It also contributes to obesity and hypertension, and therefore to the risk of stroke. Regular physical activity promotes a lower heart rate, and lowers blood pressure, which means that the heart works less hard for a given level of activity. Regular physical activity also improves the profile of plasma lipids, (see Appendices B and C) and total plasma cholesterol levels may be reduced.

CONTRIBUTORY RISK FACTORS

2.10 The following contribute to the major risk factors:

Excessive alcohol consumption

- Sustained drinking (in excess of 21 units per week in men and 14 units per week in women) increases the risk of raised blood pressure and so contributes towards stroke and possibly CHD. It can also contribute to obesity.

Obesity

- Obesity is associated with raised blood pressure and raised plasma cholesterol and present in 8% of adult men and 12% of adult women. It results from taking in more calories (in food and drink) than are used up in physical activity. Obesity is less likely to occur from a diet lower in fat and richer in starchy foods. The level of physical activity is key in preventing and managing obesity.

Salt Intake

- The level of salt intake in a population is directly related to the average level of blood pressure. The average salt intake in adults in England is far in excess of requirements.

Diabetes

- Diabetes increases the risk of CHD and stroke, probably by a factor of two to four fold. The risk of developing diabetes is less in those who do not smoke and follow a healthy diet.

FIXED RISK FACTORS

2.11 Although these cannot be altered they contribute to overall CHD risk. They are male sex, increasing age and a strong family history of CHD.

MULTIPLE RISK FACTORS

2.12 Risk factors interact, and the effect of two or more risk factors is greater than the addition of their individual risks.

CHAPTER 3

WHAT ARE WE TRYING TO ACHIEVE?

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TARGETS FOR HEALTH

3.1 The strategic aims of the Health of the Nation White Paper in this Key Area are set out in terms of targets for reduction both in risk factors and in mortality. Targets are important for stimulating change, gaining commitment and monitoring progress. The main Health of the Nation targets for CHD and stroke are shown in the box below; risk factor targets are shown in the following box. Further smoking targets are shown in the Key Area handbook "Cancers".

HEALTH OF THE NATION MAIN TARGETS

A. To reduce death rates for both CHD and stroke in people under 65 by at least 40% by the year 2000 (from 58 per 100,000 population in 1990 to no more than 35 per 100,000 for CHD, and from 12.5 per 100,000 population in 1990 to no more than 7.5 per 100,000 for stroke).

B. To reduce the death rate for CHD in people aged 65 to 74 by at least 30% by the year 2000 (from 899 per 100,000 population in 1990 to no more than 629 per 100,000).

C. To reduce the death rate for stroke in people aged 65 to 74 by at least 40% by the year 2000 (from 265 per 100,000 population in 1990 to no more than 159 per 100,000).

HEALTH OF THE NATION RISK FACTOR TARGETS

- *Smoking*

D. To reduce the prevalence of cigarette smoking in men and women aged 16 or over to no more than 20% by the year 2000 (a reduction of at least 35% in men and 29% in women, from a prevalence in 1990 of 31% and 28% respectively).

- *Diet and Nutrition*

E. To reduce the average percentage of food energy derived by the population from saturated fatty acids by at least 35% by 2005 (from 17% in 1990 to no more than 11%).

F. To reduce the average percentage of food energy derived by the population from total fat by at least 12% by 2005 (from about 40% in 1990 to no more than 35%).

- *Obesity*

G. To reduce the percentage of men and women aged 16-64 who are obese by at least 25% for men and at least 33% for women by 2005 (from 8% for men and 12% for women in 1986/87 to no more than 6% and 8% respectively). NB Obesity is defined as a Body Mass Index of 30+ (Weight in kilogrammes divided by square of the height in metres.)

- *Blood Pressure*

H. To reduce mean systolic blood pressure in the adult population by at least 5mm Hg by 2005.

- *Alcohol*

I. To reduce the proportion of men drinking more than 21 units of alcohol per week from 28% in 1990 to 18% by 2005, and the proportion of women drinking more than 14 units of alcohol per week from 11% in 1990 to 7% by 2005.

3.2 The Department of Health published a Specification of National Indicators at the end of 1992, which will be used centrally to assist with monitoring progress towards the main and risk factor targets, and which will also be relevant to monitoring at the local level.

3.3 As managers plan a comprehensive local programme of health promotion, prevention, cure and care they will need to consider:

- the national Health of the Nation targets
- the challenge presented by the local burden of disease from CHD and stroke (see 3.4)
- the need to arrive at local targets (see 3.7)
- the monitoring methods available, and planned, to keep track of progress (see 3.12 and Chapter 9).

Some progress towards mortality targets will be made in the short term from acute treatment interventions, but in order to achieve long term mortality improvements, the NHS and healthy alliance partners have to address prevention, and the promotion of health-enhancing behaviour. In the short term, these preventive actions are intended to achieve improvements in the levels of risk factors.

THE LOCAL BURDEN OF DISEASE

3.4 The examples below show the burden of CHD and stroke on a hypothetical purchasing authority.

CHD

In a hypothetical population of 500,000 with average risk and mortality rates, 244 people under 65 years of age and 389 people between the ages of 65 and 74 die each year from CHD.

In total, at least 1,275 people in all age groups suffer a heart attack each year.

In addition, at least 1,750 people in all age groups are suffering from angina in any given year. These figures do not represent the full picture since CHD can develop without symptoms until causing heart attack or sudden death

Stroke

In a hypothetical population of 500,000 with average mortality rates, 53 people under 65 years of age and 114 people between the ages of 65 and 74 die each year from stroke.

In total around 1,200 people in all age groups suffer a stroke each year. Of these around 240 die within a month.

There are around 3,000 people who have had strokes at any one time, of whom half are significantly disabled.

LOCAL TARGET SETTINGS

3.5 Managers in purchasing authorities should agree realistic but challenging targets which take account of the local situation and also contribute to the Health of the Nation targets.

3.6 Managers need to ask the following questions when setting local targets, in order to understand the potential for improvement:

- **Where are we now?**

  Managers should consider baseline data on mortality and risk factors. An average over several years may give the most representative picture. Director of Public Health reports will generally provide this, together with, in some cases, morbidity data. Levels of risk factors may be available from local surveys, otherwise assumptions can be based on data from other comparable purchasing authorities or from national surveys.

- **Why are we different?**

  Managers will want to examine the local social class, ethnicity and other characteristics of the population. How much of the observed local differences can be accounted for in this way?

- **Where are we going?**

  Managers may wish to examine trends in risk factors and mortality. What are the trends (allowing for more uncertainty if the numbers are small) in the various subgroups of the population, for example men, women, specific age groups, social classes and ethnic groups? What is known about the likely impact of treatment interventions?

SETTING LOCAL HEALTH OF THE NATION TARGETS

3.7 Regions and purchasers are becoming increasingly involved in discussing, negotiating, matching and reconciling proposals for achieving national and local targets.

3.8 Discussion and agreement of both Health of the Nation principles, and national and local targets, in local alliances for health, will be important to achieve common ownership of targets.

3.9 When managers are considering additional local targets, they may initially wish to limit their number. It is probably most realistic to try to achieve early success in one or two local targets, in the context of the longer term strategy.

3.10 Although there have been reductions in CHD mortality since the 1970s, variation in mortality rates has increased; mortality has fallen faster in social class I than in the other social classes.

3.11 Local strategies must avoid increasing these variations, which could occur by concentrating solely on those groups where improvements are most easily achieved. Managers will wish to take steps to avoid this problem when local targets are set and local programmes designed.

INDICATORS OF PROGRESS

3.12 Monitoring of progress towards meeting targets will be important. Managers will wish to ensure that they make use of available indicators, both of health improvement and of activities that contribute to Health of the Nation targets.

3.13 At purchaser level, progress towards local targets will often be measured using data based on small numbers. It will take time to demonstrate reliably that progress, in both risk factor and mortality terms, is being made.

CHAPTER 4

THE INTERVENTIONS

THE INTERVENTIONS

4.1 Targets for improvements in health provide a framework for the development of strategies for better health. The interventions described in this chapter will form the major elements in such a strategy. The chapter describes some of the options available for health promotion and for treatment of people with recognised disease.

HEALTH PROMOTION

4.2. Health promotion aims to encourage and support individuals and communities to help themselves to improve health and prevent illness by changing to healthier lifestyles.

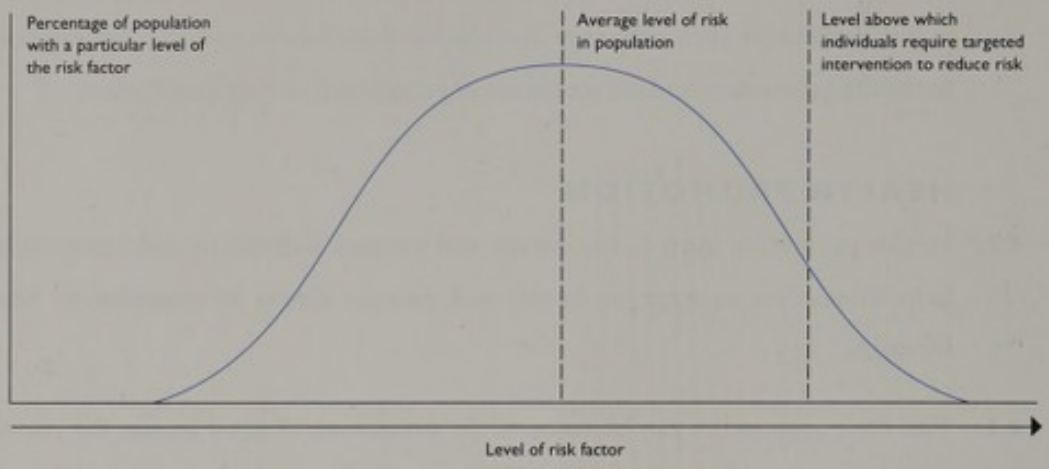
4.3 Two basic approaches can be taken to the promotion of good health, the population approach and the high risk approach. The most effective programme combines both approaches.

INFLUENCING WHOLE POPULATIONS

4.4 A population approach entails achieving change across an entire population. It aims to reduce average levels of risk factors in the population. This is appropriate when a risk factor is so common in a population that most people could benefit from a reduction in the risk factor.

4.5 In more detail (see Figure 5) the levels of some risk factors for CHD and stroke in the population (for example cholesterol and blood pressure) follow a smooth curve rather like that shown. The population approach aims to reduce the average level of the risk factor, by shifting everyone to the left, ie towards safer levels. This will be particularly valuable where most people in the population have a level of the risk factor in question that is higher than desirable, so that most will benefit from a reduction.

Population risk curve *Figure 5*



4.6 Examples of the population approach:

- most people eat too much saturated fat. This can lead to a higher than desirable level of plasma cholesterol; some initiatives to promote healthy diets can therefore be aimed at the whole community.
- reducing average blood pressure as a result of success in meeting the obesity and alcohol targets and a reduction in salt intake.

4.7 Because many aspects of environmental change and health education are outside the direct control of NHS managers, alliances for health are central to any effective means of reaching the whole population. Further information on alliances for health will be found in Chapter 5.

INFLUENCING THOSE AT HIGH RISK

4.8 The high risk approach entails identifying individuals at particular risk of developing the disease, and aiming a message or intervention at them. These are the group that lie above a certain threshold value on the population curve for levels of the risk factor (see Figure 5). For example:

- Primary health care teams might contact a defined group of the population, perhaps those with a strong family history of CHD, and ask individuals to attend their GP practice or hospital for a specific check-up.

- Opportunistic case finding identifies high-risk individuals during the course of any visit to medical care or within other settings such as school or work.

4.9 General practices have made major progress in organising preventive programmes aimed at CHD and stroke including the detection and management of high risk patients. The recent revision of the GP contract in respect of health promotion provides clear incentives to practices to do this.

4.10 Once risk factors are identified, it is important that there is appropriate advice and follow up available. Risk factors that need modification occur in those with no symptoms (and also those with no disease yet) as well as in people with recognised or established disease.

HEALTH PROMOTION INTERVENTIONS

4.11 The population and high risk approaches can be applied to CHD and stroke risk, and associated risk factors, as follows:

Smoking (discussed in detail in Appendix A)

4.12 Health promotion has two main aims: preventing people starting smoking and encouraging smokers to stop. Approaches include:

- educational use of the media; ensuring smoke-free work places and public areas; and encouraging enforcement of legislation concerning sale of tobacco to children
- identifying smokers and providing appropriate advice and support, particularly by primary health care teams.

Promoting healthy eating

4.13 This is an area in which the population and high risk approaches may be used together for maximum effect:

- The Health of the Nation targets imply a major change in most people's eating habits. An effective shift in dietary patterns requires action across the whole range of people's meals, from the work place and school to home.

The principles of the advice applicable to almost everybody are to eat:

- more starchy foods (potatoes, pasta, rice and bread)
- more vegetables and fruit
- less fatty and sugary foods
- less added salt.

- Achieving this change depends on provision of information on nutrition – in the school curriculum, the work place, in primary health care, the media; and making healthy choices easier through coordinated action in food provision in:
  - schools, for example, school meals, tuck shops
  - the workplace, for example, canteens, staff restaurants
  - high street caterers and retailers
  - hospitals
  - local authority premises
  - prisons.
- In addition to changing average cholesterol levels by a population change in eating habits, a high risk approach for people with raised cholesterol levels is advised:
  - measuring plasma cholesterol levels of individuals identified as falling within a high-risk priority group (see Appendix B)
  - treating initially with diet and where appropriate with drugs.

Promoting sensible drinking

4.14 Health promotion campaigns should be aimed at the total population to ensure full knowledge of both the recommended sensible drinking guidelines and the unit system for calculating consumption. More specific targeting should be considered for those drinking above the recommended sensible drinking guidelines. Alcohol retail outlets should publicise health promotional material containing information on sensible drinking guidelines and on unit information.

4.15 Changes in the health promotion arrangements in the GP contract will encourage primary health care teams to enquire regularly about levels of alcohol consumption and to quantify the actual level. Interventions aimed at encouraging reduction in levels of consumption should be targeted at those drinking above the sensible drinking guidelines.

Inadequate physical activity (see Appendix C for further information)

4.16 As stated in the Health of the Nation White Paper, targets for this risk factor have not yet been set. However, a task force is being set up to advise on this issue. The findings of the Allied Dunbar National Fitness Survey will form the basis for discussion and provide baseline statistics from which targets can be set. A current guideline from the Health Education Authority and Sports Council for the amount of physical activity needed to maximise health benefits is:

- "Exercise regularly for a minimum of three times a week and for at least twenty minutes per occasion but building up to this gradually".

4.17 The physical activity needed to achieve health benefits may not have to be vigorous, particularly for the more inactive or elderly where more moderate activity levels than specified above may well be sufficient. Most adults and children in England would benefit from increasing their current levels.

4.18 Tackling inadequate physical activity, as with other risk factors for CHD and stroke, cannot be achieved by purchasing authorities alone. There are a range of possible interventions, and many of these need the development of alliances for health with other organisations. However, health authorities, as employers, can also initiate changes within their own organisations.

High blood pressure

4.19 Initiatives to control raised blood pressure include:

- programmes promoting a mix of healthy eating and physical activity such as the Look After Your Heart campaign
- programmes promoting sensible drinking such as the Drinkwise campaign
- reducing obesity through healthy nutrition and physical activity programmes
- improvement of existing services for screening, surveillance and treatment of raised blood pressure.

TREATMENT AND REHABILITATION

4.20 The Health of the Nation initiative focuses on the prevention of disease and the promotion of good health, and also seeks to promote improved treatment and rehabilitation for CHD and stroke. Working to ensure efficient and effective treatment of established disease will make a major contribution to national and local mortality targets, and to morbidity and the quality of life for people with CHD and stroke.

4.21 Treatments vary in their effectiveness, and increasingly information is being collected about the effectiveness and cost-effectiveness of treatments. The Department of Health has now set up an Outcomes Clearing House, a Central Health Outcomes Unit, an Effective Health Care Bulletin Series, and an Epidemiologically Based Needs Assessment series, in order to promote understanding and disseminate knowledge on these subjects. The Needs Assessment series document on stroke was published in 1992 and one on CHD will be published shortly. Effectiveness and cost effectiveness are becoming vital issues for managers to be aware of at purchaser and provider level (see references 14, 32, 47, 51, 53 in Appendix D) and are issues on which the Department of Health is working to produce further guidance.

4.22 Managers will need to make decisions about which treatment intervention is most appropriate in a particular case. These choices should be based on whatever data is available about the effectiveness of each intervention.

CHD

4.23 Health care services will contribute towards the CHD mortality target for example by:

- increasing levels of basic resuscitation skills amongst health care professionals and the general public (see example)
- increased capacity for resuscitation of people with cardiac arrest by specially trained ambulance crew (paramedics)
- using thrombolytic drugs (These drugs act by dissolving the blood clots in the coronary artery. They have to be given early, preferably within three or four hours after the onset of symptoms. There is conclusive evidence of benefit, in certain people, if used up to 12 hours afterwards).

- preventing the recurrence of heart attacks by controlling risk factors through encouraging people who have had heart attacks to give up smoking, adopt a healthier diet and become physically more active
- preventing the recurrence of heart attacks by drugs such as beta-blockers and aspirin
- ensuring the optimum drug treatment of angina (for example, providing aspirin for all suitable patients, especially those with unstable angina)
- the surgical treatment of angina with coronary artery bypass grafting (CABG) which involves the bypass of a blocked artery using a blood vessel from elsewhere in the body
- the treatment of angina with angioplasty. This involves passing a balloon catheter through a blockage in the coronary artery and inflating it to widen the artery.

(Research is currently under way to establish the most appropriate use of CABG and angioplasty in people with angina.)

Cardio - Pulmonary resuscitation training

A DHA/FHSA joint-funded District Cardio-Pulmonary Resuscitation Training Officer has been employed to train hospital staff, GPs, dentists and their staff in basic resuscitation techniques. Future plans include training of the general public. Contact: Carolyn Williams, District Resuscitation Training Officer, Bury General Hospital, Walmersley Road, Bury, BL9 6PG. Tel: 061-705 3315.

4.24 There are a number of other problems caused by CHD such as arrhythmia (disturbance in heart rhythm) and heart failure for which effective treatments exist.

4.25 Most people with CHD may benefit from a formal rehabilitation programme which may also reduce mortality in some people.

Stroke

4.26 Health care services can contribute towards the stroke mortality target by:

- intervention in people with TIAs and minor strokes to prevent progression to a major disabling stroke, by the use of drugs such as aspirin and surgical treatments such as carotid endarterectomy
- provision of high quality multidisciplinary care during the acute phase of a stroke
- provision of an appropriate range of assessment and services during the rehabilitation phase.

CHAPTER 5

ALLIANCES FOR HEALTH

ALLIANCES FOR HEALTH

5.1 Tackling the problems of CHD and stroke cannot be done by purchasing authorities alone. There is a wide range of organisations that need to be involved in the process, including agencies outside the NHS. Indeed, managers will be aware that successful alliances can be initiated by agencies other than purchasing authorities.

WHY DO IT?

5.2 Alliances for health between purchasing authorities and other organisations offer significant advantages.

- They enable purchasing authorities to take forward the Health of the Nation targets both through direct action and by facilitating and co-ordinating action by others.
- They allow purchasing authorities to work beyond traditional service boundaries.
- Alliances can increase agencies' knowledge and understanding of one another. This helps to eliminate service discontinuities and to avoid duplication of services and effort.
- Joint planning can ensure that the most appropriate contribution is made by each partner, ensuring the most effective use of scarce resources: knowledge, information, skills and finance.

GENERAL PRINCIPLES

5.3 An alliance can be:

- a partnership of organisations and/or individuals to enable people to maintain and improve their health and well being
- any arrangement for joint working, collaboration or co-operation between purchasing authorities and other agencies.

5.4 Inter-sectoral collaboration works best in small groups with common agreed objectives – a large group with representatives of all key players is not likely to work well as members will have little in common overall and find it unrewarding to contribute. The development of these shared objectives within an alliance will be particularly important, to ensure that all managers are fully committed.

POTENTIAL ALLIANCE PARTNERS

5.5 Health Authorities and NHS Providers:

- Health care purchasers and providers can include promoting positive health in service contracts (see Chapter 8 for further information).
- FHSAs can share baseline and activity data, offer education and training opportunities to GPs and primary health care teams and facilitate and encourage GPs', dentists' and pharmacists' health promotion activities.
- CHCs represent patients' interests.
- Health professionals can provide specialist skills, information and advice:
  - consultants
  - GPs
  - practice nurses
  - practice facilitators
  - midwives
  - health visitors
  - information specialists
  - speech and language therapists
  - physiotherapists
  - occupational therapists
  - dieticians
  - local health promotion specialists
  - RHA staff, such as Look After Your Heart and Healthy Workplace Officers
- Health authorities as employers should lead on healthy workplace initiatives including local smoking, alcohol and healthy eating policies.

5.6 Local Authorities:

- Possibilities for sharing baseline and activity information
- Promoting the role of the local authority in healthy workplace initiatives
- Enforcement of legislation on the sale of tobacco to children
- Provision of appropriate anti-smoking advice to children in care
- Promotion of Heartbeat awards to retail outlets
- Development of physical activity policies
- Community support services – home care, access to leisure centres, day centres, housing adaptations
- Work with local education departments to support health education (including nutrition) in the core curriculum
- Emphasis on healthy food choices in school tuck shops as well as school meals
- Development of healthy workplace initiatives and local smoking, alcohol and nutrition policies
- Promoting accessibility to cheap fresh foods.

5.7 Employers:

- Encouragement of healthy workplace initiatives, for example workplace alcohol policies, providing no smoking areas, healthy food choices in staff restaurants and exercise facilities available
- Participation in Look After Your Heart scheme.

5.8 Voluntary and Private Sector:

- Local community groups may have access to harder-to-reach "at risk" groups for example in ethnic communities
- Some voluntary bodies concentrate on rehabilitation of CHD and stroke patients
- Long-stay care for stroke patients is provided by some voluntary and private homes
- Local Councils on Alcohol can make a contribution
- Local information providers such as Citizens Advice Bureaux or disability resource centres provide valuable information and counselling services for people with lasting disability or impairment.

5.9 Industry and Retailers:

- Possible source of baseline data on sales of food and sports goods
- Source of data on costs of healthy food choices
- Can provide health information at point of sale, including information about units of alcohol
- Can promote healthy food choices.

5.10 Local Media:

- For coverage of campaigns and initiatives mounted locally
- Effective use of ethnic minority press and radio.

5.11 Health Education Authority:

- Various CHD prevention programmes, including Look After Your Heart, Drinkwise, National No Smoking Day, Enjoy Healthy Eating Campaign
- Provision of leaflets, posters, national campaigns, guidance on good practice, etc. – full details from Regional "Look After Your Heart" officers

- Advice on specific black and ethnic minority campaigns
- Advice on diet and nutrition for black and ethnic minority groups.

HA/Voluntary body

A cardiac rehabilitation programme in Russel's Hall Hospital, Dudley, has been set up by Action Heart. Contact: Russ Tipson, Action Heart, Wellesley House, 117 Wellington Road, Dudley, West Midlands, DY1 1UB. Tel: 0384-230222/230601.

The Stroke Association in over a hundred authorities runs a volunteer stroke service which gives help and support to those left with speech and communication problems after a stroke. A recent initiative aims to provide a visiting service to those affected by stroke soon after the onset of the illness and to review progress at intervals thereafter. Contact: The Stroke Association, CHSA House, Whitecross Street, London, EC1Y 8JJ. Tel: 071-490 7999.

HA/School/Workplace/GP

Pupils from a school in Southampton surveyed risk factors in a workplace setting and gave health education messages to employees. Contact: Sue Lopez, PE Department, The Applemore School, Roman Road, Dibden Purlieu, Southampton, SO4 5RQ. Tel: 0703 848804.

LA Recreation Department/GP/FHSA/Community Health

Hailsham GPs have been referring patients to a leisure centre for physical activity programme. Community health workers are using the leisure environment to develop their programmes. Contact: Mike Osbourne, Oasis Project, Lagoon Leisure Centre, Vicarage Lane, Hailsham, E. Sussex. Tel: 0323-846755.

HEA/HA/Local Community

The Bolton Food Co-operative have organised a healthy food programme to make healthy choices available to housing estate residents. Contact: Lynda Mason, Regional LAYH Officer, North Western RHA, Gateway House, Piccadilly South, Manchester, M60 7LP. Tel: 061-236 9456.

DHA/LA/FHSA

In Bradford the DHA, LA, and FHSA have developed a joint heart health strategy known as "HEARTSMART – a campaign to promote heart health". A holistic approach is taken aiming to achieve a high media profile and community involvement. The latest initiative is a community grant scheme to fund projects designed and managed by community groups. Future proposals include a formal evaluation of work, a smoking campaign and a heart health worker in the Bangladeshi community. Contact: Neville Roland, Health Strategy Manager, Housing and Environmental Protection, City of Bradford Metropolitan Council, Central House, Forster Square, Bradford, BD1 1DJ. Tel: 0274-754480.

Inter-agency initiatives

East Cumbria Health Authority have produced exercise policy guidelines, setting out aims and objectives, implementation through collaborative and inter-agency working, target and priority groups with arrangements for evaluation. Contact: Joan Lancaster, Health Promotion Manager, Health Development Unit, East Cumbria Health Authority, 11 Portland Square, Carlise, CA1 1PY Tel: 0228-515034.

Yorkshire Heartbeat is a regional coronary heart disease prevention programme launched in September 1988 and initially funded for five years. It aims to reduce premature death from coronary heart disease by raising awareness and promoting healthier lifestyles in smoking, diet and exercise, working with such diverse agencies as primary health care teams, schools and pubs. It also embraces the LAYH programme and works primarily through a network of healthy alliances, seeking to support and stimulate activity at a local level.

Contact: Tony Goodall, Yorkshire Heartbeat Co-ordinator, Yorkshire Regional Health Authority, The Queen Building, Park Parade, Harrogate, HG1 5AH. Tel: 0423 500066. Ext. 2428.

CHARACTERISTICS OF SUCCESSFUL ALLIANCES

5.12 Creating successful alliances can be difficult – each organisation has its own history, culture and priorities. However, certain characteristics seem to be common. These characteristics include:

- Commitment to the alliance on the part of the Chief Officers
- Working to common, agreed objectives
- Flexibility
- Dynamism
- Willingness to share (for example: information, resources, skills)
- Openness to change
- Personal commitment
- Good personal relationships
- A willingness to blur traditional managerial boundaries of responsibility.

CHECKLIST FOR ACTION

5.13 Top level support is vital for intersectoral work to succeed. Commitment from Chief Officers in all agencies is crucial, as are arrangements for reporting back to them.

5.14 A named senior contact, responsible for taking the lead, should be identified in each agency.

5.15 Building healthy alliances is time-consuming and needs patience. Many purchasing authorities will already have alliances in place (though not necessarily specifically for CHD and stroke) and where these exist they should be developed rather than starting afresh.

5.16 Where no suitable alliance is in place then a "health audit" of existing CHD and stroke prevention activity could be a useful starting point, to identify local players and gaps in local activity. The result of such an audit could be used as the focus of a one day seminar to raise the profile of CHD and stroke prevention and bring together relevant parties to develop a local strategy.

5.17 Alliances should have agreed terms of reference, aims, reporting mechanisms and accountability. Agreement will also be needed on the roles of key players, and where appropriate, on finance, for example the use of joint funding.

CHAPTER 6

PURCHASING FOR HEALTH PROMOTION

PURCHASING FOR HEALTH PROMOTION

6.1 CHD and stroke are potentially preventable in many people because lifestyles can be influenced to reduce the risk factors involved. This can be done at the primary care level as described in Chapter 7.

HEALTH PROMOTION IN THE PURCHASING PROCESS

6.2 Managers in purchasing authorities can assist by including health promotion in the purchasing process, as they negotiate with health promotion centres and providers of secondary and community care. This can be done in three ways:

- by contracting for health promotion specialist support services
- by including health promotion principles and policies in the generic section of each provider unit specification and contract
- by including specific health promotion requirements within each service contract.

Health promotion in the purchasing process

Southampton and SW Hampshire Health Authority have produced guidance on health promotion and disease prevention aspects of service agreements/ contracts/business plans. Contact: Mrs Pat Christmas, Assistant Director of Public Health, Southampton and SW Hampshire HA, Western Hospital, Oakley Road, Millbrook, Southampton, SO9 4WQ. Tel: 0703-780911.

6.3 Providers should be encouraged to create a "healthy workplace" for CHD and stroke by adopting and implementing (to a standard approved by the purchaser) policies for:

- smoking (see Appendix A)
- healthy eating
- alcohol
- physical activity.

Health at work in the NHS

The Health of the Nation White Paper contained an undertaking by the NHS Management Executive to examine how best the concept of health promoting hospitals can be developed and taken forward from the point of view of patients, public and staff. A starter pack " Health at work in the NHS" was distributed to NHS managers in September, and a series of regional workshops have been held to enable managers to formulate action plans appropriate to the workplaces for which they are accountable. Further guidance on this initiative will be issued from time to time, and managers will need to take account of their role as employers in implementing local strategies.

6.4 Each provider may wish to identify a named lead individual as responsible for the implementation of each of these policies.

SERVICE CONTRACTS

6.5 The specification for services for people with established CHD or stroke may address health promotion issues (as described in Chapter 8) but managers can extend these principles to contracts for other services:

- Cardiology: All patients could be provided with understandable and culturally sensitive advice on risk factor reduction, and referred on discharge for appropriate help with, for example, smoking, alcohol related problems and healthy diet. (This requires that dietetic expertise to be available as necessary)
- General medicine: Patients with diabetes, high blood pressure or raised plasma cholesterol could be provided with specific understandable and culturally sensitive guidance. Such material may be particularly valuable for patients from black and minority ethnic groups. This guidance could cover, for example, controlling their condition and reducing other risk factors, particularly smoking, and increasing their awareness of the significance of TIAs

- Antenatal care: All expectant mothers could be offered advice on healthy eating, alcohol consumption and, for those who are smokers, advice and support to help them stop smoking
- A cardiac discharge and rehabilitation programme, including primary care input, could be agreed and applied
- Partners/relatives of heart attack patients could be offered training in cardio-pulmonary resuscitation and advice on a healthy lifestyle
- All in-patient records could include details of smoking and alcohol history, height, weight, blood pressure and physical activity status
- All relevant staff could receive appropriate training in the principles and practice of health promotion
- The catering specification for all meals offered in the hospital should be based on the local diet and health policy.

SPECIALIST HEALTH PROMOTION SERVICES

6.6 These are a key resource and managers may wish to ensure that they purchase sufficient specialist health promotion services to support health care workers (including primary care) in health promotion work and to liaise with other agencies in alliances for health. For instance:

- training in the principles and practice of health promotion as applied to their specific area
- provision of resource materials – leaflets, posters etc.
- provision of advice and support to health care staff including help with the development of health promotion guidelines
- co-ordination with other relevant health promotion bodies for example the Health Education Authority, Action on Smoking and Health (ASH)
- management of existing initiatives, for example, "Look after Yourself" classes, "Look after Your Heart" programmes.

6.7 Health promotion services could identify a named individual responsible for coordinating initiatives in health promotion in this Key Area.

CHAPTER 7

PRIMARY CARE

PRIMARY CARE

THE ROLE OF PURCHASING AUTHORITIES

7.1. Effective health promotion in primary care requires a cultural shift by some primary health care teams (PHCTs) towards care for practice populations in addition to care for the individual and families. Managers in purchasing authorities should discuss with GPs locally how such a shift might be facilitated. Managers need to bear in mind that:

- Cultures change over years, not overnight
- Successful change takes place when the starting point is from where practices and their staff are, not from where authorities would like them to be.

7.2 Purchasing authorities should consider purchasing a full range of preventive as well as treatment services and using resources to supplement PHCT activities. More information can be found about this in Chapter 6.

HEALTH PROMOTION ARRANGEMENTS FOR GENERAL PRACTICE

7.3 The recently agreed health promotion arrangements for general practice focus on smoking, CHD and stroke. Practices will have the option to participate in systematic programmes of health promotion relating to smoking, CHD and stroke which include:

- the identification of individuals within the practice population likely to benefit from health promotion (see examples at the end of this chapter)
- the recording of relevant information in a data retrieval system
- appropriate health promotion measures
- basic audit and evaluation of the programme.

7.4 The joint GMSC/RCGP/DH publication "Better Living – Better Life" is a practical and useful resource book, which will be issued to all GP practices and health authorities in early 1993.

7.5 "Better Living – Better Life" looks in detail at CHD and stroke prevention through:

- smoking cessation
- encouraging physical activity
- healthy eating and drinking.

Each of these topics has a concise summary and section on:

- practical assessment and interventions
- scientific background
- support and available material.

7.6 Managers should ensure high standards of follow up and treatment of raised blood pressure since these are two important interventions to prevent stroke. (See references 16, 38, 48 in Appendix D.)

7.7 Offering a range of facilitator services is important to the development of health promotion in general practice. This could typically include support to practices in organising health promotion programmes, through primary health care facilitators.

National Facilitator Development Project

The National Facilitator Development Project provides a central resource and support for primary care facilitators. These health professionals are generally nurses who have a primary care background. They have an authority-wide brief to act as catalysts and resource agents to PHCTs. This help may include:

- professional development and training of practice nurses
- support and organisation of multidisciplinary teamwork and audit assistance for assessing health promotion
- development of opportunistic screening programmes for information on local provision.

Contact: Elaine Fullard, HEA, Primary Health Care Unit, Churchill Hospital, Oxford, OX3 7LJ. Tel: 0865-226052/53/61.

Local organising teams

The Health Education Authority supports over 100 local organising teams (LOTs) consisting of representatives from FHSAs, community units, DHAs, Regions, and General Practice. LOTs receive training, support and consultancy so that they in turn will be able to provide two day residential PHC workshops to develop team work and health promotion activities. Contact: Susan Gooding, HEA Primary Health Care Unit, Block 10, Churchill Hospital, Headington, Oxford, OX3 7LJ. Tel: 0865-226054.

ALLIANCES FOR HEALTH

7.8 Managers in purchasing authorities might consider how best to assist general practices in working with health professionals such as health visitors and other agencies who can help to extend the scope of preventive working by providing skills and resources. More information can be found about potential alliances in Chapter 5.

7.9 Managers could encourage GPs to use community resources to improve the lifestyle

of their populations. District Health Promotion managers can facilitate this process by:

- contacting FHSAs and practices to assess the need for supplies of appropriate leaflets and educational resources and helping to ensure that the materials found to be useful are available
- actively addressing how they can aid GPs who encourage more physical activity in their populations by establishing projects in this area (see example in Chapter 5)
- enlisting the support of doctors in Public Health medicine, particularly those who have a background in primary care. Their skills are a valuable resource which can be of great help to practices seeking to move towards a population approach to CHD and stroke. Working closely with Medical Advisers to FHSAs, they can help practices to reach a level where they can offer a wider Health Promotion Programme and population coverage. Jointly funded DHA/FHSA appointments can help.

USE OF GP RECORDS

7.10 GPs deal with a defined population. Records of patients held by GPs are therefore a unique resource and are becoming more reliable and usable for health-related, in addition to administrative, activity. Many practices are, however, at an early stage in developing the information systems which are fundamental to a quality programme of both the population and high-risk approaches to CHD and stroke (see Chapter 4). Managers in purchasing authorities may wish to consider how best to offer help to GPs in:

- improving the recording and retrieval of CHD and stroke risk factors and morbidity data in primary care manual or computerised information systems
- noting an individual's risk factors. This can be a stimulus to intervention to change the level of risk. Recording interventions systematically enables the development of population profiles useful for the practice to assess the effectiveness of its activities.

Auditing medical records

Guidelines for auditing medical records with a view to calculating the percentage of patients with a recording of blood pressure, weight or indication of obesity, smoking and drinking habits in a five year period have been developed. Examples of audit may be obtainable from local primary care facilitators. Contact: Elaine Fullard, National Facilitator Development Project, HEA Primary Health Care Unit, Block 10, The Churchill Hospital, Oxford, OX3 7LJ. Tel: 0865-226052/53/61.

7.11 Most patients are registered with a GP, although this coverage can be less complete in inner city areas. It may be helpful if lifestyle and needs assessment surveys draw their sample of patients from the age-sex registers held in FHSAs and general practices. Managers should discuss this with FHSAs and GPs locally. Information from any survey should be fed back to GPs and PHCTs. This can help to:

- broaden the scope of and increase the response rate to surveys (see example)
- enrich the data base available to practices for patient care by provision of data on lifestyle risk factors
- facilitate the development of understanding and cooperation between GP staff and FHSA/DHA involved in needs assessment work
- build productive links between managers, public health and general practice which lead to shared priorities for future purchasing and evaluation of services for CHD and stroke.

Newcastle Health and Lifestyle Survey

The Newcastle Health and Lifestyle Survey used samples from the FHSA register, which were then checked with GPs. This data will be analysed by practice, and the results fed back to GPs. Contact: Dr Martin White, Department of Epidemiology and Public Health, School of Health Care and Sciences, The Medical School, The University, Newcastle upon Tyne, NE2 4HH. Tel: 091-222 6000 Ext. 6275.

Cardio-vascular screening programme

Stockport health authorities have been involved for a number of years in running a GP-based five year Cardio-vascular screening programme for men and women aged 35-60 years. Standard protocols are used for at-risk groups. Contact: Mrs Susan Hinchliffe, Stockport Health Authority, Healthcare House, Bramhall Moor Lane, Hazel Grove, Stockport, SK7 5BY. Tel: 061-419 4600.

"Helping People Change"

The Health Education Authority has produced a "Helping People Change" programme, which includes a patient-held Personal Health Record giving health promotion advice and space to record health information and goals. This resource is accompanied by a guide and video for the practitioners and summary cards for audit and evaluation. In addition, the HEA has produced four patient self-help booklets with information and advice on smoking, eating, drinking and physical activity as well as a training course for nurses on risk management, communications and specific interventions. Contact: Susan Gooding, HEA, Primary Health Care Unit, Block 10, Churchill Hospital, Headington, Oxford, OX3 7LU. Tel: 0865-226054.

CHAPTER 8

PURCHASING HEALTH CARE SERVICES

PURCHASING HEALTH CARE SERVICES

8.1 Health care services can make an essential contribution to mortality targets for CHD and stroke. DHAs and, for some procedures, GP fund-holders are responsible for placing contracts for these services. The role of others such as RHAs, provider unit managers, hospital clinicians, non fund-holding GPs, FHSAs and service users is also important. The aim of the contracting process is to improve the quality and cost-effectiveness of health care.

GENERAL ISSUES

8.2 Purchasers should consider the following general issues when placing contracts for health care services:

- ensuring a constructive debate about the service, so that the specification drives service improvement rather than simply being a description of current practice
- identification of key quality indicators that can be monitored and used to guide service improvement. These indicators should focus on:
  - outcomes (such as reduction in disability in people with strokes)
  - key processes such as reduction in delay time for administration of thrombolytic drugs (see example)
- encouraging the use of guidelines for the referral, assessment and treatment of people with CHD and strokes
- ensuring access to clinical input in the design of service specifications and guidelines
- ensuring mechanisms exist to share good practice to avoid each locality having to duplicate work
- facilitating good communication amongst purchasers, GPs, management, clinicians and, where applicable, social services departments
- ensuring that quality measures are used by providers, for example, in medical and clinical audit.

CHD service specification

Bradford HA is introducing an outcome-based contract for CHD services from 1993/94. This will involve a service specification based on key quality indicators such as delay to thrombolysis, smoking cessation in people who have had heart attacks etc. Contact: Dr Liz Kernohan, Bradford DHA, Daisy Bank, 109 Duckworth Lane, Bradford, BD9 6RL. Tel: 0274-366016.

Standards for stroke care

In South Western RHA agreed standards for referral, discharge and review of stroke patients for physiotherapy, occupational therapy and speech and language therapy have been generated by each NHS Trust/ DMU. This work will be taken forward to develop multidisciplinary agreed standards applicable to each provider unit. Contact: Madeline Simpson/ Penny Wheeler, Bristol Clinical Audit Unit, Bristol University, Canynge Hall, Whiteladies Road, Bristol. Tel: 0272-238870.

CORONARY HEART DISEASE

8.3 Purchasers could consider monitoring paramedic activity:

- coverage of emergency ambulance crews with paramedic-trained personnel
- response times to cardiac arrest calls and to calls to people with suspected heart attacks
- number of successfully resuscitated people with cardiac arrests
- number of trained cardio-pulmonary resuscitators in the community.

8.4 Managers may wish to take action to improve the delivery of thrombolytic drugs for people with heart attacks. The delay between the onset of symptoms and the administration of thrombolysis could be monitored according to:

- the delay between a person developing symptoms and calling for help
- the delay between a person summoning help and arriving in hospital

- the delay between a person arriving in hospital and receiving thrombolytic treatment.

Managers should be aware that each component of delay needs to be analysed separately as each has different causes and solutions, for instance, delays in summoning for help can be reduced by education of people who have had heart attacks whereas delays within hospital can be reduced by setting up fast-tracking mechanisms.

Fast-tracking

The Royal Sussex County Hospital has introduced a system of fast-tracking to minimise delay between admission to hospital and the administration of thrombolytic drugs. An average door-to-needle time of 17 minutes has been achieved in those without obvious contra-indications to the treatment. Contact: Professor Richard Vincent, Consultant Cardiologist, The Royal Sussex County Hospital, Eastern Road, Brighton, BN2 5BE. Tel: 0273-696955.

8.5 Purchasers should ensure the immediate availability of appropriate hospital facilities for people with acute heart attacks.

8.6 Managers should also consider how best to reduce the recurrence of heart attack after the original one. This will necessitate monitoring and promoting relevant lifestyles in people who have had heart attacks:

- smoking reduction
- healthy diet and sensible drinking
- appropriate physical activity.

8.7 It may also be necessary to monitor the proportion of people who have had heart attacks who are receiving drug treatment to prevent recurrence.

8.8 Risk factor control, particularly smoking, is also vital in people undergoing treatment for the other manifestations of CHD such as angina.

8.9 Purchasers should ensure facilities for and access to further treatment of heart attack complications, for example electrophysiology and surgery (including pacemakers) for arrhythmias.

8.10 Purchasers may wish to strengthen cardiac rehabilitation programmes to ensure complete coverage for people who are suitable candidates for such a programme (see examples).

8.11 Purchasers should ensure that local provision of CABGs meets the current Government target of 300 operations per million population, subject to local need. Purchasers should also ensure that provision of CABG and angioplasty is supported by agreed guidelines for patient referral, assessment and treatment.

Cardiac rehabilitation

Dorset Health Commission have concentrated on the potential of cardiac rehabilitation to reduce further heart attacks, to improve lifestyles of patients undergoing cardiac surgery and to provide a focus within local communities for preventive work. Contact: Dr Paul Harker, Director of Public Health and Policy, and Lesley Shucksmith, Preventions Co-ordinator, Dorset HA, Victoria House, Princes Road, Ferndown, Dorset, BH22 9RJ. Tel: 0202 893000.

Harefield Hospital NHS Trust has introduced a cardiac rehabilitation programme for patients undergoing cardiac surgery. The programme starts with a preadmission day, continues throughout the patient's stay, and following discharge through a support group with regular meetings. Contact: Diane Ellison, Harefield Hospital NHS Trust, Harefield, Middlesex, UB9 6JH. Tel: 0895-278762.

STROKE

8.12 Purchasers will wish to improve the co-ordination of stroke services:

- A named person should be responsible for taking the lead in co-ordinating stroke services. This will normally be a consultant who may also have experience and responsibility for other areas of disability (see example)
- Purchasers may wish to develop a policy based on guidelines for the admission, rehabilitation, discharge and long-term care of people with strokes.

Co-ordination of stroke services

In Edinburgh an individual clinician based at the Western General Hospital has been given responsibility for organising and co-ordinating stroke services. There is a dedicated stroke rehabilitation team, a programme of shared stroke care with general practice and easy access outpatient clinics for referral of people with strokes. Contact: Dr. Martin Dennis, Department of Neurosciences, Western General Hospital, Crewe Road, Edinburgh, EH9 2HL. Tel: 031 332 2525 Ext 4736.

8.13 Action can be taken to streamline the assessment of people with strokes:

- Common assessment procedures throughout the rehabilitation process, acceptable to all professional groups, would reduce repeated, overlapping assessments and facilitate communication
- A standard assessment procedure would act as the basis of outcome measures, against which performance could be monitored.

8.14 Managers will wish to ensure effective discharge planning to enable the smooth handover of responsibility of care to professionals based in the community:

- Stroke policies to include guidance on discharge of people with strokes
- Provision of appropriate community health services
- A social assessment will need to be undertaken to formulate an appropriate package of care, for example, home care, meals on wheels etc.

- Patient satisfaction and carer difficulties could be monitored and addressed. Provision of help to carers such as respite care should be explored and developed locally through alliances for health, taking into account the community care initiative.

8.15 Managers will wish to ensure services are in place to help prevent people with TIA and minor completed stroke progressing to a major disabling stroke. These services could be supported by guidelines and include monitoring of key quality indicators.

CHAPTER 9

INFORMATION, MONITORING, RESEARCH

INFORMATION, MONITORING, RESEARCH

9.1 Managing CHD and stroke programmes requires bringing together data from a range of sources to build up an accurate local picture and to keep track of progress throughout NHS organisations and across alliance partnerships. Purchasing authorities will need to ensure that their information strategy supports the Health of the Nation initiative on CHD and stroke.

WHY DO IT?

9.2 An effective information strategy is essential to enable managers to assess the prevalence of risk factors as well as the local impact of the diseases, and the effectiveness of their interventions. More specifically, it will allow purchasing authorities to:

- identify needs /agree priorities
- agree programmes of prevention, treatment and care
- allocate resources
- influence external agencies
- monitor key processes in a programme
- monitor key outcomes of the programme
- evaluate programmes.

TYPES OF DATA

9.3 Initially, much of the data available to purchaser managers is likely to be confined to mortality data, process measures and (in some localities) prevalence of risk factors. Not all purchasers will have access to data on morbidity (relating to disease and not solely deaths).

MONITORING MORBIDITY

9.4 Morbidity data is important for managers to understand both the baseline position and progress towards local targets. Much can be done to improve the collection, validation and use of morbidity data. For example, a local stroke register contributes to better understanding of the occurrence of stroke and enables trends to be studied and comparisons to be made.

Stroke registers

Stroke registers have been established in three districts of South East Thames to determine the reasons for the varying standardised mortality ratios for stroke. The registers provide unique data on the process and outcome of care and are a useful tool in the evaluation of new services for stroke patients. The data can inform purchasers and providers of the need for services for the prevention, treatment and rehabilitation of patients. The registers are currently utilised for multidisciplinary audit and in an evaluation of a community package of care. Contact: Dr Charles Wolfe, Division of Public Health Medicine, UMDS, St Thomas's Hospital, London SE1 7EH. Tel: 071 928 9292 Ext. 3139.

Heart attack register

The Division of Cardiovascular Medicine at Queen's Medical Centre, Nottingham, has maintained a register of all patients admitted to the Nottingham Hospitals with suspected heart attacks since 1972. The register has documented patient behaviour, intervals from onset of symptoms to hospital admission, the use of special ambulance services and the introduction of new therapies such as thrombolysis. Contact: Professor J R Hampton or Dr D Gray, Cardiovascular Medicine, Queen's Medical Centre, Nottingham, NG7 2UH. Tel: 0602 709346.

Simulation of potential for health gain

Yorkshire Health have produced a computer simulation model of the need for cardiological services. The model simulates the potential for health gain, in terms of a fall in mortality, by balancing action both through prevention and treatment. It can be modified to use data from other districts and regions. Contact: David Bensley, Regional Statistician, Yorkshire Regional Health Authority, The Queen Building, Park Parade, Harrogate, HG1 5AH. Tel: 0423-500066.

9.5 Morbidity data from general practice represents a vital potential source of information for planning at the local and national levels. It is not suggested that all authorities should try to collect this data at this stage; it can be difficult to collect consistent and reliable data. The NHSME is exploring setting up a project to see how such data might be collected in the future, both at national and local levels.

MONITORING MORTALITY TARGETS

9.6 Progress towards the mortality targets can relatively easily be assessed at purchasing authority level:

- Data on deaths produced by OPCS (Office of Population and Census Surveys) can be analysed by age, sex, local authority wards etc. to build up a local picture of mortality patterns.
- The Public Health Common Data Set includes data on standardised mortality rates, number of deaths, years of life lost etc. The material is now available in a form that takes into account the Health of the Nation Key Area targets (Public Health Common Data Set 1992: The Health of the Nation Baseline Data, issued October 1992). (See also Appendix A, paragraph 1.4.)

MONITORING RISK FACTOR TARGETS (See EL(92)57 Annex D)

9.7 Purchasing authorities may wish to monitor progress towards risk factor targets in the general population, but should note that:

- there are no routine information systems to monitor risk factors at health authority level. However, from 1994 progressively more detailed information on smoking prevalence will be available (due to changes in health promotion arrangements under the GP contract) which may be a useful resource.
- design and successful implementation of special surveys can be expensive and require large sample sizes and good response rates to give valid results.

However, data on risk factors obtained from occasional special surveys can be valuable in raising the local profile of CHD and stroke prevention. There are plans to set up an NHS Survey Advice Centre to provide information and advice about survey methodology for local researchers, and to help to ensure comparability between

different areas. Surveys by local authorities, employers, voluntary and other agencies may also be useful. This depends on developing effective alliances.

Computer assisted risk factor analysis

Primary health care teams in Hillingdon measure disease risk factors during health promotion interviews. The Healthview data bureau analyses these data on a medical-in-confidence basis. Computers suggest follow-up action (based for example on the district lipid policy) and draw up graphs showing what each patient is doing to themselves (smoking, drinking, etc.) and what all this is doing to the patient (blood pressure, coronary heart disease risk score, etc). Copies of these graphs are given to patients. Participating practices receive confidential audit reports. Contact: Dr J M Graham, Director of Public Health, Hillingdon Health Authority, St. John's, Kingston Lane, Uxbridge, Middlesex, UB8 3PL. Tel: 0895 279120.

MONITORING PROCESS ISSUES

9.8 Information concerning the CHD and stroke issues discussed in this handbook that is routinely available at local level to purchasers in aggregate form is largely confined to the following:

- hospital admissions for CHD and stroke
- ambulance response time to emergency calls
- provision and waiting time for CABG and angioplasty
- drug usage for high blood lipid levels (hyperlipidemia)
- drug usage for treatment of high blood pressure.

Monitoring heart attack intervention effectiveness

Walsall Health Authority identified a wide variety of data sets required to monitor the effectiveness of interventions at the time of a heart attack. Using the local version of DISP, an information system for use in purchasing developed in 1991, a retrospective study was undertaken of a sample of 60 local residents who died from heart disease. Relationships between thrombolytic therapy and admission to a coronary care unit were examined as well as coincidental disease, ethnicity and employment status. The results have been used to influence clinical management guidelines as well as data collection by provider organisations including the ambulance service. It is hoped during 1993 that a much larger study will be undertaken. Contact: Dr Mary Brennan, Walsall Health Authority, Lichfield House, 27-31 Lichfield Street, Walsall, West Midlands, SW1 1TE. Tel: 0922 720255.

Anticipated Recovery Pathways

Anticipated Recovery Pathways (ARP) are practical tools to design and improve the process of patient care. They have been used in North West Thames Region since August 1991 and are achieving significant results in reduction in variation of clinical care, improved efficiency and reliability of that care and, through this, improved quality of care. ARPs are developed by the care team who agree on a pathway of care. Variations from that path are contemporaneously recorded. The variation data provides a basis for subsequent audit and highlights where the process of care could be improved. Most experience has been gained in surgical specialities but from mid November 1992 there will be data accumulating in relation to the management of unstable angina, heart attack and coronary angioplasty. The ARP framework achieves improved quality by the constant review of patient care; improved efficiency by reduction in variation and prompt recognition of any problems; a subsequent reduction in length of stay and improved communication between all care givers. Contact: Denny Van Liew, Integrated Care Team, North West Thames Regional Health Authority, 40 Eastbourne Terrace, London, W2 3QR. Tel: 071 725 5300/5493.

GENERAL PRINCIPLES

9.9 As a general rule, data is most reliable when it is directly useful to the person recording it. This can be enhanced by feedback of information to health care personnel:

- Purchasers should be wary of collecting any data which cannot be directly linked to improvement of the quality of the programme.
- Data can be collected in a simple qualitative checklist, for example, whether local provider units are operating a smoking policy.
- Other forms of data need to be assessed quantitatively and routinely, for example smoking status in people with angina.
- A description of services should include their geographical location
- Time trends should be identified whenever possible.
- Where possible, an analysis of utilisation should include age, sex, ethnicity and local authority ward of residence. For retrospective studies of services this may have to be done on a sample basis.

SUPPLEMENTARY INDICATORS OF PROGRESS

9.10 The checklist below gives some examples of areas where supplementary indicators of progress could be developed. Purchasing authorities might use these to monitor progress in the NHS. Agreement on monitoring progress using shared data from other agencies must come from within alliance partnerships.

- Lifestyle surveys
  - ~ health related beliefs and behaviours, reported risk factors and reported use of health promoting and preventive facilities
- Paramedical services
  - ~ coverage of emergency ambulance crews with paramedic-trained personnel
  - ~ response times to cardiac arrest calls, and those to patients with suspected heart attacks
- Acute Care
  - ~ interval between onset of heart attack and provision of thrombolytic drugs
  - ~ heart attack hospital case fatality rates

- Surgery
  - ~ number of coronary artery bypass graft operations performed
  - ~ number of angioplasties performed
  - ~ waiting time for procedures
- Rehabilitation
  - ~ availability of remedial therapy services to CHD and stroke patients
  - ~ proportion of stroke patients assessed by a coordinated multidisciplinary rehabilitation team.

NATIONAL INITIATIVES

9.11 The Health Survey for England involves assessment of cardiovascular disease and its risk factors in a representative annual sample of the adult population of England. It includes both questionnaire measures and objective tests. With the enlarged sample of approximately 17,000 beginning in 1993, it will be possible to obtain estimates of prevalence of CHD and stroke down to regional level. However, the survey methods in their current form may be too complex and expensive for use by local areas which may wish to carry out surveys to assess the health needs of their populations. Surveys of this kind are already under way and a review of these is intended in 1993.

9.12 The HEA's Health and Lifestyle Survey collects data on the public's knowledge and motivation to acquire and maintain good health. It involves assessment of the key risk factors for CHD and stroke and other conditions. Specific topics include physical activity, alcohol, experience of health services, environmental factors, nutrition, psychological and social influences on health and wider public health concerns. The survey is conducted annually and is in two parts:

- a nationally representative survey of the general population, sample size 5000
- a survey of Black and Minority Ethnic communities, sample size 3500.

MONITORING PROGRESS

9.13 The Health of the Nation White Paper contains a commitment to report on progress and to review the national strategy. It also accepts the importance of monitoring structure and process developments as well as outcomes. Local health strategies will want to use the same approach.

RESEARCH

9.14 The broad objective of the NHS Research and Development strategy is to ensure that the content and delivery of care in the NHS is based on high quality research relevant to improving the health of the nation. A description of the strategy can be found in "Research for Health" (see Appendix D)

9.15 National R&D priorities for the NHS are being identified on the basis of input from NHS managers and health care professionals, co-ordinated by regions. Within this national framework of priorities, regions will also identify their own particular areas of interest, and will work together to avoid unnecessary duplication of research between and within regions.

9.16 The R&D strategy will support the health strategy by investigating effective and efficient ways of achieving targets in Key Areas and by exploring other areas where research is needed before targets can be set. A review of R&D priorities in relation to cardiovascular disease and stroke (which is also looking at R&D needs related to smoking) taking account of health strategy targets will be completed early in 1993.

9.17 The success of this work in identifying and addressing NHS needs will depend upon those implementing the health strategy at local level putting forward and developing ideas for research in collaboration with Regional Directors of R&D.

9.18 Mechanisms for disseminating the results of R&D are being developed as part of the NHS R&D strategy. Further details will be published in due course.

APPENDICES

Appendix A

SMOKING

The text below is an extract from the Health of the Nation Key Area Handbook: "Cancers". It provides a detailed account of suggested action to reduce smoking. However, it has been reduced in length somewhat in this Appendix, and the text in full can be found in "Cancers", together with appendices illustrating good practice.

AREAS FOR ACTION TO REDUCE SMOKING

I. SKETCH THE LOCAL PICTURE

1.1 In looking at the health needs of their local population, NHS authorities need to:

- assess local data on smoking prevalence, cigarette consumption and mortality, including trends, in comparison with national information and data for similar populations
- establish the baseline against which targets can be set and progress monitored
- review existing levels of health promotion services on smoking
- define local priority groups (eg manual workers, young mothers, teenagers etc) and the balance of action between prevention and cessation.

1.2 Set out below are sources of statistical information on smoking and its health consequences. Information available from national surveys or data collection systems at a regional or more local level is highlighted.

Mortality data

1.3 The main sources of mortality data are:

- OPCS mortality statistics – Data on numbers of deaths by International Classification Disease Codes, age and sex is collected by the Office of Population Censuses and Surveys (OPCS). Data is available at ward level and published for RHAs, DHAs, FHSAs and LAs.
- The Health Education Authority's (HEA) – "The Smoking Epidemic – Counting the Cost" is a report setting out the most up-to-date estimates of the number of deaths attributable to smoking in the UK and the burden smoking places on the Health Service in terms of use of hospital beds and associated costs. The data is broken down by health authority and

local government district and provides a useful tool for health promoters to target local programmes and campaigns. A number of assumptions have had to be made in estimating local data. "The Smoking Epidemic – A Manifesto for Action" by the Health Education Authority breaks down this data by UK and European Parliamentary constituency. (Copies were sent to all Directors of Public Health, FHSAs and Health Promotion Units.)

Morbidity data

1.4 The main sources of morbidity data are:

- RHA cancer registers – Each RHA maintains a register of all cancers diagnosed and these data are available by DHA. These registers are brought together into a national cancer registration scheme by OPCS. The Focus Group guidance on lung cancer mentioned in "First Steps for the NHS" (NHS Management Executive) November 1992, emphasised the importance of improving the completeness, timeliness and accessibility of cancer registration data.
- GHS data – The General Household Survey (GHS) is carried out annually and collects information about illness nationally and by standard health region. In the future, data will be presented by RHA.
- The Public Health Common Data Set – The Department of Health publishes annually the Public Health Common Data Set which is derived from data provided by OPCS and presents a range of health indicators by RHAs, DHAs and FHSAs, including mortality data and cancer registrations; comparison with national and local data is possible. The data include Standardised Mortality Ratios (SMRs) and their confidence limits, as well as age specific death rates for men and women for a number of ICD groupings (including lung cancer, cancer of the cervix, coronary heart disease and cerebrovascular disease). There is also further information on years of life lost from the diseases listed, as well from other diseases which may be of interest (eg bronchitis and emphysema). In October 1992 the University of Surrey produced subnational (local) baseline data relating to targets set in Health of the Nation. This has been circulated to all HAs on disk. A national volume including presentation of data, maps and scattergrams is due to be published early in Spring 1993.

- Royal College of Physicians' reports on the effects of smoking have quoted both morbidity and mortality data. The most recent of these reports "Smoking in the Young" (published 1992) quotes morbidity data for the effects of both active and passive smoking on infants and children.

Smoking prevalence and cigarette consumption data

Specification of national indicators

1.5 At the end of 1992, the DH published a document setting out the information used to monitor progress towards the Health of the Nation targets (including detailed definitions). Initially the document will be restricted to primary indicators – ie. those measures relating directly to the targets specified. Work is also under way to identify a larger set of supplementary indicators including measures of various actions taken to achieve each of the targets as well as measures of relevant intermediate changes in behaviour, disease precursors and disease incidence. Details of these supplementary indicators will be published in due course.

Existing information sources

1.6 The main sources of information on smoking prevalence and consumption are:

- The GHS survey of adults – The GHS collects data on smoking habits of adults in alternate years only. Information on smoking includes trends over time in the general population aged over 16. The report is generally available about one and a half years after the survey is completed. The first year for which information was tabulated by RHA was 1990. This includes data on the average number of cigarettes men and women smoke a day, and the proportion of people who are current and ex-smokers.
- The OPCS survey of secondary schoolchildren – OPCS have been carrying out biennial surveys of smoking among secondary school children since 1982. The survey covers first to fifth formers who were mainly 11 – 15 at the time. The last two surveys have had half the children cotinine tested (saliva tested for the presence of cotinine, a major metabolite of nicotine). Some limited regional breakdown is available.

- Infant Feeding Survey data on pregnant women – The Infant Feeding Survey provides data every 5 years on smoking in pregnant women. There is no regional breakdown of smoking data.
- Family Expenditure Survey – The Family Expenditure Survey carried out annually includes household expenditure on tobacco at a regional level.
- HEA MORI surveys – Regular tracking surveys of smoking habits and attitudes among 11-15 year olds have been carried out by MORI for the HEA since 1989. A limited regional breakdown of data is available.
- HEA Health and Lifestyle survey – The HEA Health and Lifestyle Survey consists of two parts, a general population sample and a black and ethnic minority sample. Data collected includes morbidity, prevention, cessation support, workplace and other policies. Some of the 1992 data will be available broken down by health region.
- Annual reports by General Practitioners – where records of smoking have been included. From 1994, more detailed information on smoking prevalence in individual practices will be available as a result of changes in the health promotion arrangements under the GP contract. Managers should discuss with GPs locally ways which this information might be aggregated to provide a useful resource.

Local needs assessment

1.7 RHAs/DHAs/FHSAs should consider their further information requirements in conducting local 'needs assessment' analysis. The DHA Project paper "Moving Forward – Needs, Services and Contracts" (available from the Purchasing Unit, PMD3B, NHSME) highlighted a number of issues for NHS authorities to consider in determining local priorities:

- epidemiological assessments;
- comparative assessments;
- a corporate view taking account of a range of local views and interests.

In addition, the DHA Project document on lung cancer (publication pending) provides a valuable reference point for work in this area. It includes modelling processes to calculate the percentage reduction in smoking in the local population needed to achieve the lung cancer mortality target.

1.8 NHS authorities should consider:

- local surveys of smoking prevalence and consumption to focus efforts and publicise the extent of the smoking problem locally. It is important to recognise that RHAs may be able to commission/undertake more specialised research and survey activity which would not be viable at a more local level. The NHS Survey Advice Centre being set up will be able to provide advice on questions to be asked, for example to help ensure that they provide information which is comparable with national data.
- reviewing existing levels of health promotion services on smoking prevention and cessation. Issues to consider include:
  - ~ the proportion of smokers who report having received advice from the GP or primary health care team to stop smoking;
  - ~ the proportion of smokers who report having received advice to stop smoking in secondary care settings;
  - ~ cessation advice and support available to everybody but in particular pregnant women;
  - ~ the effectiveness of existing health education/smoking prevention activities;
  - ~ the level of training of staff providing, or in a position to provide, cessation advice;
  - ~ the effectiveness of existing services, eg cessation clinics;
  - ~ the extent to which NHS premises are smoke-free.
- seeking local views (see below).

2 SEEK LOCAL VIEWS

2.1 Effective local consultation can be an important part of needs assessment. Such consultation needs clear objectives in defining what information is required and what it will be used for. The Localities project publication "Local Voices – The views of local people in purchasing for Health" (available from the Purchasing Unit, PMD3B, NHSME) outlines good practice in this area. Examples of issues include:

- what help do smokers want from the NHS?
- how easy do smokers find it to get support?
- what proportion of smokers wish to give up?
- what strategies are most popular and effective?

2.2 NHS authorities should also consider targeting of the main interest groups in seeking views, for example:

- CHCs and the public, including ethnic minority groups
- local voluntary sector eg local ASH, smokebuster clubs
- GPs and other health professionals
- local business community, as employers and retailers
- local authorities, including providers of public transport
- schools, colleges and youth clubs.

3 DEVELOP LOCAL ALLIANCES

3.1 Local strategies on smoking need to be fully supported by other agencies eg commerce, local authorities, voluntary agencies, schools, etc. This is important as targets on smoking need to reach people who are generally not yet ill and therefore may not be presenting to NHS facilities. Building a local alliance is important in developing a range of approaches to smoking reduction. This is essential in achieving a significant and sustained effect on smoking prevalence – focusing on one area alone, such as workplace smoking, is not sufficient to achieve major change.

3.2 Purchasing authorities need therefore to stimulate the commitment of others outside the NHS. Annual public health reports could include smoking as a standard feature defining targets to be achieved and action required by the NHS and other sectors. Setting up a 'tobacco control alliance' in the area is another mechanism for developing a common agenda and goals.

3.3 The HEA are supporting the development of a local 'tobacco control' network in West Yorkshire. Eight DHAs, five FHSAs, five LAs and the voluntary sector are represented on the network. The HEA intend to disseminate lessons from the network in due course.

Employers/unions

3.4 Health authorities and providers should play an exemplary role in illustrating the dangers of smoking by implementing the "Health At Work in the NHS" initiative. This aims to introduce a systematic health-workplace programme throughout the NHS and engage all NHS staff in health education and health promotion.

3.5 The implementation of NHS smoking policies will encourage other employers and the general public to take steps to avoid the risks of exposure to tobacco smoke. Those employers who do not have a smoking policy can be encouraged to introduce one urgently.

3.6 Advice on workplace smoking issues is available from

- Action on Smoking and Health (ASH) Workplace Services provides professional advisory services to all those interested in smoking policies in the workplace by way of training seminars, a comprehensive manual and consultancy services;
- QUIT Corporate Health Services offer professional advice on smoking programme implementation and cessation activities together with experienced, practical help for smokers who want to stop at work;
- the HEA provides written information and guidance, together with Look After Your Heart Workplace Activities.

Local authorities (LAs)

3.7 LAs have a very important role to play in reducing smoking because of their special expertise and responsibilities, particularly at the level of policy, in the following areas:

- LAs are major employers;
- LAs both provide and purchase services for the general public;
- LAs are responsible for many public buildings, leisure and sports facilities (the Department of Environment "Code of Practice on Smoking in Public Places" sets out overall policy in this area);
- Environmental Health Departments are responsible for the health and safety of 40% of the workforce and 60% of work places eg pubs, restaurants, cafes;

- Trading Standards Officers are responsible for protecting children from illegal tobacco sales, particularly by monitoring the implementation of the Children and Young Persons (Protection from Tobacco) Act 1991. Local authorities also have a new duty under the Act to review enforcement of the law and refer to the review in their Annual Reports.

3.8 LAs should be encouraged to initiate smoking policies and make tobacco control the responsibility of a named person within the LA.

3.9 Health authorities often find it easier to work with local authorities if there are joint funding initiatives. For example, some health and local authorities jointly appoint a Health for All Coordinator (eg Winchester). Similarly, a number of 'Healthy City 2000' projects are jointly managed by health and local authorities.

Schools (whether opted out or not) and educational establishments

3.10 Health authorities can work with schools to ensure that education about smoking takes place as part of a school's programme of health education. Action can be taken with all schools (including those taking part in the Healthy Schools initiative) to encourage them to introduce smoking policies. Guidance on the implementation of such policies will be available from the HEA in April 1993.

Local voluntary sector organisations

3.11 The voluntary sector are actively involved in health promotion and should be involved in local tobacco control strategies. The two main voluntary organisations involved in smoking prevention are ASH and QUIT. ASH has a network of regional branches, some of which are much assisted by grants from their local health authorities.

Media

3.12 NHS authorities should develop local media contacts to ensure that they regularly publicise health education messages and participate in media campaigns (eg around No Smoking Day).

Health professionals including cancer specialists

3.13 The most credible sources of health education messages to the public are doctors and those who treat smoking related diseases such as cancer specialists, thoracic surgeons etc. and consideration should be given to using their expertise in the health promotion context. However, health promotion is not the exclusive preserve of any professional group. As the Health of the Nation White Paper makes clear, active partnerships between groups and individuals will add significantly to the opportunities for progress towards targets. For example, pharmacists have much to offer local health authority managers as an increasing number of local initiatives demonstrate. The anti-smoking campaign launched by Liverpool FHSA in 11 pharmacies at the end of September 1992 is an imaginative use of the pharmacists' professional skills.

4 ASSESS AVAILABLE INTERVENTIONS

Consider interventions for the NHS as a purchaser

Activities led by FHSAs

4.1 In order to raise awareness of smoking as an issue to be addressed by everyone in primary care FHSAs should consider initiating/developing the following range of activities. Many of these activities would benefit from being undertaken with the local DHAs, contractors and in partnership with other agencies where appropriate.

4.2 A lead role within the FHSA could be taken by the health promotion manager or primary care facilitator. FHSAs should recognise the potential for a full range of health professionals to make a contribution. For example dentists are well placed to give advice given their one to one relationship with patients who are generally healthy and who attend regularly. Dentists also have a particular interest given the links between smoking and periodontal disease and synergism with alcohol for oral cancer.

4.3 Options for action are:

- encouraging GPs to have smoke-free policies for their premises. GPs should be made aware of the general guidance for NHS premises in HSG(92)41, and should be encouraged to meet similar standards;

- encouraging GPs to record in quantified way the smoking status of their practice list and provide advice and support to help smokers give up. The changes negotiated in the GP contract will provide remuneration arrangements for GPs taking part in such activity;
- FHSAs should set themselves targets to assess the effectiveness of their role in facilitating health promotion in general practice. GPs participating in the new arrangements for health promotion under the GP contract will provide to FHSAs annual reports, including quantified information on morbidity and risk factors. The primary use of this information is to support practices' own health promotion work. Managers could also discuss with GPs locally how this information might feed into the supplementary indicators;
- encouraging good practice in developing practice guidelines for managing smokers.
- stressing the usefulness of building up computerised practice health profiles. This will enable practices to monitor any changes in numbers or age distribution of smokers;
- offering training in smoking cessation advice for at least one key member in each practice, for example the practice nurse;
- encouraging the inclusion of smoking cessation services in practice leaflets;
- FHSAs should approach Regional Advisors in General Practice with a view to establishing formal evaluation of existing training for GPs and their practice staff on both smoking prevention and cessation;
- FHSAs should discuss with Medical Audit Advisory Groups how to encourage the inclusion of smoking within the Medical Audit Programmes (both prevention and cessation for established smokers);
- FHSAs could work jointly with Directors of Public Health to facilitate GPs in improving the quality of the data from general practice. They should discuss with GPs locally incorporation of such data into the DPH's annual reports, to monitor changes in the smoking status of the population (as reflected in practice health profiles);
- FHSAs/LDCs/LPCs have a role in encouraging dentists, opticians and pharmacists to identify smokers, provide health promotion advice and display

health education materials on smoking. FHSAs could consider developing separate protocols for dentists, opticians and community pharmacists to help identify and encourage those patients and customers who wish to give up smoking;

- FHSAs/LDCs/LPCs should develop and implement "no smoking" policies within dental practices, opticians and pharmacies;
- FHSAs to ensure that primary care professionals for example dentists and pharmacists, have details of local smoking cessation clinics for dissemination and receive appropriate training in the provision of health promotion advice;
- FHSAs should participate in community campaigns, such as No-Smoking Day.

Activities led by DHAs

4.4 DHAs, Joint Commissioning Teams and other purchasers should consider including the following range of health promotion issues on smoking in contracts. Many of these activities would benefit from being undertaken with local FHSAs, local providers and in partnership with other agencies where appropriate:

- ensuring through contracts, possibly as a joint post with the FHSA, that sufficient health promotion expertise exists at provider level in the district. While contracts should where possible include relevant local outcome targets, there may also be value in intermediate targets at early stages, eg aim for the full time equivalent of at least one health promotion worker focusing on smoking issues at provider level;
- ensuring through contracts that health promotion becomes an integral part of the skills of a wide range of health workers, and that there is formal evaluation of existing training for health professionals on prevention;
- ensuring that smoking (both prevention and cessation for established smokers) has a high priority within Medical Audit Programmes;
- ensuring that smoking cessation leaflets and counselling is available for patients on admission to hospital, if appropriate after smoking history has been ascertained. All outpatient areas (including ante-natal, paediatric and baby clinics) should display health education materials, including posters and leaflets on the effects of active and passive smoking;

- health education displays on paediatric wards should cover the effects of passive smoking on infant/child health, HEA Teenage Smoking Programme materials on the negative imagery of active smokers, and "SmokeBusters" information;
- ensuring that advice is given to pregnant women attending antenatal clinics;
- encouraging health professionals in contact with pregnant women and new mothers to make full use the HEA's parent education project which provides advice on both one to one and group work throughout the antenatal period and first year of parenthood;
- ensuring that smoking education advice is given to in-patients, for example, advice from physiotherapists for post-operative and chest patients;
- inclusion of information on smoking policy in all pre-admission literature given to patients;
- including questions on smoking in patient satisfaction surveys;
- consider smoking prevention activities which specifically target young people.

4.5 Purchasers should also insist on a virtually smoke-free environment for patients and visitors attending hospital through contracts (HSG(92)41 refers). The joint Department of Health/HEA booklet "Creating an effective policy on smoking in the NHS" provides good practice material. It includes a model specification for a service contract to cover the policy objective of a virtually smoke-free environment. The main points are:

- all service providers should have an effective no-smoking policy for patients and visitors. A copy of the written policy and any associated documents should be available to the purchaser on request;
- an effective policy is defined as meaning that all premises should be smoke-free except for separate, enclosed and adequately ventilated rooms designated for smoking and no other purpose (where practical). There should be no smoking by visitors, and no sales of tobacco to patients on NHS premises (except for long-stay patients who cannot stop smoking). All sales of tobacco products on NHS premises (except to long-stay patients who are smokers) should have been stopped by the end of 1992;

- qualified help should be available for patients who wish to stop smoking. Those offering help and support should have attended a recognised course in smoking cessation;
- all in-patient and out-patient information (such as pre-admission literature) should refer to the policy on smoking.

4.6 Health Promotion Departments could contact FHSAs and practices to assess the need for supplies of appropriate leaflets and educational resources. DHAs could help to ensure that the materials found to be useful are available.

Media activity/health education campaigns for RHAs/DHAs/FHSAs

4.7 Media and publicity about smoking are particularly important in influencing public opinion, and bringing about changes in public policies in favour of smoking controls. For example, the publication of the Royal College of Physicians' reports in England and the Surgeon General's reports in the USA resulted in significant declines in smoking. Key points are:

- media campaigns can enhance the impact of direct personal education undertaken locally by health professionals, increase the impact of smoking prevention work and bring down smoking rates even further. In media campaigns, consideration should be given to using the ethnic minority press and, particularly providing information in languages other than English, where appropriate;
- mass media campaigns can be expensive and are therefore only likely to be an option at national and/or regional level. The HEA is investigating the effects of mass media advertising campaign directed directly towards family smoking, in conjunction with local alliances in test areas;
- purchasers can develop cost-effective communications strategies which capitalise on national publicity campaigns in the local media. For example, unpaid publicity can be used to highlight the illness and deaths due to smoking locally. These figures could be calculated and publicised at regular intervals for units such as hospitals, FHSAs etc (see "The Smoking Epidemic');
- participation in campaigns such as No Smoking Day, WHO World No Tobacco Day, and 'Europe Against Cancer' week also provide important

publicity hooks. For example, No Smoking Day reaches over 90% of smokers, creates massive publicity and has been demonstrated to encourage some 50,000 smokers to give up the habit permanently each year. No Smoking Day in 1993 is on Wednesday 10 March; while the campaign aims to target all smokers, this year it will also target young women in particular. WHO World No Tobacco Day is on 31 May 1993; the theme is smoke-free health services. The theme of Europe Against Cancer Week 1993 is passive smoking.

- Directors of Public Health can publish their Annual Reports and actively seek publicity in the local media for their smoking prevalence, interventions and impact within the area. 'Position Statements' on the Health Authority's policies regarding smoking can also be drawn up and then publicised. Copies of the HEA's 'Position Statements on Tobacco' are available on request.

4.8 "Headlines" and "Health Education News" are HEA publications for health promotion staff which carry information on national health events (all health promotion units receive these). These two publications will be replaced by a new periodical in April 1993 which will continue to carry this information.

4.9 The HEA HELIOS project (Health Education Local Initiatives on Smoking) can offer written guides and individual consultations to assist health promotion officers in developing their strategies on media and smoking.

Consider interventions for the NHS as an employer

4.10 The Health of the Nation White Paper sets commitments to a virtually smoke-free NHS by 31 May 1993. All NHS staff should be encouraged to recognise that those providing the service set a role model for those receiving it.

4.11 HSG(92)41 takes forward these commitments. A joint Department of Health/HEA booklet, titled "Creating an effective policy on smoking in the NHS", provides good practice material on implementation. The key action points are:

- ensuring that all staff are covered by a no-smoking policy;
- making available advice and support for staff who want to give up smoking, for example through the use of occupational health staff to provide a staff occupational smoking education programme. NHS employers should consider

providing smoking cessation clinics for staff prior to implementation of the smoking policy;

- setting aside a limited number of separate smoking rooms, if necessary.

4.12 GPs, dentists, pharmacists and opticians may wish to consider how this initiative can be applied to their practices and premises. FHSAs should facilitate and support this.

4.13 It should be recognised that the model policy provides the minimum steps that need to be taken by May 1993. Policies which go further than this already exist and NHS authorities will wish to consider them.

4.14 The target date for a virtually smoke-free NHS of 31 May 1993 is also the World Health Organisation World No Tobacco Day 1993. The theme already chosen by WHO is smoke-free health services. NHS authorities and provider units should consider how to maximise publicity from their smoke-free status on this occasion, to encourage other employers to take similar action.

5 IDENTIFY RESEARCH AND DEVELOPMENT NEEDS

5.1 It will be particularly important to local parts of the NHS to identify questions on smoking prevention and cessation which could be answered by R & D and ensure that they are fed into the region's R & D committee.

5.2 RHAs could also consider setting up development funds to pump-prime more innovative smoking programmes, and then ensuring the results are widely disseminated. This could be adopted on a more widespread basis if effective. This could be part of wider R & D investment.

5.3 The HEA is conducting a review to explore the role health promotion research will play in the development of regional strategies for R & D in the light of the NHS R & D strategy and the Health of the Nation White Paper.

6 AGREE LOCAL TARGETS

6.1 Targets are important for stimulating change, gaining commitment and monitoring progress. There are a number of areas where RHAs/DHAs/FHSAs will need to set targets, both in taking forward the population outcome targets in the Health of the

Nation White Paper and to ensure adequate local indicators of progress. It will be useful to distinguish between:

- sub-national (local) targets for the five targets set out in the Health of the Nation White Paper (lung cancer mortality and the four smoking targets). RHAs/DHAs/FHSAs may wish to develop this approach, to cover:
  - whole population targets;
  - particular priority groups (male/female; 11-15 year olds; pregnant women; ethnic groups; social class etc.);
  - intermediate targets for the year 2000 (eg. 1994, 1996, 1998 targets);
- supplementary indicators of morbidity. Examples could include:
  - lung cancer incidence;
  - incidence of other smoking-related diseases with a shorter time lag;
- supplementary indicators on services/public attitudes. Examples include:
  - the proportions of patients on the practice list with smoking status recorded;
  - the proportion of smokers on the practice list receiving or reporting GP/primary health care team advice on smoking;
  - the proportion of smokers receiving advice on smoking cessation at antenatal clinics;
  - this could be supplemented by patient surveys eg. on proportion of smokers receiving advice on smoking cessation from GPs/Primary Health Care Teams (PHCT) or secondary sector, particularly at antenatal clinics and the proportion of smokers in the local population who want to give up;
  - data should be used to assess progress generally within the area and to inform policy. A variety of different factors may affect trends, so it is probably not possible to evaluate success or failure of an individual agency purely from such data.

6.2 RHAs/DHAs/FHSAs should work in partnership with local alliances to encourage them to set targets in other areas. Examples would include:

- percentage of local workforce covered by no-smoking policies (the national target is for the large majority of employees to be covered by a no-smoking policy by 1995);

- proportion of public places covered by effective no-smoking policies (the national target is for 80% of public places by 1994);
- percentage of schools with no-smoking policies;
- local targets concerned with preventing illegal sales of tobacco products to under 16s.

7 AGREE STRATEGIES FOR ACHIEVING LOCAL TARGETS

7.1 RHAs/DHAs/FHSAs should consider developing and publishing an overall strategy for action, working with their local alliance partners and professionals (eg GPs) locally. Such a strategy would cover:

- responsibilities of NHS bodies and alliance members;
- the timetable for action, including target dates for progress with particular commitments;
- issues of joint resourcing;
- monitoring arrangements, including reports on progress.

8 DEVELOP SKILLS AND RESOURCES

8.1 For a successful strategy, it is essential that staff receive training to arm them with the skills they require. Training should be provided to enable professionals to:

- provide information regarding the health effects of smoking and methods of cessation;
- assess the risk profile of individual patients;
- assess local interventions for reducing smoking prevalence;
- build alliances, for example with local authorities, LEAs, employers, local voluntary organisations, media and cancer specialists;
- use research findings in order to develop health promotion programmes and interventions that are appropriate for the target group;
- consider local targets;
- set a local strategy.

8.2 Advice/materials are available to RHAs/DHAs/FHSAs on health promotion as purchasers from:

- the HEA from their individual programmes, for example the cancer programme and the smoking programme;
- Knowledge House who have been commissioned to produce a package entitled 'Better Living – Better Life', dealing with health promotion interventions to reduce coronary heart disease (including a section on smoking cessation). This was commissioned by the Chief Medical Officer's Tripartite Joint Working Group on Health Promotion in Primary Care (GMSC, RCGP and DH), and will be issued to FHSAs with copies for all practices and DHAs in January 1993;
- the HEA Primary Health Care Unit in Oxford, primarily for FHSAs and primary health care teams.

8.3 Useful reference materials on health promotion for providers (Trusts, DMUs and within them Health Promotion Units and primary health care teams) are available from the HEA and many voluntary organisations.

9 MONITORING, EVALUATION AND DISSEMINATION

9.1 NHS authorities should monitor and review progress towards targets on a regular basis. Annual public health reports could include as a standard feature a section on smoking which defines targets to be achieved and action required by the NHS and other sectors and assesses progress to date.

9.2 NHS authorities should use the opportunity provided by such reports to publicise local strategies and progress towards targets.

9.3 RHAs should also consider ways of disseminating good practice, for example through a 'smoking issues' network.

Appendix B

PLASMA CHOLESTEROL TESTING

Introduction

1. The purpose of this appendix is to give guidance which will enable consultants, General Practitioners and managers to develop local policies for plasma cholesterol testing for people at high risk of coronary heart disease (CHD). More detailed guidance for GPs is given in "Better Living – Better Life" (see Appendix D).

Cholesterol and coronary heart disease

2. The level of plasma cholesterol is a major determinant of CHD risk and is itself related to the amount of fat in the diet. The average plasma cholesterol level in England (5.85 mmol/1) is high on the international scale (eg China – 3.2 mmol/1). Most people at risk have plasma cholesterol levels that are either mildly elevated (5.2 – 6.5 mmo1/1) or moderately elevated (6.5 – 7.8 mmol/1) and only a minority have very high levels (over 7.8 mmol.1). Cholesterol is transported in blood combined with specific proteins (lipoproteins) which affect its metabolism. CHD is mainly linked with low density lipoproteins (LDL) which carry 70% of plasma cholesterol. Some high density lipoproteins (HDL) remove cholesterol deposited in arterial walls. A high ratio of LDL to HDL is associated with an increased risk of CHD mortality.

The Standing Medical Advisory Committee Report on blood cholesterol testing

3. The Standing Medical Advisory Committee's (SMAC) report on cholesterol testing was issued in May 1990. The report endorsed the promotion of healthy eating as a population measure to reduce this country's high base line level of risk of CHD. It also concluded that it was cost effective to establish a programme of opportunistic cholesterol testing for people at particular risk of CHD. However, because of lack of consensus amongst the profession on the value of blood cholesterol testing in preventing CHD, the Department issued the SMAC report for consultation. There was an exceptionally large response to the consultation covering a wide range of views.

Response to the SMAC Report

4. Among responses to the SMAC report, there was very little support for mass screening and SMAC's emphasis on the place of cholesterol testing as part of a

broadly based programme of measures to prevent coronary heart disease was broadly endorsed. The type of programme which received most support could more properly be described as "case finding" of those at high risk rather than "opportunistic screening". However, there was disagreement as to what constituted a risk sufficiently high to justify a blood cholesterol test.

5. The report suggested that it was likely that providing individuals with information about their cholesterol levels would lead to changes in public attitudes and behaviour. However, in the responses there was considerable scepticism (in some cases backed by research findings) that knowledge of one's cholesterol level is in itself sufficient motivation towards a changed, better diet. Some responses suggested that such knowledge might, in some cases, positively inhibit such change.

6. A number of organisations were concerned about possible distress caused to those who undergo testing. It was felt that it could lead to people being labelled "at risk" which could have adverse psychological consequences for some individuals. Although plasma cholesterol is a major determinant of risk, the level of cholesterol alone is insufficient to predict CHD risk with confidence in any individual. This is due to its interaction with other risk factors. Therefore, many will be put through unnecessary anxiety and, conversely, many with average plasma cholesterol levels will be falsely reassured.

Recent statement of professional consensus

7. Since consultation on the SMAC report, there have been two significant statements of professional consensus:

   - The Faculty of Public Health Medicine supports a "case finding" approach for relatives of people with any of the familial hyperlipidaemias and those with a first degree relative who has had a myocardial infarction under the age of 50.
   - The current Royal College of General Practitioners' advice is given in the 1992 RCGP publication on Guidelines for the Management of Hyperlipidaemia in General Practice:

     "Estimation of the serum cholesterol on an opportunistic basis is justified in all adults between 20 and 75 years. Within such a policy, it is logical to identify

priority groups in order to direct care at the earliest possible time towards those at greatest risk".

8. A framework for a local policy which takes account of the views summarised above is as follows:

National framework for cholesterol testing policy

Cholesterol testing should be offered to individuals as part of an overall CHD prevention programme, including appropriate interventions, based on case finding of people with increased risk of CHD, within a higher and lower priority group.

The higher priority group will comprise people with one or more of the following:

- a first degree relative under the age of 50 with myocardial infarction
- a family history or clinical evidence of one of the hyperlipidaemias
- a personal history of diabetes, or CHD under the age of 65.

The lower priority group, to be included as and when possible, comprises adults with two or more of the following current risk factors:

- smoking
- hypertension
- obesity
- inadequate physical activity.

Local policies should be defined within this framework, suited to local circumstances and capable of progressive implementation as and when resources and existing local arrangements permit. Policies must take into account that there is a range of views not only on cholesterol testing, as evident from 3-7 above, but also on when and how to manage raised plasma cholesterol.

Method and place of testing

9. Local policies will need to recognise that people can now obtain a plasma cholesterol test in different ways, with or without professional involvement:

- sample by venepuncture taken within general practice or hospital setting and sent to hospital laboratory for analysis
- sample by finger prick analysed by "near-patient testing" (NPT) equipment, whether by GP, community pharmacist, or in a variety of retail and other locations
- sample by finger prick analysed by the patient using a self-testing kit.

10. Factors which will affect decisions on method and place of testing include:

- appropriateness of test and intervention: those involved in implementing the local policy must be both committed to and, if necessary, trained to apply the criteria for testing and to undertake intervention (see paragraph 13).
- quality of test: laboratories (both NHS and private) should be able to give quality assurance by virtue of their involvement in external quality assessment. Any NPT method must adopt similar good practice.
- cost-effectiveness: costs of tests may vary locally. Two recent research projects (see Appendix D) have shown that NPT for cholesterol is unlikely to be cost effective in general practice except in the largest practices.

11. It is likely that there will be cholesterol tests on offer to the public outside the agreed local policy. People availing themselves of these tests are taking an interest in their health which can be encouraged. Authorities might aim to strike a balance between avoiding endorsement of inappropriate testing and yet at the same time using any worthwhile opportunities for responding to people's interest in heart health, by encouraging the provision of information and support. In any event, the policy will need to provide for people seeking authoritative advice – particularly from their GP – about test results which they have obtained on their own initiative.

12. Various factors will affect the decision whether and when to seek a retest. These include age, presence and severity of risk factors, where the original test was performed and what intervention is planned. However, for those with high plasma cholesterol levels, who may need therapeutic intervention, it is necessary to validate the plasma cholesterol test by repeating it at least once in a reliable laboratory as well as performing a lipid profile before intervention is started (see paragraph 13). This is because of variability of the test itself and biological variation in an individual's

plasma cholesterol level.

Interventions for raised plasma cholesterol

13. Local policies will need to include guidelines on the combinations of both cholesterol levels and other risk factors at which different interventions should be considered. These guidelines will need to cover referral by GPs for hospital consultation and also the nature of interventions themselves, for example, how is dietary advice to be provided. Key points are:

- Advice to individuals should be given on a lipid lowering diet, as well as advice on the management of any other risk factors identified. In obese or overweight patients, the first action should be to lose weight.
- Drug treatment should only be given in particular circumstances. These will mainly include patients with familial hyperlipidaemia but also those whose cholesterol level does not fall with a lipid lowering diet under the supervision of a dietician after 3 – 6 months. Drug therapy should be added to dietary management, not substituted for it.
- Most cases of hyperlipidaemia can be managed in primary care. Referral to a lipid clinic should be restricted mainly to patients with severe hyperlipidaemia, and to patients with hyperlipidaemia which has not responded or who are intolerant of treatment with lipid lowering drugs. Patients with established renal or vascular disease or diabetes may also benefit from referral.

Summary

14. In summary:

- A case finding approach rather than systematic screening is recommended.
- Testing should be focused on priority groups.
- Testing techniques should be subject to external quality assessment.
- Dietary modification should be the mainstay of treatment.
- Attention to other risk-factors such as obesity, hypertension and smoking are essential in the management of patients with raised plasma cholesterol.

Within this framework, local guidelines on plasma cholesterol testing and subsequent interventions need to be drawn up at purchasing authority level in consultation with local consultants and GPs.

Appendix C

PHYSICAL ACTIVITY

Introduction

1. There is now a well established association between high levels of regular physical activity and low incidence of coronary heart disease. This has been affirmed by an analytical review of 43 reports published between 1953-1985. Since then, further studies have been published and these also strongly confirm the protective role of physical activity against coronary heart disease.

2. Physical inactivity was found in these studies to be as important a risk factor for CHD as hypertension, raised blood cholesterol or smoking. Given the prevalence of inactivity, it is a remediable risk factor of great importance.

3. There is substantial evidence that regular physical activity is beneficial to many aspects of physical health as well as psychological health, (see table, page 110).

How physical activity affects CHD and stroke

4. The beneficial effects of physical activity on CHD occurs in a variety of ways:

Direct Effect

Regular physical activity promotes a lower heart rate and blood pressure, which means that the heart works less hard for a given level of activity.

Cholesterol and Blood Lipids

The profile of blood lipids is improved (towards a higher ratio of HDL to LDL). Total cholesterol levels may also be reduced.

Hypertension

Hypertension can be controlled to some extent by physical activity. This effect has been shown in several trials in adults with mild or labile hypertension, and average reductions of 13mm Hg in systolic blood pressure were achieved with regular, moderate rhythmic exercise. Similar affects have been recorded in severely hypertensive women. Regular physical activity may also have a protective role by inhibiting the rise in blood pressure observed in middle age in western societies.

Obesity

Regular physical activity helps in weight control as well as reduce obesity. Weight loss is achieved by an increase in energy expenditure which does not lead to a corresponding increase in energy intake.

Diabetes

Moderate physical activity appears to reduce the risk of developing diabetes in both normal weight and obese middle aged people. Physical activity is also beneficial to those who already have either maturity on-set or insulin dependent diabetes, both by increasing sensitivity of muscle cells to insulin and increasing insulin secretion after activity.

Blood Clotting

Moderate physical activity protects against blood clot formation. If it is taken regularly this effect may be of long term benefit.

Allied Dunbar National Fitness Survey

5. The Allied Dunbar National Fitness Survey is a unique study of physical activity patterns and fitness levels of the English population.

6. The survey was designed to measure the activity and fitness levels of the adult (16 years of age and over) English population. It did this by surveying a representative sample of 6,000 adults selected at random throughout the country. Of those 4,300 adults who completed the home interview, 62% attended for the physical appraisal section of the survey at a specially equipped mobile laboratory. Some of the more elderly and infirm were tested on a reduced set of measurements in their homes.

7. The survey measured many aspects of behaviour, attitudes and beliefs, and included other lifestyle behaviours and health status as well as levels of participation in sport and in physical activity generally. The main findings of the study were:

- that in terms of physical activity over 7 out of 10 men and 8 out of 10 women fell below their age appropriate activity level necessary to achieve a health benefit

- although most people knew that physical activity is beneficial to health, many believed that they were fitter or more active than they really were.

Increasing physical activity

8. As stated in the Health of the Nation White Paper, targets have not yet been set in this area. However, a task force is being set up to advise on this issue. The findings of the Allied Dunbar National Fitness Survey will form the basis for discussion and provides baseline statistics from which targets can be set.

9. A current guideline from the Health Education Authority and Sports Council for the amount of physical activity needed to maximise health benefits is:

> "Exercise regularly for a minimum of three times a week and for at least twenty minutes per occasion but building up to this gradually."

10. The physical activity needed to achieve health benefits may not have to be vigorous, particularly for the more inactive or elderly where more moderate activity levels than specified above may well be sufficient. Most adults and children in England would benefit from increasing their current activity levels.

Types of intervention

11. Interventions could include:
    - education to help people understand how active they really are
    - education as to the type of activity that is beneficial for CHD, and is also safe
    - encouraging people to build up their activity levels in easy and manageable stages
    - encouraging being active as a way of life, for example, by walking up stairs rather than taking the lift, walking to local shops rather than taking the car or the bus
    - encouraging provision of safe local environments for walking, jogging and cycling
    - encouraging liaison between GPs and local leisure and recreation facilities to offer patients a safe and effective activity programme
    - action on physical activity planned in association with action to achieve the dietary targets.

Achieving the interventions

12. Tackling inactivity, as with other risk factors for CHD and stroke, cannot be done by purchasing authorities alone. The following list illustrates some of the possible interventions, and many of them need the development of healthy alliances between purchasing authorities and other organisations. However, health authorities, as employers, can initiate changes within their own organisations:

- advice by primary health care team on lifestyle and "prescription" for exercise
- provide a safe local environment for walking, jogging and cycling
- increasing affordable, accessible and attractive exercise facilities
- cycling mileage allowances for employees
- encourage exercise breaks at work
- provide showers at place of work for those who exercise at work or on route
- secure parking facilities for bicycles
- access to suitable activities for people with impairment or disabilities
- encouragement to use recreation facilities for those detected in primary care as being at increase risk of CHD
- provide incentives to improve take up of physical activity negotiated with local recreation facility managers
- encourage the "active habit" to be cultivated in childhood.

ALLIED DUNBAR NATIONAL FITNESS SURVEY

The Physiological and Psychological Basis for Health Benefits

Physiological and psychological improvements and benefits to health	Prevention/association of disease
Functions which can be enhanced by regular physical activity are:	**Thus regular physical activity:**
1 Cardiovascular function	
i cardiac performance/myocardial work	• ameliorates the effects of age and chronic disease (including CHD)
ii arterial blood pressure regulation	• reduces BP in mild hypertension; attenuates age dependent rise in BP
iii cardiovascular & sympatho-adrenal response to acute exercise	
iv electrical stability of heart muscle	• reduces risk of cardiac arrhythmias and possibly of sudden death
2 Skeletal muscle	
i metabolic capacities nutrient blood supply contractile properties	• ameliorates the effects of age and chronic disease on reserve capacity for exercise, increasing endurance and reducing fatigue
ii strength	• reduces risk of injury • amelioartes the effects of muscle disease
3 Tendons and connective tissues	
i strength ii supportive function iii increases joint stability	• reduces risk of injury, especially with age, and muscle disease
4 The skeleton	
i maintenance of bone mass ii adjustment of structure to load	• 'prevents' osteoporosis and fractures
5 Joints	
i lubrication ii range of movement iii maintenance of flexibility	• avoids limitation of movement • limits effects of degenerative arthritis
6 Metabolic functions	
i body weight control regulation of energy balance	• 'prevents' obesity-related disease and excessive weight gain
ii insulin sensitivity and carbohydrate tolerance	• improves carbohydrate tolerance; ameliorates late-onset diabetes
iii lipid and lipoprotein metabolism	
iv inhibition of blood clotting processes	• 'prevents' coronary heart disease • counters acute precipitants of heart attack
7 Psychological function	
i mood ii self-esteem iii psychomotor development iv memory v stress	• reduces mild anxiety and depression • influence mood favourably • contributions to the quality of care for the mentally handicapped • can improve memory in the elderly • can ameliorate stress-related conditions

Appendix D

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