THE ANNUAL REPORT OF THE
DIRECTOR OF PUBLIC HEALTH

1991/92

GREATER GLASGOW HEALTH BOARD
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DIRECTOR OF PUBLIC HEALTH

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# Annual Report 1991/92

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*Note: The image provided is a page from a document, but the content is not visible clearly enough to transcribe accurately.*
PREFACE

Greater Glasgow: a special case?

Unless there is a massive and unexpected change in current trends, inequalities in health within Greater Glasgow and between Greater Glasgow and the rest of Scotland are likely to increase. No apology is made for returning to the theme of inequalities in health in this year's report even though it was highlighted in previous years because it is the most striking and important aspect of health in Greater Glasgow. Chapters 16 and 17 describe some of the imaginative projects the Greater Glasgow Health Board and others have initiated to confront the problem. Nonetheless, much more needs to be done.

What this year's report says

Previous reports of the Director of Public Health have presented detailed data relating to the health of Greater Glasgow. The approach this year is more descriptive and analytical. Section I (Chapters 2 to 4) describes the complex multidimensional nature of health and analyses the important determinants of health. It is argued that lifestyle factors are important but that, in Greater Glasgow, social and economic influences are probably more important and interact with lifestyle factors (where you live profoundly influences how you live). This is evident from an analysis of the five local government districts within the Health Board's area. Two districts (Bearsden and Milngavie, Eastwood) have socioeconomic and health indices as good as the best areas within Europe. Strathkelvin has intermediate levels of health but Glasgow and Clydebank have levels of health which are comparable with many cities in what was once Eastern Europe.

Doctors, nurses and other health care professionals within Greater Glasgow have to deal with the heavy burden of disease which is the result of the influences described above. This is an increasing challenge as a declining population in Greater Glasgow and the move towards parity in funding for health boards in Scotland means that there has been and will continue to be decreasing revenue for health services in Greater Glasgow. Consequently, it is essential that priorities for health care are based on a comprehensive assessment of health and health care needs. This process of health needs assessment and priority setting is described in Section II (chapters 5 to 9).

Section III (chapters 10 to 14) outlines some aspects of the recent National Health Service reforms and argues that they represent an opportunity to improve health status and standards of health care within Greater Glasgow.

Section IV (chapters 15 to 17) defines the Health Board strategy for improving health and illustrates the wide variety of projects and other initiatives which are being taken to address health problems in Greater Glasgow.

Looking to the future (Section IV, chapters 18 and 19) there is some considerable cause for optimism but also a severe warning. The levels of some important diseases (e.g., heart disease, accidents, stroke, respiratory disease) are expected to decline in Greater Glasgow by the end of the decade but the levels of improvement are likely to be significantly less than for the rest of Scotland. Once again, relative deprivation accounts for much of Greater Glasgow's shortfall but the end result, if the predictions are accurate, will be an even wider health divide between Greater Glasgow and the rest of Scotland.

What the report does not consider

This report is concerned with health and its determinants. Other documents deal with the Board's organisational and financial affairs and its strategic plans. Consequently, these subjects are only considered when they impinge on issues relating to health status.
A call for action

Chapter 20 makes a series of recommendations to confront the issues outlined in previous chapters. Some may consider it the duty of a Director of Public Health only to report on health and its determinants and leave the policy responses to others. Since many of the determinants of health are social and economic there is a real danger of straying into political issues or areas beyond the professional competence of public health doctors. Others might judge determinants of health too complex and current health trends so well established that calls for action are considered unrealistic or futile. Nonetheless, to advocate for specific actions to be taken by a wide range of individuals and bodies who are able to influence health is very much within the remit and tradition of Public Health. Furthermore, the success of many past initiatives and the relative speed with which health related behaviours change and health status improves gives hope for further improvements in health within Greater Glasgow.

A realistic response to GGHB's health problems

As has been argued above, many of Greater Glasgow's health problems require an alleviation of relative deprivation if lasting improvements are to be achieved. However, health is improving in many respects and there is a great deal which can be done to maximise existing positive trends.

First, Greater Glasgow needs to be specially targeted if health inequalities are to be reversed. Although spending on some traditional forms of medical care should decrease for perfectly justifiable reasons, a strong case can be made for reinvesting health service savings within the Greater Glasgow area to confront some of the social, economic and behavioural determinants of health outlined in the text.

Second, within the Board's area much more could be done to improve health in the broadest sense by cooperative working between local government, the business and commercial sector, the voluntary sector, the academic and educational sector and the health board. Healthy Cities has achieved much but there is not yet full commitment to joint action to improve health or a common vision with agreed priorities. Old rivalries between organisations could be put to one side in favour of a genuinely cooperative approach.

Third, the assessment of health and health care needs should become much more comprehensive and participative. One way of achieving this is to decrease the size of the area for analysis by considering the city as a series of small localities. This approach could allow local residents and professionals to speak for themselves. In this way locality plans for improving health status and purchasing health care could be developed. The Board has already outlined its intention to adopt this approach but early implementation would ensure that services are better matched to true need.

Chapter 20 (pages 151 - 154) outlines a framework of action by central government, the health board, local government and voluntary organisations which should lead to an improvement in the health of Greater Glasgow to a more acceptable level relative to Scotland and other countries. The main components of this framework are:

**Health Board**

* Continue to strengthen programmes for the prevention of disease and promotion of good health.

* Early implementation of locality planning.

* Develop and implement the concept of the health promoting hospital and health centre.
Preface

**Intersectoral Action**

* Increase commitment to the Healthy Cities movement.

**Local Government**

* Continue efforts to improve housing stock and reduce road and other accidents.
* Implement the health promoting school/institution programme.

**Central Government**

* Make the burden of Greater Glasgow’s health problems the subject of special targetting.
* Make healthy choices easier choices.
* Confront the effects of deprivation on health.

**Voluntary Organisations**

* Contribute to the Health Board’s planning processes, with encouragement from the Board.

Health care professionals will have to show great adaptability in the forthcoming years. Patterns of care will change (for example, more day surgery, increased care in the community, greater consumer orientation) with many potential benefits for patients. However, decreased health board revenue, even with a small population, will require a more appropriate and efficient use of acute hospitals while services for priority groups (eg, the elderly, the mentally ill etc) should change radically as more care is provided outwith traditional long stay hospitals. Health care professionals will require flexibility to accommodate these changes while managers will need great skill and determination to achieve efficiencies, meet waiting list targets, ensure improved quality of care, and promote a more consumer orientated approach while continuing to shift the relative balance of expenditure towards priority care groups and longer term prevention and health promotion.

*Dr G D Forwell*

Director of Public Health

*Dr J Womersley*

Editor of Report
During 1991 the number of births in Greater Glasgow exceeded the number of deaths for only the third time since 1974, and the difference (an excess of 659 births) was much greater than in 1988 and 1990. Infant mortality and stillbirth rates maintained the low levels achieved over the previous two to three years and continued to be almost exactly the same as the average for Scotland. Rates for therapeutic terminations of pregnancy and illegitimate births continued to increase, but the proportion of births to teenage mothers maintained its decline.

It has not been possible to include any information for the adult population such as trends in standardised mortality or hospital utilisation because of the continuing delay in the availability of small area population data for the census of 1991.
VITAL STATISTICS FOR 1991

During 1991 there were 12,763 live births to residents of the Greater Glasgow Health Board (GGHB) area, and 12,114 deaths (fig 1). The number of births was 363 greater than in 1990 and 538 greater than in 1989. The number of deaths was lower than for any year ever before - partly reflecting the decline in population.

Infant mortality during 1990 was 7.4 deaths per 1000 live births, virtually identical to the lowest ever rate of 7.3 achieved in 1990 (fig 2). The corresponding value for Scotland was 7.1 - the lowest recorded, and 0.6 points below the rate for 1990. The stillbirth rate was 5.3, compared with 5.7 in 1990 and 4.9 in 1989, the lowest recorded level (fig 3). The stillbirth rate for Scotland was 5.5, compared with 5.3 in 1990 and 5.0 (its lowest level) in 1989.

The stillbirth rate for the GGHB area has remained fairly constant (between 5.0 and 6.0) since 1982 whereas the infant mortality rate has continued to fall. Infant mortality declined by some 50% between 1974 and 1986 both for the GGHB area and for Scotland as a whole. The values for the GGHB area have also improved relative to Scotland: whereas in the 1970s infant mortality was consistently higher in the GGHB area, during the 1980s it was usually lower than for Scotland.

In 1991 there was again an increase in the rates for terminations of pregnancy (fig 4). Compared with 1990, the rates rose from 135 to 146 terminations per 1000 live births for women resident within the GGHB area, and from 155 to 167 terminations per 1000 live births for Scotland as a whole.

The proportion of births which are registered as 'illegitimate' (ie, outwith marriage) continued its increase, reaching 35.9% in 1991, compared with 34.7% in 1990 (fig 5). There is considerable geographical variation in the rate, which exceeds 50% in some areas. The proportion of births to teenage mothers in GGHB continued its fall from 14.6% in 1975 to reach 9.1% in 1991; comparable values for Scotland are 12.2% and 8.2% (fig 6).

The number of deaths in preschool children (aged 1 to 4 years) fell from an average of 22 each year over the period 1982-88, to 18 in 1989 and to only 13 in 1990. Unfortunately the number increased again to 21 in 1991. For older children aged 5 to 14 years deaths fell from an average of 34 each year over the period 1982-88, to 22 in 1989, rose to 28 during 1990 and fell again to 22 during 1991. In this older group the proportion of deaths attributed to motor vehicle accidents fell from 32% for the period 1982-88 to 23% for 1989 and then to 18% for 1990, but rose again to 23% during 1991. The main causes of death in childhood are shown in figs 7(a) and (b).

Although infant mortality in the GGHB area is now much the same as that for Scotland as a whole, the death rate at older ages is considerably higher than for Scotland. After making allowances for differences in population structure in terms of age and sex (ie, after standardisation) the death rate for people of all ages who live in the GGHB area is about 8% above the average for Scotland. However for younger people (aged 0-64 years) the standardised mortality (death) rate (SMR) for 1990 was 20% above the Scottish average, and this adverse difference is increasing. Fig 8 shows that the SMR for this age group fluctuated around 12 to 14% above the Scottish average throughout the period 1976 to 1985, but since then has increased progressively.

Surprisingly, the deterioration in mortality rates in younger adults relative to Scotland has occurred only in men. Whereas death rates for younger women have remained fairly constant about 12% above the Scottish average throughout the period 1975 to 1990 with only the suspicion of a more recent increase, those for men have increased considerably since 1985, from about 21% to 26% above the average for Scotland (see chapter 5, fig 7).

Unfortunately it is not possible to calculate SMRs or even crude death rates (apart from infant mortality) for 1991 because census information is still not available and no mid-year population estimates for 1991 have been published.

There were 100 deaths from suicide and self-inflicted injury among GGHB residents during 1991, compared with 97 during both 1990 and 1989. The crude death rate of 9.6 per 100,000 population is much the same as it has been since 1979 and for 1991 was slightly below the Scottish average (10.5). Deaths from motor vehicle accidents remain lower than the average for Scotland, the rates per 100,000 population being 9.2 for 1989 (86 deaths), 9.3 for 1990 (also 86 deaths) and 8.3 for 1991 (77 deaths) for the GGHB population. The corresponding values for Scotland are rates of 10.9 (1989), 10.7 (1990) and 9.9 (1991).

Home accidents unfortunately continue to occur in Greater Glasgow at a higher rate than for Scotland generally. The rates per 100,000 population for 1989 and 1990 respectively were 12.8 (119 deaths) and
10.1 (94 deaths) for GGHB compared with rates of 9.8 and 9.0 for Scotland as a whole. There were 97 deaths from home accidents in GGHB residents during 1991.

Between 1991 and the year 2001 the population of the GGHB area is expected to decline by 5% from 917,100 to 867,100 (table 1). There will be a decline in the actual numbers of people in all age groups except in those aged 85 years and over for whom there is an expected increase of 11% (from 12,000 to 13,300) and possibly in children (although this will depend on changes in the birth rate which are impossible to predict).

Compared with the changes observed over the last decade, the main projected differences for the next decade are a marked slowing in the rate of increase in very elderly people, a marked slowing and possible reversal of the decrease in the numbers of children, and a decrease rather than slight increase in people aged between 75 and 84 years.

Table 1


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<td>174,000</td>
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<td>12,000</td>
<td>13,300</td>
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<td>917,100</td>
<td>867,100</td>
<td>-7.1</td>
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<td>142,400</td>
<td>131,200</td>
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Figure 1
Births & Deaths
GGHB Residents, 1974 - 91

Figure 2
Infant Mortality
Scotland, GGHB & Glasgow City, 1974 - 91
(rates per 1000 live births)
Figure 3
Stillbirth Rates
Scotland, GGHB & Glasgow City, 1974 - 91
(rates per 1000 live and stillbirths)

Figure 4
Therapeutic Terminations of Pregnancy
Scotland & GGHB, 1976 to 91
(rates per 1000 live births)
Figure 5
Illegitimate Birth rates
Scotland, GGHB & Glasgow City, 1974 to 1991
(percentage of live births)

Figure 6
Births to Teenage Mothers
Percentage of Total Births (Live & Still), 1975 to 1991
Figure 7(a)
Deaths of Children aged 1 to 4
by Primary Cause, 1991

Total Deaths = 21

Figure 7(b)
Deaths of Children aged 5 to 14
by Primary cause, 1991

Total Deaths = 22
Figure 8
Standardised Mortality Ratios (SMRs) for GGHB
0-64 year age group, both sexes, all causes
(Scotland=1.0)

SMR (3 yr average)

1.24
1.2
1.16
1.12
1.08
1.04

year (midpoint of 3 years)

76 77 78 79 80 81 82 83 84 85 86 87 88 89
SECTION 1 - HEALTH AND ITS DETERMINANTS

CHAPTERS 2 TO 4

What this section says:-

* Health is a complex concept.

* Many interacting factors determine health status in Greater Glasgow.

* Health is unevenly distributed within Scotland and particularly within Greater Glasgow.

* Relative deprivation is the key factor and accounts for almost all of the variation in health within Greater Glasgow.
SECTION 1 - HEALTH AND SAFETY

CHILDREN’S TOY

Weft thread tension was

fixed in a computer controlled

facility at 1.63% of the nominal

weft thread tension. The facility

includes a computer control system

and a data logger for monitoring

and recording the tension levels.

Health and safety measures were

implemented for the protection of

workers and the environment.

Procedures were established to

ensure that safety measures were

complied with.

(continued)
Health is a complex concept, and a wide range of measures is necessary for its assessment including the subjective feelings of people themselves. The success of the health service is often judged in terms of hospital provision, operations and treatments; in fact the need for these measures reflects lack of success in improving health. In order to measure health in a useful way indicators are needed not only of the health of individuals and of healthy behaviours but also of environmental factors which determine health both directly and through lifestyle choices. These include a safe, clean and warm home and working environment, adequate access to local services, freedom from the more harmful aspects of stress, avoidance of smoking and other addictive practices, and opportunities to eat a healthy diet and take reasonable exercise.
HEALTH STATUS AND ITS ASSESSMENT

It is impossible to derive a single measure of health status. Health status has been likened to "fruit in a bowl. It is impossible to add and subtract its various components in order to derive an overall measure". (Ware et al, 1981).

A frequently used definition of health has been that of the World Health Organisation (1948) - "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". However social factors are important influences on health, and so it is probably preferable to exclude these from the definition of health; it is more important to discuss social factors as major determinants of health.

Black (1980) has pointed out that "conceptions of health and illness vary among different groups within a single society and between societies as well as in any single society over time". There can therefore be no absolute measure of health.

Blaxter (1990) has investigated the many and diverse concepts of health held by the general public, and these include:

- Not being ill (never experiencing symptoms or using medical services).
- The absence of disease, or being able to cope with disease or misfortune.
- A robust constitution and temperament.
- Good lifestyle and habits.
- Physical fitness.
- Energy and vitality (being lively, alert and enthusiastic).
- Good social relationships.
- Satisfactory physical and mental functioning.
- Psycho-social well-being (being confident, proud, relaxed and in a happy state of mind).

An assessment of the health of an individual or community should therefore include:

(a) Positive aspects of health such as physical and mental well-being, physiological functioning and quality of life.

(b) Measures of disability, morbidity and mortality and in addition

(c) An analysis of the socio-economic and environmental factors influencing health.

Health may be assessed in subjective terms as well as by objective measures. A disabling impairment in an athlete might be no more than an inconvenience to most people; and the normal functional impairments of aging are quite compatible with good health in older people. For this reason self-assessment of health status may be at least as reliable as clinical, biochemical and physiological indices of health (Epstein, 1990).

Alwyn Smith (1992) has proposed the definition "that people are healthy to the extent that they are able to meet their obligations and to enjoy the rewards associated with membership of their community". He suggested that two strategies were required in the pursuit of public health: measures to protect and promote the capabilities of individuals to function in the widest diversity of social contexts (the traditional approach), and the development of a society which permits the successful functioning of individuals of the widest diversity of capabilities. This second approach would require society to redress the disadvantages incurred due to incapacity by discriminating in favour of disabled people.

The success of the health service still tends to be judged in terms of numbers of patients treated or operations performed, on the numbers of doctors and nurses, or an increase in expenditure on the health service. This leads us to believe that we are ill and are made well, whereas it is nearer the truth to say that we are well and are made ill (T McKeown, 1976) - for example by poor social and environmental amenities and poor nutrition. The belief that greater provision of drugs, surgery and other treatments is a measure of a successful health service is analogous to the belief that the answer to mental illness is to build attractive asylums in every community (Cannon, 1992).

Good health should not be equated with a large volume of health service activity or with the number of hospitals. Rather good health is associated with a safe, clean and warm home and working environment, adequate access to local services, freedom from the more harmful aspects of stress, avoidance of smoking and other addictive practices, and opportunities to eat a healthy diet and take regular exercise. Unfortunately however we are under constant pressure to make unhealthy choices. Most people have little choice about the way they live: tobacco advertising,
the food which is most readily available, vehicle exhaust fumes, unemployment and the frustration and stresses of daily living all predispose to ill health and premature mortality.

We are undoubtedly much healthier as a population than we have been since statistical evidence began to be collected in the Bills of Mortality of the mid 18th century. Life span has increased very little if at all since the three score years and ten of biblical times. What has changed is that more of us are living to reach this life span. It is clearly important to encourage this trend to continue; but in doing so we must strive to ensure that the onset of disability is delayed until as late in life as is possible, and that when disability becomes inevitable, resources are available to minimise its ill effects.

**Conclusion**

The health of a population should be assessed in terms of positive physical and mental health and of the environmental and lifestyle factors which encourage good health. Numbers of hospitals and other institutions, or measures of activity such as numbers of people treated, are not appropriate for assessing health.
The probability of having a good overall level of health is about twelve times less in people who experience the worst material and social deprivation and take little exercise than in those with none of these three adverse factors. Material deprivation has a slightly greater impact on health than social deprivation, but both forms of deprivation appear to be more important than lifestyle factors. However, lifestyle does have a very important influence on health, and it is likely that if just five factors (smoking, high cholesterol, obesity, lack of exercise and heavy alcohol consumption) could be eliminated, then death rates would fall by 25%. All these risk factors are potentially reversible, and the health service has a major part to play in reducing their prevalence. The alleviation of material deprivation as expressed in poverty, unemployment, poor housing and adverse environmental influences is not an NHS responsibility; however unless this is accepted as a major political objective there will be no possibility of reducing health inequalities or of effecting a major improvement in the overall health of the population to a satisfactory standard.
DETERMINANTS OF HEALTH STATUS

The traditional view that improved health over the past 200 years was largely the consequence of a more widely available and more scientifically based medical practice is now considered to be untenable (Alwyn Smith, 1992).

Morris (1982) described the principal determinants of health as follows:

- Family history (genetic).
- Standard of living: eg, poverty, unemployment.
- Lifestyle: eg, smoking, lack of exercise.
- Environment: eg, housing.
- Nutrition.
- Health Services.

These other determinants of health interact, and a simplified model of the determinants of health status may be illustrated schematically as follows:

These determinants fall into three groups -

- **Non reversible** (eg, age; sex; family history).
- **Potentially reversible** (in ideal circumstances) (eg, deprivation; poor housing; unemployment; the environment; education).
- **Reversible** (eg, cigarette smoking; raised blood pressure; raised serum cholesterol; lack of exercise; obesity; poor nutrition)

1. **Age**

Data from the Health and Lifestyle Survey (Blaxter, 1990) and the General Household Survey for 1988 shows that with exception of the measure of psychosocial malaise, the prevalence of illness (both long-standing and acute) and disability increases dramatically with age. Health declines with age, being "like a stock of capital with which we are initially endowed, and which naturally depreciates through time, and at an increasing rate in later life" (Williams, 1978).

The numbers of people aged 85 years and over is projected to double between 1991 and the year 2029, and this will clearly reduce the overall health status of the population and have a major impact on the need for health and social services.

2. **Sex**

Blaxter (1990) found that at all ages women describe more illness than men. This may be due to women finding it easier to admit to symptoms, or possibly because women are genuinely more likely to suffer more minor illness and dysfunction. Fitness and the presence or absence of disease however do not differ greatly between the sexes.

3. **Family History**

Some diseases such as haemophilia and cystic fibrosis are genetic in origin. The endowment of physical and mental health 'capital' at birth will also be considerably influenced by genetic factors.

4. **Material Deprivation**

Material deprivation is positively associated with ill health (both subjectively and objectively measured), poor psycho-social health and decreased fitness. A variety of components of material deprivation may be described, each of which has an influence on health:

(a) **Poverty**: Adequate accommodation, food and warmth are prerequisites of good health but poor families are likely to live in unhealthy houses and to cut back on the amount of food and fuel which they purchase - or to use materials which are cheaper but less healthy or less efficient.
"Poor people are denied access to many of the activities and services which are widely taken for granted. They experience poverty of restricted opportunities and inhibited life chances for themselves and their children. In addition, the living standards of poor people are often so low that they are forced to go without the most basic of essentials, such as adequate housing, clothing and nutrition"; (Becker, 1991).

Poverty is by far the most important cause of material deprivation, and material deprivation is associated with poor health in people of all ages.

(b) **Unemployment:** The OPCS Longitudinal Survey shows that after standardisation for age and social class, mortality rates in men who are seeking work are almost 25% higher than for all men below retirement age. The wives of unemployed men have mortality rates about 20% above the average. For both sexes the highest standardised death rates are for accidental deaths, suicide and lung cancer. There is also a strong association between unemployment and poor psychological health.

(c) **Housing:** Both physical and mental well-being are influenced by housing - not only by the characteristics of individual houses, but also by the characteristics of the immediate environment.

Dampness (caused either by entry of water from outside or by internal condensation) and cold (due to inadequate heat and usually also to inadequate insulation) are now known to be associated with respiratory disease in children. If mould is also present then illness is more likely and more likely to be severe. There is a dose-response relationship between the amount of mould, and the severity of symptoms such as wheeze, sore throat, running nose, irritability, persistent headache, fever and high temperature (Platt et al, 1989). Furthermore these childhood symptoms are associated with increased morbidity and mortality in later life. There is also a significant dose-response relationship in adults between damp and mould and symptoms such as aching joints, nausea and vomiting, blocked nose, constipation, breathlessness, and 'bad nerves', after controlling for differences in socioeconomic status and smoking (Platt et al, 1989).

Overcrowding in houses is associated with infectious diseases, childhood accidents, gastroenteritis, skin disorders and respiratory infections (BMA, 1987).

Lack of privacy and other stresses are also detrimental to mental health and reduce the ability of families to cope. Children living in houses which are noisy, cold and overcrowded or in a poor state of repair are more likely to wet the bed, have temper tantrums or to be unhappy and unstable; and their parents are more likely to be tired, have 'bad nerves', headaches or to feel depressed (Hunt, 1990).

In Greater Glasgow, virtually all houses now have basic amenities such as an indoor toilet, bath and hot and cold water, but many houses still have open fires instead of central heating, thus leading to a risk of fire; others have loose floor-coverings and glass doors, predisposing to other forms of accident.

(d) **The Environment:** The immediate environment appears to have an influence in addition to housing itself. Thus people from 'bad' housing areas report poorer health, more long-standing and recent illness and more symptoms of depression than those living in 'good' areas (Whitehead, 1988). Living in blocks of flats - particularly high up - is also detrimental to health in some circumstances: respiratory disease in women and children and psychoneurotic disorders in women are associated with lack of facilities for children to play, lack of social contact, poor local facilities (including transport), vandalism and fear of criminal attack (King’s Fund Institute, 1992).

Specific hazards also cause ill health. It has been said that there are no dangerous substances only dangerous concentrations. Thus a wide variety of potential hazards have to be kept under control in the home, at work and in the wider community. Agencies which are responsible for monitoring or controlling such exposures include Environmental Health Departments, Regional Chemists, the River Purification Boards, Her Majesty’s Industrial Pollution Inspectorate and the National Radiological Protection Board.

There are still many households with lead piping; in some of these houses lead
concentrations in tap water are unacceptably high and in a much larger number the water lead content is near the current legal limit. Exposure to such levels of lead is associated with a small reduction in performance in intelligence and attention tests in school children.

There is increasing concern nationally about the potential effects on respiratory health of vehicle exhaust fumes. Such effects are difficult to measure. What is certain, however, is that any effects will increase substantially over the next two decades as a result of projected trends in car ownership in Glasgow. This trend will more than outweigh the effect of such measures as fitting catalytic converters to new cars. There is a need for joint action between GGH, Glasgow District and Strathclyde Region in order to review this issue.

Air pollution is particularly dangerous for those at the extremes of life, pregnant women, those with heart or respiratory disorders and people such as parking wardens and traffic police and others who work in heavily polluted areas.

(e) Education: Education is positively associated with good health. One reason for this is that it provides people with skills required to control their health - for example the ability to assimilate information from books, magazines, the mass media and health workers so that they can provide themselves with a better diet, find more economical ways of heating their homes, and minimise risks at home, in leisure pursuits and at work. Education also provides access to better jobs, a higher income and therefore to a better and healthier standard of living. Better educated people are also more likely to spend their time in healthy pursuits and to have better social and psychological adjustment to their environments.

5. Social Deprivation

(a) Social support: Blaxter (1990) has described a close association between lack of social support and both physical illness and psycho-social health. The availability of a friend or other support is associated with a reduction in stress and depression, improved recovery from life threatening illness, and greater efforts to seek help.

(b) Social integration: Employment, marriage and parenthood are associated with good physical health both in men and women. Relationships with other people provide emotional support and practical assistance in coping with the difficulties of life (BMA, 1987). Conversely the absence of social and community ties is related to premature mortality. People classified as having very low social integration in terms of social roles, social contact and community integration (living in an area for a long time and/or feeling or being part of it) are over four times as likely to have poor health as those classified as having very high social integration (King's Fund Institute, 1992).

6. Lifestyle and behaviour

(a) Smoking: Smoking is the largest single preventable cause of death (Health of the Nation, 1992) and contributes to 34% of all deaths in adults under the age of 65 years. There is a clear relationship between socioeconomic circumstances and the prevalence of smoking. In the more deprived parts of Glasgow over 50% of the mothers and fathers of newborn children are reported by the health visitor to be regular smokers, and there has been little change in reported prevalences over the period 1986 to 1991.

(b) Alcohol consumption: Heavy alcohol consumption predisposes to cirrhosis of the liver, cancer, road traffic accidents and high blood pressure.

(c) Exercise: Regular physical exercise increases life expectancy; reduces the risk of coronary heart disease; reduces blood pressure, obesity, diabetes, osteoporosis and the risk of bone fracture; and enhances psychological well-being by improving self-confidence and self esteem and by reducing anxiety and depression.

(d) Diet: Jacobsen et al (1991) estimates that 35% of cancer deaths may be due to diet, and the amount of saturated (mainly animal) fat in the diet is an important determinant of cholesterol level and hence of the risk of heart disease. Hahn et al (1990) estimated the reduction in age-adjusted mortality rates from the nine most prevalent chronic diseases which would occur if the main risk factor for each disease were eliminated. The diseases
were stroke, coronary heart disease, diabetes, chronic obstructive lung disease, lung cancer, breast cancer, cervical cancer, colorectal cancer and chronic liver disease - together accounting for 52% of deaths in the United States in 1986. Analysed singly, cigarette smoking was estimated to account for 33% of deaths from these causes, obesity for 24%, lack of exercise and high cholesterol each 23%, hypertension 21% and diabetes 8%. The five principal risk factors (smoking, high cholesterol, obesity, lack of exercise and heavy alcohol consumption) were together estimated to be responsible for 47.5% of the deaths from these causes.

Elimination of these risk factors would be expected to increase US life expectancy (both sexes) by 4 years - to 77.6 years, raising it to second place after Japan and the same as that for Switzerland.

Conclusion

Investigations by the King’s Fund Institute (1992) show that the probability of having a good overall level of health (in terms of illness symptoms, psychological health, disease, disability and fitness) is about 12 times less for men who take little exercise and live in the worst circumstances of material and social deprivation than in those with none of these three adverse factors. The differences are less (nine-fold) for men aged 18-44 years, and greater (16-fold) for men older than 64 years. Health status in both sexes is clearly related to indicators of both material and social deprivation even after standardising for a wide range of lifestyle and demographic factors. Material deprivation has a slightly greater impact on health than social deprivation, but both forms of deprivation appear to be more important than lifestyle factors.

The King’s Fund authors conclude that it is necessary to identify those aspects of material and social deprivation which are most damaging to health in different population sub groups, and then to determine what interventions are needed. They suggested the need for:

* Building a new political consensus which emphasises the relatively limited role of health care in health promotion and disease prevention.

* Addressing the central issue of health inequalities before any serious attempt can be made to improve health - requiring action on a broad range of social and other public policy fronts.

* Health care resources being allocated to take account of the impact which material and social circumstances have on health.

* A concerted and imaginative approach to healthy public policy as a central strand for all government activity - including housing, transport, energy and agriculture - in order to make social and economic development more in tune with the promotion of health.

* Health advocacy initiatives to influence political and legislative reform; community development actions to promote social change; and intersectoral decision-making in the formulation of public policy.
Health in Greater Glasgow is determined by three associated sets of conditions - socio-economic disadvantage, lifestyle and possibly increased susceptibility to disease. Health in Glasgow City is poor relative to the rest of Scotland for two main reasons - firstly, the concentration of socio-economic deprivation within the city is much greater than elsewhere and secondly, the degree of disadvantage in the deprived areas of Glasgow is generally greater than elsewhere. Material disadvantage and adverse lifestyle factors not only predispose to ill health directly, but they - possibly in conjunction with genetic factors - appear also to increase susceptibility to disease from an early age. In order to improve the overall health of Glasgow, efforts must be targeted on those areas where disadvantage is greatest and health is poorest. Poverty and poor housing are the main components of socio-economic disadvantage, and unless these problems are effectively addressed, it is unrealistic to expect that lifestyle factors can be greatly improved in the short term or susceptibility to disease decreased in the longer term.

It is of particular concern therefore, that poverty in households with children has worsened considerably over the past ten years. Children from the poorest sections of the community are having their future health compromised by the unsatisfactory circumstances in which they are being brought up.
FACTORS WHICH INFLUENCE HEALTH IN GREATER GLASGOW

The most striking feature of the health status of the GGHB population is the variation in health between different areas. The variation is attributable to two sets of factors. The first concerns differences in disease risk profile (principally smoking and alcohol consumption, blood pressure and diet). The second concerns the susceptibility, or vulnerability, of the population to these disease risks. This is manifest as a tendency towards premature death from all causes, rather than an excess from specific diseases: the effect of vulnerability is to determine in broad terms the age at which death is likely to occur, rather than the precise cause of death. The tendency to premature death outweighs the effects on mortality of any specific environmental hazard, with the exception of cigarette smoking. About 2600 deaths per annum out of the total 6700 deaths under the age of 65 years are associated with the difference between the mortality rates of the healthiest section of the Greater Glasgow population and of the remainder.

Longitudinal analysis shows that differences in vulnerability are acquired and maintained from an early age. Different studies point to the importance of maternal nutrition, prenatal factors and the postnatal environment during infancy, childhood and youth. It follows that health promotion campaigns to encourage behavioural change in adults should be complemented by longer term strategies, targeted at the young, and the very young, to give them the best start in life. It will take more than a generation to reap the full benefit of such policies.

Different generations will have been subject to different environmental experiences at the early stages of their lives. Many environmental factors which had a major impact on the early life of older generations, and which still influence current mortality rates, are no longer a problem today, statistically speaking. They include serious overcrowding, major infections, nutrition in infancy, air pollution, lack of sanitary facilities and exposure to asbestos and other dangerous chemicals at work.

General indicators of health, which may reflect the vulnerability of a cohort to disease risks and shortened life expectancy, are high infant and perinatal mortality rates (the causative factors also affect survivors), low birthweight, short stature and impaired respiratory function. Other characteristics which are relevant to the provision of health care include impaired resistance to infection and wound healing; these and other factors may affect operative complication rates, and thus length of stay in hospital. This means that health gain (a given improvement in health) will often cost more in deprived population groups.

There is no single cause of increased vulnerability. Rather, there is a matrix of factors including poverty, housing and nutrition, which interact to impair the general health status of large sections of the population. Malnutrition is now more an aspect of the quality rather than the quantity of the food which people eat. The major deficiency is in the consumption of fruit and vegetables.

People from areas of social and economic disadvantage make greater use of health service resources. They tend to have longer lengths of stay in hospital due to a higher incidence of complications after certain surgical procedures (Burns, 1992). These biological consequences of social and economic disadvantage however should be distinguished from the processes by which socio-economic groups vary in their use of health service facilities, for example in different rates of attendance or referral for various services.

Poverty has a pervasive effect on health, and operates through low birthweight, poor nutrition, impaired growth, impaired resistance to infection and increased susceptibility to disease risks. The effect on morale compounds these effects on health and on healthy behaviour. Inner city slums have been cleared and replaced by peripheral council housing estates. Much of the council housing stock is of inferior design, and predisposes to condensation and damp. Many households lack the resources to heat these properties adequately. As a result, large numbers of children are growing up in circumstances which are potentially hazardous to their respiratory health.

The major determinants of health in Glasgow are as follows:

1. **Lifestyle**

In recent years a number of surveys within Greater Glasgow have provided a picture of lifestyles and key health related behaviours. Two clear patterns have emerged from these data. First "unhealthy" behaviours are more common in Glasgow than in the rest of Scotland. Secondly, certain behaviours like smoking, poor diet and intravenous drug abuse are more common in areas of relative deprivation.
Factors which influence Health in Greater Glasgow

a) Smoking

Smoking is the single most important preventable cause of ill health in Glasgow: it causes lung cancer, other cancers, coronary heart disease, chronic bronchitis and peripheral vascular disease. It has been estimated that 2000 deaths (mainly lung cancer and heart disease) per year in the GGHB area are attributable directly or indirectly to smoking. Smoking during pregnancy results in more miscarriages, premature labour, higher perinatal mortality, low birthweight and subsequent reduced growth and educational attainment. Passive smoking may claim the lives of a further 200 people, and predisposes to allergic diseases in infancy, to acute asthmatic attacks, and to middle ear effusion. However the excess mortality due to smoking is only partly explained by cigarette smoking levels: there is also increased susceptibility among Glaswegians to a given level of smoking risk. (Gillis, 1990)

During 1986 a survey was conducted of a random sample of 3,000 Glasgow residents aged between 16 and 64 years. Seventy one per cent of the sample agreed to be interviewed at home. Of the respondents, 93% were aware that cigarette smoking was an important cause of ischaemic heart disease (91% in social classes IV and V; 97% in social classes I and II).

Forty three percent smoked every day (both men and women) whereas 5% smoked only occasionally. The proportion of daily smokers in the age groups 16 to 24 years, 25 to 44 years and 45 to 64 years were 32%, 43% and 51% for men, and 39%, 43% and 44% for women. For social class I and II the proportion of smokers was 26% daily smokers and 8% occasional; for social classes IV and V the corresponding values were 53% and 4%. Fifty-nine per cent of unemployed people smoked daily, and 5% occasionally. Fifty six percent of current smokers wanted to stop (61% in the 16-24 year age group; 52% in the 45 to 64 year age group). These values did not vary very much with social class or area of residence. Thirty-six per cent of residents had tried to give up smoking within the past 12 months, and an additional 28% had tried to give up at some time over a year ago. Thus almost two thirds of respondents had tried to give up smoking at some time.

In an ongoing telephone survey of the lifestyles of Glaswegians begun in 1989 it was found that 97% of respondents were aware of the health hazards of smoking, so strategies to decrease smoking have to be sophisticated enough to understand the pressure to smoke and also allow for the influence of social circumstances. Encouragingly, smokers prevalence has fallen during the past three years, particularly in men.

b) Alcohol

Unlike smoking, alcohol, if used in moderation, has no adverse health effects. However, excessive intakes can lead to a variety of social, mental and physical health problems. Alcohol use in Greater Glasgow is common and 30% of men and 6% of women admit to drinking more than the safe limits:

<table>
<thead>
<tr>
<th>Alcohol consumption in Greater Glasgow</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumed alcohol during the past month</td>
<td>85%</td>
<td>73%</td>
</tr>
<tr>
<td>More than safe limit of alcohol</td>
<td>30%</td>
<td>6%</td>
</tr>
<tr>
<td>Proportion of drinkers taking 5 or more drinks on one occasion during past month</td>
<td>68%</td>
<td>40%</td>
</tr>
</tbody>
</table>

c) Drugs

It is clear that drug misuse in the Glasgow area is extremely widespread. Many drugs are abused but quantitative data are currently only available on the prevalence of drug injecting. It is estimated that in 1990 there were about 9,000 injectors in Glasgow, representing about 1.5% of the adult population aged between 15 and 50. During the first ten months of 1990 there were at least 53 deaths as a direct result of drug injecting. A large but unquantified proportion of the drugs misused have been prescribed by medical practitioners.

d) Diet

An adequate and balanced diet is essential for health. Dietary patterns in Scotland are thought to contribute to our high levels of heart disease and may account for as much as one third of all cancers. Undernutrition remains a problem among some vulnerable groups (eg, the elderly living alone), but the major dietary problems in Greater Glasgow are due to excessive intakes of saturated fat and low consumption of fresh fruit and vegetables. One consequence of our poor diet is that over one third of the population is overweight and 6% severely obese.

Remarkably, 36% of the adult population of Greater Glasgow is on a “calorie reducing diet” at any one time (42% of females, 29% of males). Clearly there is some very ineffective dieting taking place and at least some of those on diets have no reason to be. Much could be gained if the proportion of fat (especially...
saturated fat) in the diet were to decrease and the amount of fibre, fresh fruit and vegetables increase. There is, however, some evidence that the pattern of fat intake is improving, with fewer people using only butter (a fall from 22% to 18% between 1989 and 1992) and more using low fat spreads (increase from 30% to 38%).

A related problem is the very high level of dental caries which can be attributed to the sugar content of the diet, a lack of fluoride in the water supply and poor dental hygiene.

e) Exercise

Moderate exercise for 20 minutes three times per week has benefits for heart health but exercise also has important mental and social health benefits. It contributes to a healthy lifestyle and for this reason is frequently emphasised as part of positive health promotion. Forty-eight per cent of the population of Greater Glasgow takes no regular exercise whereas 14% exercise more than 4 times per week.

f) Sexual Health

Sexual health is an important and sensitive area. Education about relationships and sexual activity, family planning and awareness of sexually transmitted diseases are all important. In addition, promotion of "safe sex", together with action directed towards intravenous drug users, are the main strands of AIDS prevention. Therefore, awareness of the risk of HIV and AIDS, use of condoms and the number of sexual partners are among the indices which are currently being measured in Greater Glasgow. However, the reliability of these data is open to question and much needs to be done to find effective ways of monitoring sexual health.

2. Socioeconomic Factors

Good physical and mental health can only be attained in the presence of favourable social circumstances but Greater Glasgow has much higher levels of deprivation than any other health board in Scotland. 80% of the most deprived postcode sectors in Scotland (Carstairs category 7) are within the GGHB area: 84% of people in Scotland who live in Carstairs category 7 postcode sectors live in the GGHB area. In other words all except 16% of the most deprived people in Scotland live in the area served by the Greater Glasgow Health Board.

Since most of the diseases and behaviour which are the subject of the routine health targets have marked social class gradients it is unlikely that it will be possible to achieve a uniform pattern of improvement across Scotland.

a) Poverty

Poverty causes ill health in a variety of ways. For example, income influences choice of diet, access to services, housing, local environment, heating, household safety, educational opportunities, empowerment and smoking behaviour. One in five adults in Greater Glasgow currently receives Income Support. There has also been a considerable increase in debt in Greater Glasgow over recent years. The cause is multifactorial but 47% of people attending as social work referrals now have "financial problems". The main groups at risk from the effects of low income are the elderly, single parent families, the unemployed, people with disabilities, the low paid, "carers", ethnic minorities, young homeless and ex-offenders.

b) Employment

It has been estimated that between a quarter and one third of social class variation in health is due to occupation. This is mainly due to the life styles associated with certain occupations and the effects of low pay and unemployment rather than to direct occupational hazards. Since 1984 employment in Strathclyde as a whole is estimated to have fallen by 6.4%. This compares with an estimated increase for Scotland of 2.8% and an increase of 4.4% in Great Britain. Much of the decline in Greater Glasgow has taken place in traditional manufacturing industries and the great majority of jobs (70% of the total employed) are now in service industries. In Greater Glasgow, approximately 11% - 12% of the workforce is currently unemployed (17% - 18% of those in youth training schemes are included) but the range for smaller communities is large (4.9% - 25.7%).

c) Housing

The relationship between poor housing and ill health has been appreciated and quantified since the early nineteenth century and more recent studies have demonstrated a more specific link between damp housing and respiratory disease. Glasgow’s current housing problems date to the period following the Second World War when a massive programme of new building was started. These houses were poorly insulated against both damp and noise and difficult to heat. For thirty years the inhabitants of housing schemes have been deprived of adequate physical shelter, warmth and even privacy. A survey of housing conditions in Glasgow conducted in 1985 showed
that 28% of the city's entire stock was affected by dampness and/or condensation. More than half of all council houses were affected and 9% of cases were so severe as to fall below tolerable standards. Half of all households with children have some problems with dampness or condensation. Only recently have major remedial works been undertaken to improve the environment and physical state of housing in Glasgow and with considerable success. However, a vast problem remains and it is estimated that some quarter of a million Glaswegians still live in accommodation affected by dampness or condensation.

3. Susceptibility to risk

Watt and Ecob (1992) have compared all cause mortality rates for 10 year age groups of Glasgow and Edinburgh men and women born during the 5 year periods 1869-73, 1879-83, 1889-93, 1899-1903, 1909-13, 1919-23, 1929-33 and 1939-43. Mortality rates were higher in Glasgow than in Edinburgh: these differences were established at least by the age of 25 years, and possibly much earlier. The same pattern is evident for the individual major causes of death - heart disease, stroke and all cancers. In 1979-83 the population of Glasgow reached a given all-cause mortality rate 3.9 years earlier in men and 3.6 years earlier in women than did the population of Edinburgh. These differences have increased, and are predicted to increase further, especially in men.

The excess in all cause mortality is made up of an excess of all major diseases in Glasgow compared with Edinburgh, rather than by an excess of any single group.

The study clearly demonstrated that by the age of 25 years a general pattern has been established which has predisposed Glaswegians to an earlier death from a wide range of diseases. The link between health in early life and disease in middle age appears to operate on a larger scale than has been suggested previously.

Poverty, adverse environment and inadequate diet are likely to be important factors in determining susceptibility to disease risks. However there may be a genetic influence, in view of the large influx of population to Glasgow from Ireland and the Scottish highlands.

A key question is whether increased susceptibility (or "poor general health") is amenable to change in later life. There is no doubt that health can be made worse by a variety of factors, but it is less clear whether and how health can be improved. In general, risk factor intervention studies in middle age have not been successful in making people live longer; they have been more successful in changing the cause of death.

Risk factor levels for blood pressure, cholesterol, alcohol intake and exercise activity are broadly the same in both cities. The main differences are higher cigarette smoking and less consumption of fruit and vegetables in Glasgow. These differences give support to current health promotion measures to prevent deaths from coronary heart disease, stroke and lung cancer. However, with the possible exception of diet, it is difficult to see how these risk factors can explain the substantial excess in Glasgow of deaths from other causes at all ages, and the deep-rooted nature of the inequality of health.

When populations vary in their tendency to premature death from all causes, differences in mortality are likely to be caused not only by differences in risk but also by differences in susceptibility to risk. This conclusion could help to explain why for a given level of risk factor, mortality rates are higher in the West of Scotland.

These findings have several important implications:

- Mortality rates have improved in both cities, but are improving more quickly in Edinburgh. In consequence, national health targets will be more difficult to achieve in Glasgow than in Edinburgh.

- Explanations of inequalities in health which are based on specific diseases provide a limited understanding of the problem and only a partial basis for health promotion measures.

- When populations vary in their tendency to premature death from all causes, it is likely that differences in mortality are due not only to differences in risk, but also to differences in susceptibility to risk.

- Campaigns to influence public behaviour in adult life should be complemented by longer term strategies, targeted at the young, not only to promote healthy lifestyles, but also to reduce susceptibility to risk.

- Maternal and child health require greater priority in public health policy, particularly in areas of socio-economic disadvantage.

- The worsening economic and social conditions experienced by the least healthy and most disadvantaged populations are likely to result in
increasing disparities in health - both between and within cities such as Glasgow and Edinburgh.

4. Education

The Influence of Neighbourhood Deprivation

Perhaps it is the type of area rather than the standard of housing that is important. Middle-class children, even if their home circumstances are bad, are likely to mix with other middle-class children who come from families where education is valued. In contrast manual working-class children in similarly substandard homes will often live in poor neighbourhoods where there is little interest in learning, so that both they and their parents may be discouraged by the apathy and disinterest around them. (Douglas, 1964).

Neighbourhood deprivation is the end result of processes whereby groups and individuals with similar (in)abilities to compete in the urban markets of housing, employment and education are constrained to live in spatial contiguity. That the characteristics of these spatial groupings (neighbourhoods) matter for educational attainment confirms neighbourhood as an important element in the equation of educational outcomes. (Catherine Garner, 1988).

The educational performance of a child is influenced by the home environment, the school and by the type of neighbourhood in which the child lives. The effects are large and extremely important. For pupils who left school in 1981 for example, only 70% of those with one or two 'O' grades found employment, compared with over 85% for those with five or more 'O' grades (bands A to C). In 1989 - 90, 26% of school leavers in Scotland gained the minimum entry qualifications for higher education (three or more SCE Highers), but in Glasgow only 21% achieved this standard.

After controlling for differences in the home environment and the school, deprivation accounts for differences of up to four in the number of 'O' grades obtained (eg, between a pupil in Eastwood and another in Easterhouse). Because of the association between poor home and neighbourhood characteristics, young people living in deprived neighbourhoods are doubly disadvantaged in relation to educational attainment. The magnitude of this combined disadvantage is shown in the probability of entering higher education (table 1).

<table>
<thead>
<tr>
<th>Table 1 - Probability of achieving 3 or more SCE Highers according to categories of home and area disadvantage (Garner, 1988)</th>
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</thead>
<tbody>
<tr>
<td>Disadvantaged home and disadvantaged area</td>
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<tr>
<td>Disadvantaged home and advantaged area</td>
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<td>Advantaged home and disadvantaged area</td>
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<td>Advantaged home and advantaged area</td>
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</table>

Some of these differences could be accounted for by differences in ability, but it is difficult to imagine that this could be the entire explanation.

<table>
<thead>
<tr>
<th>Table 2: Proportion of children achieving A-C passes at 'O' and 'H' grade according to type of area of location of school, 1991</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Children Achieving Grades A-C</td>
</tr>
<tr>
<td>Area type of Location of Secondary Schools</td>
</tr>
<tr>
<td>Large owner - occupied housing</td>
</tr>
<tr>
<td>Smaller owner - occupied housing</td>
</tr>
<tr>
<td>Mixed tenure housing</td>
</tr>
<tr>
<td>Local authority housing</td>
</tr>
<tr>
<td>Peripheral estates, skilled workers</td>
</tr>
<tr>
<td>Furnished rented accommodation</td>
</tr>
<tr>
<td>Peripheral estates unskilled workers</td>
</tr>
<tr>
<td>Inner city</td>
</tr>
<tr>
<td>10,821 45 19 9</td>
</tr>
</tbody>
</table>

Table 2 gives the percentage of children leaving school at Christmas 1990 or June 1991 who had by that time achieved three or more grades A to C in 'O'
grade and 'H' grade examinations, analysed according to the neighbourhood type in which the schools are situated. Attainment is clearly poorest for schools in the peripheral housing estates. A three times higher proportion of children from the most advantaged areas achieve three or more 'O' grade passes compared with children from the deprived areas; and the passes achieved by the more advantaged children are at a higher level. For 'H' grade examination the differences are very much greater: less than 1% of children from schools in peripheral housing areas achieve at least three passes, compared with 44% of children from the most advantaged areas.

Pitfalls in measuring the performances of schools

This tabulation, like the 'league tables' of performance which are now published, demonstrates the overriding importance of the home environment, the area type (deprivation) and the characteristics of the pupils in determining the educational attainment of pupils.

These types of analysis however are also misleadingly simplistic. They fail to take account of other qualifications which children may achieve. For example, increasing proportions of children from schools in the more deprived areas are taking the SCOTVEC courses instead of or as well as the hitherto conventional 'O' and 'H' grades. Also children in the more advantaged areas are likely to stay on at school for a sixth year and thus have a considerably greater chance of obtaining 'H' grade passes. On the other hand the comparisons of 'O' grade achievements underestimate differences because the passes achieved by children in the more advanced areas are likely to be at a higher standard (i.e., bands A and B rather than C.)

'Freedom of choice' further disadvantages children from deprived areas

Parents have now been given the freedom to choose schools. 'Middle class' parents are able to spend time and money to try to ensure that their children are enrolled in the 'best' schools with the most favourable pupil characteristics. They are also able to transport their children to schools which provide the best opportunities and even to provide them with special coaching. For those living in the most disadvantaged areas however the local school is often the only real 'choice': most parents do not have the resources to research and visit schools, or to transport their children beyond the local area. In some schools with the best pupil attainment over half the pupils come from 'parental placing requests' - for children living beyond the local catchment area. The new policies of encouraging parents to choose schools, and of encouraging schools to specialise and select pupils are therefore leading to greater polarisation and inequalities of opportunity.

Some ways of trying to redress increasing inequality

Strathclyde Regional Council has introduced several innovative schemes in an attempt to minimise the disadvantages suffered by the children of working class parents living in deprived areas. For example, schools in disadvantaged areas receive additional supplies and teacher staffing (at an annual cost of about £5 and £195 respectively per pupil). A supported self-study programme held after hours in some schools helps fourth-year pupils with their work and has already had marked success. In 11 schools involved in this scheme, the proportion of pupils gaining three or more A (top) grades at standard level increased from 5.4% to 11.9%. School timetables have been made more flexible so that where appropriate pupils can work for SCOTVEC qualifications on a modular basis at local colleges. Nursery provision is also targeted on deprived areas, one objective being to try to bring children from these areas to the level of development reached at the time of school entry by children from more advantaged areas.

5. Safety

Safety is a major public health issue in Greater Glasgow. Each year there are approximately 400 accidental deaths, 12,000 hospital admissions due to accidents and 100,000 casualty attendances. Road traffic accidents and accidents in the home are the areas of greatest concern and, in these locations, a combination of engineering for a safe environment and safety education could reduce accident rates significantly.

6. Broader Environmental Influences of Health

Industrial innovation means that man man-made hazards are a continuing challenge. However, compared to the effect of major lifestyle factors like smoking or the impact of multiple deprivation through poverty, specific environmental hazards have relatively small effects in Greater Glasgow. Natural and man-made environmental hazards like pollution from landfill sites, lead contamination of some domestic water supplies, and emissions resulting from the huge growth in the transport of goods and people, do have some localised effects. A joint study by GGH, Glasgow University and Strathclyde Water has recently been funded by the Chief Scientist Office of the Scottish Home and Health Department to measure blood and tap water lead levels in mothers of young children in Glasgow, in order to investigate the residual problem
of lead exposure in unborn and newborn children, and to determine how resources should be deployed in order to address these problems.

7. Changes in the Size and Age Structure of the Population

Between 1991 and the year 2001 the population of the GGBH area is expected to decline by 5% from 911,400 (current 1992) to 867,100. There will be a decline in the actual numbers of people in all age groups except in those aged 85 years and over for whom there is an expected increase of 11% (from 12,000 to 13,000) and possibly in children.

Conclusion

The wide variations in health which exist in Greater Glasgow are attributable mainly to interactions between material and social disadvantage, lifestyle differences, and possibly susceptibility to disease of genetic and early environmental origin.
SECTION 2 - ASSESSING HEALTH STATUS

CHAPTERS 5 TO 9

What this section says:-

* Health Boards need to have an explicit role in assessing health needs.

* Health needs are complex and difficult to assess.

* The task however has begun - some examples are given.

* Need exceeds supply - priorities must be set, and some rationing is necessary.
Assessment of the Health Status of the Greater Glasgow Health Board Population

There are 45 postcode sectors in Scotland in the most deprived category for deprivation. Thirty-six (80%) of these most deprived sectors (and 84% of the population living in them) are in the GGHB area. The degree of deprivation within the two most deprived postcode categories (6 and 7 of a 7-category range) is also greater in GGHB than elsewhere in Scotland. There is an approximately two-fold difference in standard mortality rates and in acute hospital utilisation rates between the extreme deprivation categories. For psychiatric hospital utilisation, smoking and some other health indices the differences are even greater. Fifty percent of the GGHB population lives in the most deprived areas (categories 6 and 7) - far greater than for any other Health Board. This has profound implications both for the health of people in Greater Glasgow and for the use made of health services. It is also of concern that mortality for males in the 0-64 year age group has been increasing relative to Scotland over the past five years.
ASSESSMENT OF THE HEALTH STATUS OF THE POPULATION OF GREATER GLASGOW HEALTH BOARD

1. Is the health of Greater Glasgow entirely attributable to its high levels of deprivation?

The most generally accepted method of classifying areas according to their deprivation status is that of Carstairs. Postcode sectors are scored according to their 1981 levels of male unemployment, low social class, overcrowding and car ownership, and then classified into seven categories - category one being the most affluent and category seven the most deprived.

TABLE 1

Distribution of postcode sectors between Carstairs deprivation categories for the GGHB area and the rest of Scotland, with mean deprivation scores and their standard deviation

<table>
<thead>
<tr>
<th>Deprivation Category</th>
<th>GGHB</th>
<th>Rest of Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of Postcode Sectors</td>
<td>Mean Score</td>
</tr>
<tr>
<td>1</td>
<td>19</td>
<td>-6.12</td>
</tr>
<tr>
<td>2</td>
<td>16</td>
<td>-4.09</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
<td>-2.06</td>
</tr>
<tr>
<td>4</td>
<td>15</td>
<td>0.04</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
<td>1.82</td>
</tr>
<tr>
<td>6</td>
<td>35</td>
<td>4.88</td>
</tr>
<tr>
<td>7</td>
<td>36</td>
<td>8.63</td>
</tr>
</tbody>
</table>

(Means are weighted by population)

The table also shows that in general the mean deprivation scores for the least deprived postcode sectors (categories 1, 2, 3 and 5) are lower for the GGHB area than the rest of Scotland - meaning that the postcodes in these categories in Greater Glasgow are of higher socio-economic status than the same categories of postcodes elsewhere in Scotland. However, the mean scores for categories 6 and 7 are substantially greater than those for the rest of Scotland, indicating that within the most deprived categories deprivation is greater in Glasgow than elsewhere.

Fig 1 gives for each Carstairs category the standardised mortality ratios for mortality from all causes for younger adults in the GGHB area compared with the rest of Scotland. The data is for the period 1980-85. This is because 1981 is the most recent census for which data is available at present and only at or around the time of the census it is possible to match population with mortality data; more recent mortality data has therefore not been used. The figure shows that people living in the most deprived areas (category 7) have SMRs of 135 to 140 whilst those living in the most affluent area (category 1) have SMRs of about 60.

In each deprivation category, apart from category 2, all-cause mortality for GGHB residents is higher than for the rest of Scotland. The SMR for GGHB residents is five points higher for category 7, and 11 points higher for category 6. The differences for the other categories vary between -4 points (category 2) and +3 points. The higher mortality for GGHB residents living in areas classified as categories 6 and 7 would be expected from the observations that people living in postcode sectors in these categories of deprivation are more deprived in GGHB than elsewhere. The excess mortality in categories 1, 3, 4 and 5 however would not be expected since deprivation in these types of area is less in GGHB than elsewhere; the excess mortality in these categories is however quite small.

For IHD and stroke (figs 2 and 3) there is no consistent difference between GGHB and Scotland in mortality by deprivation category and the values are generally similar. For lung cancer however (fig 4) mortality is higher for GGHB residents in all seven deprivation categories. For some categories these differences are extremely large - the SMR for GGHB is some 30 points higher than for the rest of Scotland in postcode categories 3, 6 and 7, and is between 10 and 20 points higher in categories 1 and 5. For people in the most affluent postcode areas (category 1) the SMR for lung cancer is 20% higher for GGHB residents.
Assessment of the Health Status of the GGHB Population

(SMR = 66) than for people resident elsewhere in Scotland (SMR = 55) - despite the fact that the deprivation score is lower (ie, the people are on average less deprived) in this category for GGHB than for the rest of Scotland. Possible reasons for this are that compared with similar advantaged areas elsewhere people who live in the most advantaged parts of GGHB smoke more, are exposed to more adverse environmental influences or have a greater susceptibility to lung cancer (or possibly all three).

Table 2 gives for people aged 0-64 years (period 1980-85) the SMR values for GGHB and the rest of Scotland for each deprivation category (as illustrated in fig 1). The table also gives, for each deprivation category and for the total population, the actual number of deaths which would be expected if the SMR for the rest of Scotland were applied to the Greater Glasgow Health Board population. From these data it is possible to calculate an ‘SMR’ for the Greater Glasgow Health Board population (0-64 years) which is standardised not only for age and sex but also for deprivation. This ‘SMR’ value (21,420 / 20,514) is 104.4. Mortality in younger adults in the Greater Glasgow Health Board area is 113.9 - 13.9% above the average for Scotland after standardising for age and sex. This reduces to only 4.4% above the value for Scotland when deprivation is also taken into account. Deprivation alone therefore accounts for almost 80% (10.8 / 13.9) of the relatively high mortality in the young Greater Glasgow Health Board population. Some of the residual difference is also attributable to deprivation since the degree of deprivation in categories six and seven is greater for GGHB than the rest of Scotland.

2. Other aspects of the health of the Greater Glasgow Health Board population

Much of the content of the first two annual reports of the Director of Public Health was devoted to an assessment of the health status of the Greater Glasgow Health Board population. In summary

- For those 35 countries which keep reliable data, the standardised mortality ratios (SMR) values for Scotland are exceeded only by Hungary, Rumania and Russia in women and by these and seven other mainly Eastern European countries in men (fig 5(a) and (b)).

- Standardised mortality ratios (SMRs) for younger adults (below the age of 65 years) in Greater Glasgow Health Board for 1990 are about 26% higher than for Scotland in men and 16% higher for women (fig 6). For the City of Glasgow local government district these differences are even greater (35% and 26% respectively).

- All-cause mortality relative to Scotland in younger men has been rising sharply since 1985, and in women there has been a rise since 1988 (fig 7). The SMR for men under 65 years has increased from a fairly constant value about 15% above the Scottish average over the period 1975 to 1985, to reach 26% above the Scottish average in 1990. In the women there has been a more gradual increase from about 10% above the average for Scotland in 1976 to 16% above in 1990. This increase is due to the decrease in younger adult mortality which has taken place in Scotland generally - particularly in men - taking place more slowly in Glasgow than in the rest of Scotland.

This is illustrated in chapter 18 (fig 1) which shows that death rates for both sexes in each of the age groups 35 to 44 years, 45 to 54 years and 55 to 64 years are falling, both for GGHB and for Scotland as a whole; however the rate of decline for GGHB (particularly in recent years, and for the age group 55 to 64 years in which most deaths occur) is considerably less than for Scotland.

- SMRs for almost all the major causes of death in younger adults are higher for Greater Glasgow Health Board residents than for Scotland as a whole (fig 8). The SMRs for 1990 (for men and women respectively, with values for Scotland = 100 for both sexes) are 120 and 111 for ischaemic heart disease, 126 and 108 for all cancers, and 122 and 97 for stroke. For lung cancer alone the corresponding values are an astonishing 134 and 165.

The corresponding SMR values for younger men and women in Glasgow City (Scotland = 100) are 126 and 127 for ischaemic heart disease, 133 and 132 for all cancers, 140 and 112 for stroke, and 142 and 192 for lung cancer.

In the annual report for 1990 a series of graphs was presented to illustrate trends in SMR values for the GGHB population for all cause mortality and major causes of death. In summary,

- The SMR for ischaemic heart disease increased fairly steadily between 1985 and 1990: from 105 to 120 in younger men, and from 98 to 105 in men of all ages. The SMR for younger
women tended to increase throughout the period 1975 to 1990, albeit irregularly, from about 95 to 110. For women of all ages the SMR remained fairly constant between 95 and 100. For cancers there was no evidence of any change in mortality relative to Scotland in any of the age-sex groups. For lung cancer however the SMR has tended to rise slowly until recently. Since 1988 this rise has greatly accelerated in younger women although in the men there has been a slight fall. SMRs for cerebrovascular disease are above the Scottish average only for younger men and there is no clear trend in either sex or either age group.

- SMRs for the younger adult population living in the socio-economically most disadvantaged areas (the inner city and peripheral housing estates) are about 160, whereas those for the most advantaged areas are about 60 (fig 9)*. Younger adults living in the most deprived areas have therefore about 2.5 times less chance of reaching retirement age than their counterparts in the most affluent areas. There was little change in this differential throughout the 1980s.

- Hospital utilisation rates by younger adults for acute hospital specialties show a two fold variation (2.3 fold in men, 1.7 fold in women) with the socio-economic characteristics of the area of residence (fig 10); for discharges from psychiatric hospitals the difference is approximately four fold (fig 11). For some conditions (eg, drug abuse and alcoholic psychosis) the differences are five or six fold.

- A wide variety of indices of child health show a similar relationship with the socio-economic characteristics of the area of residence - for example perinatal deaths (two fold range between the most deprived and most advantaged neighbourhoods), maternal age (six fold difference in proportion of teenage mothers), low birthweight (two fold difference), parental smoking, breast feeding (six fold difference), immunisation status (six fold difference in proportion of unimmunised children), hospital admission (two fold difference). These differences are illustrated in chapter 8 of the 1990 annual report.

- In the more deprived areas uptake of preventive measures such as screening for breast cancer and cervical cancer is lower, dental health is poorer, the incidence of serious accidents is much higher and the prevalence of excessive alcohol intake and drug misuse is unacceptably high.

- It is encouraging that over recent years differences between the most and least advantaged populations have narrowed for the incidence of teenage pregnancies, attendance for antenatal care, infant mortality, 5 minute Apgar scores (a measure of the health of a baby just after birth), and for immunisation uptake against diphtheria, tetanus and poliomyelitis (but not for pertussis). However, the very unsatisfactory rates for breastfeeding, and smoking in mothers and fathers have not improved at all in the most disadvantaged areas.

- By all available measures, health is relatively poor in Greater Glasgow compared with Scotland as a whole. This is undoubtedly a historical legacy and reflects the levels of deprivation and environmental hazard which have been associated with the city's industrial past and also problems which have developed since the last world war (housing, changing employment, relative poverty). These social factors have given rise to health related behaviours (heavy smoking and drinking, poor diet and infrequent exercise) which have contributed to poor health.

**Conclusion**

50% of the Greater Glasgow Health Board population live in the most deprived areas (Carstairs categories 6 and 7) - compared with only 10% for the rest of Scotland. The health of people living in these areas is relatively very poor and if the health of the population of Greater Glasgow is to be improved to an acceptable standard, efforts must be concentrated on the living conditions and delivery of health services to the people in these deprived areas.

* This method for classifying postcode sectors according to deprivation scores is discussed in detail in the annual reports for 1989 and 1990. It is similar to the Carstairs system, except that it differentiates the inner city from the deprived peripheral housing areas.
### TABLE 2

**Observed and Expected Deaths to GGHB Residents under 65 years by Carstairs Category, 1980 - 85**

<table>
<thead>
<tr>
<th>Deprivation Category</th>
<th>SMR for each Category (Scotland = 100)</th>
<th>No. of Deaths in GGHB Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GGHB</td>
<td>Rest of Scotland</td>
</tr>
<tr>
<td>1</td>
<td>67</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>77</td>
<td>81</td>
</tr>
<tr>
<td>3</td>
<td>94</td>
<td>91</td>
</tr>
<tr>
<td>4</td>
<td>102</td>
<td>99</td>
</tr>
<tr>
<td>5</td>
<td>111</td>
<td>110</td>
</tr>
<tr>
<td>6</td>
<td>130</td>
<td>119</td>
</tr>
<tr>
<td>7</td>
<td>140</td>
<td>135</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>113.8</td>
<td>97</td>
</tr>
</tbody>
</table>

*Expected deaths based on SMR values for the rest of Scotland for each deprivation category.
Figure 1
Standardised Mortality Ratios for GGHB & Rest of Scotland for postcode sectors grouped according to Carstairs Type, 1980 to 1985
All Cause Mortality - Both sexes (0 to 64 years)

Figure 2
Standardised Mortality Ratios for GGHB & Rest of Scotland for postcode sectors grouped according to Carstairs Type, 1980 to 1985
Ischaemic Heart Disease - Both sexes (0 to 64 years)
Assessment of the Health Status of the GGHB Population

Figure 3
Standardised Mortality Ratios for GGHB & Rest of Scotland for postcode sectors grouped according to Carstairs Type, 1980 to 1985
Stroke - Both sexes (0 to 64 years)

Figure 4
Standardised Mortality Ratios for GGHB & Rest of Scotland for postcode sectors grouped according to Carstairs Type, 1980 to 1985
Lung Cancer - Both sexes (0 to 64 years)
Figure 5 (a)
Age Standardised Mortality for Men (30 to 69 years)
All Causes 1989, Rates per 100,000

Figure 5(b)
Age Standardised Mortality for Women (30 to 69 years)
All Causes, 1989 Rates per 100,000

Key 1: Males 30 to 69
1 = Hungary; 2 = USSR; 3 = Poland; 4 = Czechoslovakia; 5 = Romania; 6 = Bulgaria; 7 = Yugoslavia; 8 = GDR; 9 = Scotland; 10 = Finland
11 = N. Ireland; 12 = Luxembourg; 13 = Denmark; 14 = USA; 15 = Belgium; 16 = Ireland; 17 = Austria; 18 = Portugal; 19 = FGR; 20 = France; 21 = New Zealand; 22 = England & Wales; 23 = Norway; 24 = Spain; 25 = Canada; 26 = Italy; 27 = Australia; 28 = Netherlands;
29 = Malta; 30 = Switzerland; 31 = Israel; 32 = Greece; 33 = Sweden; 34 = Japan; 35 = Iceland.

Key 2: Females 30 to 69
1 = Hungary; 2 = Romania; 3 = USSR; 4 = Scotland; 5 = Poland; 6 = Czechoslovakia; 7 = Bulgaria; 8 = Yugoslavia; 9 = Denmark; 10 = GDR; 11 = N. Ireland; 12 = Ireland; 13 = USA; 14 = New Zealand; 15 = England & Wales; 16 = Belgium; 17 = Luxembourg; 18 = Israel;
19 = Malta; 20 = FGR; 21 = Austria; 22 = Portugal; 23 = Canada; 24 = Australia; 25 = Finland; 26 = Netherlands; 27 = Iceland; 28 = Norway; 29 = Sweden; 30 = Italy; 31 = France; 32 = Spain; 33 = Greece; 34 = Switzerland; 35 = Japan.
Assessment of the Health Status of the GGHB Population

Figure 6
Standardised Mortality Ratios
Under 65's, 1990

![Bar chart showing SMR for G/CITY, GGHB, and SCOTLAND for males and females.]

Fig 7
Standardised Mortality Ratios (SMRs) for GGHB
0-64 Year Age Group, by Sex, All Causes
(Scotland=100)

![Line graph showing SMR (3 yr average) for males and females from 1976 to 1989.]

39
Figure 8
Standardised Mortality Ratios for Major Causes of Death, 1990
Males & Females 0 - 64 years

% above Scottish average

All Cause  | Cancers  | Heart Disease  | Stroke  | Lung Cancer  | Resp Disease

Figure 9
Mortality of Men & Women under 65 years
Comparison of Neighbourhood Type
All Causes 1988 to 1990
(Scotland = 100)

SMR

Neighbourhood Type
least deprived  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | Peripheral estates  | inner city

Males  | Females
Assessment of the Health Status of the GGHB Population

Figure 10
GGHB Standardised Discharge rates, 1991
Acute Specialties, Both Sexes
Comparison of Postcodes Grouped according to Neighbourhood Type
(GGHB = 100)

Fig 11
GGHB Mental Health Standardised Discharge Rates 1988 & 89
All Diagnoses, Both Sexes
Comparison of Postcode Sectors according to Neighbourhood Type
(GGHB = 100)
The Background to Health Needs Assessment

In order to ensure that health service resources are deployed to the greatest possible effect it is necessary to direct services towards problems and conditions which are both important (eg, in terms of severity or numbers of people affected) and for which interventions are available to treat or alleviate. Health needs assessment is the process of establishing which aspects of health have the greatest potential for improvement. It is conducted at three levels - for the population as a whole, for major client groups (eg, disabled people, the elderly) and in individuals. The information which is the basis for health needs assessment comprises epidemiological data, the views of consumers and professionals, and comparative data.
THE BACKGROUND TO HEALTH NEEDS ASSESSMENT

Health needs, demand and supply

The purpose of health needs assessment is to determine how much improvement in health ('health gain') is likely to be achieved by health care. At present resources or supplies are provided largely on the basis of what people (particularly health professionals but also the public and politicians) ask for or demand. However, what is demanded may well not be worthwhile in terms of improving the health of the population or even of the individual patient. It may well be possible to achieve greater health gain at the same cost by providing a different service or form of treatment. The relationship between health need, demand and supply is shown in Figure 1.

The aim: to achieve the maximum improvement in health

All health authorities are currently involved in the process of health needs assessment. The aim is to ensure that available resources are utilised to the greatest possible benefit of the population as a whole, and to ensure that resources are not consumed where there is no health need or where there is a health need but no effective way of meeting that need.

Health need has been defined as 'the capacity to benefit from an intervention'. Therefore, a health need is considered important if two conditions are satisfied:

i) the health problem is large or severe and
ii) an effective intervention exists to eradicate or alleviate the health problem - i.e., it is possible to achieve significant 'health gain'.

Where an intervention is effective, the main concern is to ensure that as many as possible of those who need the intervention do receive it. This will almost always be the case for acute conditions such as appendicitis, but is less certain for more chronic conditions such as osteoarthritis of the hip or cataract, and very much less certain for preventive procedures (such as immunisation and screening for cancer or cardiovascular disease) or for the provision of rehabilitation and caring services. It is important therefore to ensure that those who would benefit from such interventions are identified and offered appropriate health care.

There are many examples of resources being used in the absence of a health need, and these include the prescription of antibiotics for non-bacterial infections; the prescription of many anti-depressants, hypnotic and anxiolytic drugs; some components of screening programmes for preschool children and antenatal care; many 'routine' laboratory tests on specimens of blood and urine; and many radiological examinations.

There are many more examples of resources being used where there is an established health need, but where health care will have or is unlikely to have any significant benefit; or some relatively small health benefit ('health gain') may be achieved, but only at very considerable cost. Alternatively health care procedures may be accompanied by such serious side effects that any 'health gain' achieved by the procedure is completely or almost completely neutralised. Finally, not infrequently the benefits which should be achieved from meeting a health care need may not be realised because of ineffective follow-up procedures. Further examples of various types of inappropriate use of health service resources will be given later.

Health service activity is now split between the "purchasing" and "providing" functions. Freed from the responsibility of overseeing operational aspects of health care provision, the Board will concentrate on strategic issues to fulfil its two main functions:

i) improving health status and
ii) ensuring the provision of cost-effective health care.

Health needs assessment is integral to both of these functions. To purchase health care on behalf of the public requires an awareness of individual and population needs and not just the pattern of demand which can be distorted by a number of factors including historical patterns of provision. Also, health care is rationed either implicitly or explicitly in all health services, and it is therefore essential to ensure that resources are targeted where they will be most effective.

Health needs assessment: a repetitive cyclical process

It is not possible to conduct assessment of health care needs in a simple operation over a short or even over a longer period of time. There is an almost limitless variety both of health needs and of health care processes and procedures. The problem is compounded by the fact that health services are relatively unimportant among the many factors which contribute to good health.
Health needs assessment therefore has to be a cyclical operation in which the early phases are relatively crude, with more sophisticated assessments being developed with experience in tackling major issues and the more obvious anomalies. There would not in any case be a useful purpose in attempting definitive needs assessment in one cycle because it is possible to implement only relatively small changes at any one time. The processes of needs assessment and resulting incremental change therefore must proceed in relatively small steps until the point is realised - probably many years hence - when it can be said with reasonable certainty that resources (and not only health service resources) are being used in the most effective way to secure the greatest possible health gain for the population.

What needs assessment should achieve

It is intended that the process of needs assessment will:

- identify areas of unmet need.
- show where savings are possible or expenditure is inappropriate.
- demonstrate the appropriateness or otherwise of the Board's relative expenditure on each major client and patient group.
- shape strategic planning decisions.
- inform the detailed cost, volume, quality and outcome measures which will be specified in contracts.
- identify health issues outwith the direct control of the Board (eg, environmental hazards) which will allow the Board to advocate for better health in its relationships with local government and others.

Health service resources may be redeployed on the basis of cost effectiveness alone without regard to an overall assessment of needs. Services of greater cost effectiveness would gradually replace those with lesser or no cost effectiveness. This process would itself be a considerable advance on resource allocation 'methods' used in the past, and it may suffice for reallocating resources more effectively within a single client group (eg, people with dementia or diabetes). However reallocating resources more effectively within more complex groups (eg, services for children or the elderly), within specialties or between client groups and specialties requires full assessment of needs.

Three levels of health needs assessment

Health needs assessment is not a new idea. Much data already exists and Boards have always sought to assess and meet the needs of their populations. As a purchaser, however, more detailed information is required at three distinct levels: the total population, particular population sub-groups, and individuals. This information will include:

i) For the population: the priority health needs, where there is unmet need, where there is inappropriate demand or provision and, most crucially, where there is potential for increasing 'health gain'?

ii) For major client groups (eg, children, the elderly) or large patient groups (eg, disabled people, those with cancer, patients with mental illness, the homeless, single parents): What services are currently being provided and how cost effective are these services? What gain or loss would be achieved by a marginal increase or decrease in expenditure?

iii) Individuals: For individuals, needs assessment is necessary so that the Board can assess the volume and quality of the interventions it is required to purchase. For example, how many hip operations are "needed" or how appropriate is the model of care for patients with a particular mental health problem?

Needs assessment at the population level allows Boards to identify strategic issues. Analysis of client/patient groups will influence relative expenditure on services or programmes, while assessment at the level of individual needs will inform purchasing decisions within increasingly detailed contracts with provider units.

Four perspectives for health needs assessment

At each of the levels described above information is required from four perspectives. The epidemiological perspective provides the foundation, and this requires analysis of data relating to the size, distribution and trends in death, disease, disability, treatments and outcomes. However, this approach, while essential, is not sufficient in itself and must be supplemented by other perspectives.

i) The Epidemiological Perspective. The annual reports of the Director of Public Health for Glasgow for 1989 and 1990 provide a detailed analysis of the physical and mental health of
Some examples of appropriate and inappropriate demands, needs and supply

a) Appropriate demand (proven health benefit)
   1) Appropriate demands which are normally met
      Emergency surgical and medical interventions
      General practitioner services
      Clinical services
      Immunisation programmes

2) Appropriate demands which are often not adequately supplied
   Prolonged waiting times for necessary treatments of proven effectiveness (e.g. cataract removal, hip replacement)
   Rehabilitation services
   Occupational health, speech therapy and physiotherapy services

b) Inappropriate demand (no proven health need)
   Some prescriptions for antibiotics, anti-depressants, hypnotics, anxioytics, ‘tonics’
   Some components of screening/surveillance programmes for pre-school children and antenatal patients and the elderly
   Many ‘routine’ laboratory tests on blood and urine
   Many radiological examinations
   Some tonsillectomies, cholecystectomies
   Some treatments for late cancer
   General practitioner consultations for common self-limiting illnesses
   Demand for inappropriate prescriptions

c) Services which are needed but not demanded and therefore not supplied
   Support for hearing-aid users in the community and in long term care
   Specialist support in the community for people with long-term physical disabilities
   Vision and hearing screening for people resident in hospitals, nursing homes and residential homes

d) Services which are needed but are often refused
   Screening and other preventive services where there is substantial failure either to accept the service or to accept appropriate follow-up.
Health care which may produce significant benefit but at high risk or disproportionate cost

Some plastic surgery - eg certain cosmetic operations
Certain procedures to encourage conception

Health Needs Assessment in Glasgow

Recognising the considerable work that would be required for health needs assessment, the Department of Public Health set up a small working group to coordinate activities and to provide a focus to link with other groups. The working group acknowledges that the main concern is with the role and responsibility of the Health Board, but believes that this requires to be seen in the context of the health needs of individuals and populations, and to the responsibilities of other bodies, both statutory and voluntary. The group has based its work on the approach outlined in the Department of Health circulars on health needs assessment.

The first stage of the work, completed in September 1991, resulted in a preliminary report which described the approach that was being adopted. As well as providing background data on the population of Greater Glasgow Health Board, preliminary specialty reviews, an example of a hospital service, and a review of community health services, were included. Since then, work has continued on the specialty reviews using essentially an epidemiological perspective and in each case working directly with relevant clinical colleagues. The chapter on cancer in this report is a shortened version of one of these specialty reviews.

The process of preparing these reports has shown the need for national and local routine data and the value of local surveys. However, in many instances these are lacking and the variation in quality of data has been demonstrated. Specially designed local surveys will be required to answer many of the questions that have arisen. At the same time, the preparation and publication of completed studies on health needs from various research teams throughout the United Kingdom has been of enormous value. Some of these are for particular conditions such as diabetes, or groups such as the elderly. This reduces the work that is required and allows local interpretation using local data.

A Scottish Needs Assessment Programme (SNAP) has been set up under the auspices of Scottish Forum for Public Health Medicine. This will allow ideas, experience and expertise to be shared within the Scottish Health Boards. The main aim is to develop a common methodology which can be fed back for use by individual Health Boards. At the same time, it will be possible to reduce duplication of effort and to identify gaps which will require to be filled.

Despite such assistance, health needs assessment will remain one of the major tasks of the Department of Public Health in this Health Board and will require substantial support. It is also recognised that this is a process that will be unending as each document which is prepared identifies areas requiring further examination and updating. While Public Health appropriately assumes responsibility for this area of work, it requires skills and contributions from other disciplines and professional groups. Health needs assessment is obviously not an end in itself. The information gathered will be available to all - clinicians, managers and the public - for comment and validation, as well as for use in planning, preparing of policies and evaluation. While it remains a prime task of the Health Board as purchaser and will be used to prepare contracts, the information will equally be vital for provider units.

Conclusion

Health needs assessment is an essential prerequisite to ensuring that scarce health service resources are used to achieve the greatest benefit.
Annual Report 1991/92

Figure 1

Genetics

Needs: What people could benefit from

Demand: What people ask for

Supply: What is provided

Research

Demography

Resources

Cultural/Social factors

Media

Education

Policy
Consumers have very different views on health and health services - depending on their own background, living conditions, education and priorities. People living in disadvantaged circumstances are usually concerned mainly with the need for warm, dry housing and employment. In the absence of these basic needs measures such as ensuring that each child is fully immunised against poliomyelitis are not a priority. Others - for example elderly people in long-term care or people with chronic disabilities in disadvantaged circumstances - may not be aware of their health and other needs and require to have these interpreted for them by an individual with the necessary insight. Obtaining the consumer view is therefore a difficult process in those groups whose health needs are greatest. Identification of the needs of people in these groups requires not only considerable skill, but usually also a specific assessment for each group. Multi-purpose surveys of samples of health service consumers in general are much easier to conduct, but provide little information about the real needs of those whose health and other needs are greatest.
COMPLETING THE PICTURE - THE CONSUMER VIEW

(a) The Consumer View

(1) The population living in a defined area

Two illustrations of the public perspective of health needs are:

Royston Health Survey

During early 1992 community workers (including some local people) conducted a survey of local groups and of health and social care professionals in a deprived inner city area in the East of Glasgow. Local people identified as the main health problems anxiety, stress, depression, bronchial complaints, unemployment, poverty, debt, poor housing (dampness and condensation) and unhealthy eating. The professionals included in addition mental health problems, use of tranquillisers, smoking, drug misuse, disability, and inadequate community care provision.

Almost all people knew that smoking was bad for health, but said that it was necessary to deal with stress, as a way of reducing tension and for some was ‘their only enjoyment’.

Survey of residents of one street in Drumchapel

A survey was conducted in a single street comprising about 150 high density tenemental houses. The population is about 450 with a male to female ratio of 3:7. 39% of households are single parent. 66% of residents are under 30 years of age with 39% under 16 years. Only 15% of residents have any type of work. 67% of residents of working age have been unemployed for more than one year. 79% of households receive housing benefit, including over one third of those in employment. 65% of households depend on Income Support.

The survey was conducted by a group of local people and volunteers in Spring 1990. 90% of households took part. The main findings were:

- Eight out of 10 complained of cold, damp housing; one third had heating in one room only, and over 60% complained of condensation.

- 85% saw dog dirt, litter and traffic as a problem.

- Half had trouble with their nerves or difficulty in sleeping. Half complained about rats, graffiti and stair lighting; 75% smoked although half would have liked to stop.

- Almost all wanted to be healthier. The people would particularly have liked to take more exercise, to give up smoking and to lose weight.

- Asthma was the most commonly reported chronic child health problem.

- Traffic and the lack of somewhere safe to play was seen as the biggest risk to child health.

- One third of residents reported dissatisfaction with their doctor - the most common complaint being having to wait too long for an appointment or in the surgery but 20% would have liked to be able to spend more time with their doctor.

- 20% were taking tranquillisers; almost half said they lacked confidence; 4 out of 10 said that they suffered from serious depression at some stage; and a third said that they had been afraid to go out of the house sometimes.

(2) People with specific long term disabilities

For people with long-term disabling conditions the consumer view is of particular importance and in fact it is only reasonable to have the consumers (including carers) participate in most of the decisions which affect them. Very often the professionals are unaware of - or do not want to be made aware of - the real needs and feelings of disabled people. A sensitively conducted interview may elicit a whole range of unsuspected problems and difficulties. What is perhaps surprising is that these often do not relate so much to deficiencies in the quantity or range of services provided, but mainly to the way in which these are delivered. There is not a great deal of information available, but two surveys have been conducted by the Health Information Unit - one of 60 children with spina bifida, and a second of 30 multiple sclerosis sufferers in association with the voluntary organisation ARMS (Action Research into Multiple Sclerosis). The main findings of these surveys were as follows:

Multiple Sclerosis Survey

During 1990 a postal questionnaire was sent to a sample of 30 members of ARMS who suffered from multiple sclerosis. 28 completed questionnaires were returned. Over 80% of sufferers felt that they were given inadequate information, support and advice and insufficient opportunity to discuss their situation both immediately after the diagnosis was made and
thereafter. General practitioners were felt to lack specialist knowledge and neurologists were often felt to lose interest once the diagnosis was made.

Unless one particular individual or organisation was available to provide support and counselling, sufferers were isolated and frustrated. In the majority of cases where there was such support it was provided by the voluntary organisation (ARMS); in a few other cases it was provided by the general practitioner, district nurse or neurologist - and in one case by a homoeopathic doctor. People often become aware of the existence of voluntary organisations and self-help groups at a relatively late stage, and in some cases the survey itself made them aware of a service, organisation which they had not known existed. Otherwise, with the exception of physiotherapy and occupational therapy, sufferers were generally satisfied with the level of provision of services and equipment. What was most needed was more opportunity for discussion and counselling, and possibly also an annual medical 'check' by someone with special knowledge of multiple sclerosis to determine whether any new signs and symptoms were due to a different and possibly preventable cause, rather than to multiple sclerosis itself.

**Spina Bifida Survey**

In an attempt to assess the adequacy of community support for children with disability, an experienced health visitor during 1985 conducted semi-structured interviews lasting between one and two hours with 54 families where there was a spina bifida child aged 4, 6, 11 or 15 years. Most families praised the paediatric surgeons as providing the greatest support and the most consistent link with other services; the physiotherapists also performed well in these roles, although not all children were able to obtain their help. Favourable comment was also received regarding the educational home visiting service, community assessment centres and nursery schools (both ordinary and special). Other services and facilities however received adverse comments, including inadequate arrangements for transport to and from school and hospital, poor teacher expectation, ordinary schools failing to meet the needs of children with disabilities, serious difficulties in obtaining occupational therapy, and delays in providing and repairing boots, calipers and wheelchairs. Several mothers commented on the need to "fight to get services".

General practitioners, health visitors and social workers were regarded as generally of little help, mainly said to be due to their lack of experience with the problems of spina bifida children. Even simple information about possible sources of finance and other help - particularly in relation to incontinence supplies, the stoma therapy service, voluntary agencies and the various benefits and allowances - was often not available from these professionals. There were comments that too many professionals were involved with the child and that communication between them was often poor. Some families felt that the support given at an early age was satisfactory, but that later on they were 'abandoned'.

It was concluded that each family which includes a child with special needs should have a professional worker responsible for ensuring that all necessary services are identified, and that parents are made aware of all possible sources of help. It is important to remember that the disability of some children, increases as they reach their teens, so that continuous contact with a helping agency is necessary.

**(b) Interpretation by Professionals of the consumer view**

**1) The needs of people with long term disabilities in a general practice**

Case summaries in all the patient records for one general practice (9,500 patients) at a Glasgow Health Centre were scrutinised by a research nurse (who was not trained in community nursing) in order to identify people with longer term disabilities which are not amenable to medical treatment. People with diabetes, asthma and hypertension were therefore excluded, as were people who had largely recovered from a normally long term disability such as stroke; those who required mainly supportive therapy were included. Two hundred and eighty-one people were identified, of whom 243 were visited and assessed during 1991/92. The remainder either declined to be visited or constituted a small group of men with psychiatric disorders or epilepsy which it was decided not to assess.

Only 41% of the patients were under the age of 65 years. 31% were aged 75 years and over and 7% were aged 85 years and over. 64% were women. 44% of the women but only 10% of the men lived alone.

The main disabilities were visual loss (45 cases), hearing loss (43), combined vision and hearing loss (22), stroke (30), rheumatoid arthritis (29), congenital malformation (19), epilepsy (12) and orthopaedic disorder (10). There were also seven cases of psychiatric disturbance, six each of Parkinson's Disease and senile dementia, five of multiple sclerosis, four...
each of Down's Syndrome and traumatic disability and one each of Friedrich's ataxia and muscular dystrophy.

The principal findings were as follows:-

- For many patients this was the first time they felt they had someone to listen to them, to explain how they themselves felt and to discuss what would happen to them subsequently. Because of this lack of someone to talk to, not all services which might have benefited the patient had been provided or even discussed with the patient.

- When given the chance patients were keen to talk and overcame any shyness about personal problems very quickly. This gave an opportunity for the collection of a wealth of information. Regular contact would build confidence and a feeling of worth, and could lead to a breakdown of the barrier which people build around themselves in an attempt to be seen to cope.

- If one person were responsible for coordinating the services for these people as a group then the patients would have a point of contact who they could rely on to act on their behalf, to increase awareness of services, and to minimise refusal of services by keeping the patient informed of what is available and by providing information to overcome suspicion or fears. A co-ordinator would also help to ensure that aids were used more efficiently - for example by reallocating bathing aids which are unused, unsuitable or unwanted to others who desperately need them.

- A lot of patients were in need of services. These were not always easy to arrange, especially at the start of the project, but as communications between the nurse and service providers developed this became easier. The services required were mostly available, apart from providing help with bathing. The role of the nurse as an advocate for the patient developed to the point where people felt able to put themselves forward and ask for further assistance.

- By building up relationships with service providers in this way the nurse was able sometimes to obtain services free of charge which normally would have to be paid for. British Telecom for example provided extension telephone sockets and more suitable telephones in several instances at no cost.

- For 91% of patients their most recent contact had been with the general practitioner and 73% had been seen within the previous 6 months. In contrast only one patient had been seen most recently by a health visitor. For 11 patients a practice nurse had been the last contact, with the same number for the district nurse. However, although 81% had been seen by the doctor or nurse within the previous six months, they were not often receiving the services they required. The usual reason was that the doctor had been consulted about a specific problem and that long term health problems had not been addressed.

- Of those patients who had family carers 40% were thought to be under a significant amount of stress with 8% under excessive or intolerable stress.

- Less than half (107) of the patients could bath themselves without assistance. With the help of carers, bathing aids and in a few cases district nurses an additional 69 patients were able to bath satisfactorily. The remaining 67 patients were unable to bath. Eight of these 67 patients had suitable assistance but still felt they could not bath satisfactorily or just refused to have a bath. Seventeen others had been assessed for assistance with bathing, but had either been judged not to be eligible, or no service was available. The remaining 42 patients had not been assessed for help with bathing and all of these were referred to the community occupational therapist. However, patients who were referred purely for assessment for bathing aids usually are refused assessment because these are not considered a priority. It was necessary therefore to exaggerate the nature of the problem when referring patients. Other patients who have bathing aids frequently find that these are unsuitable.

- Of those who needed help with problems of continence many were too embarrassed to ask. Those who it was thought would benefit (17 in all) were informed about the continence resource centre and given the telephone number for self-referral. Several middle-aged women with stress incontinence would just not go out in case they became incontinent. Other more elderly people did not like to mention their problem, and one lady made incontinence pads out of sheets and washed them for re-
Completing the Picture: The Consumer View

- Assessment of the needs of people with disabilities, particularly if they are elderly, is a skilled process. It requires time and patience and people often have to be persuaded to articulate their needs and to accept help that is offered. Very often, especially where the needs are complex, it takes several visits to establish a degree of rapport and trust before an adequate assessment of needs can be made.

- The general practitioner is probably not usually the best person to assess the needs of individual patients with long-term disabilities. This is not so much due to lack of time, but for a variety of other reasons. For example imperceptible changes occurring over a long period may fail to trigger awareness that remedial action is required. Also, although the doctor is seen to be the main or even sole point of entry for helping services, patients are often reluctant to trouble him, because he is seen as being too busy or not interested in their longer-term problems.

- Many people with severe disabilities living in the most difficult circumstances accept their lot, and fail to come forward for help because of an unwillingness to call on ‘charity’, fear of what might result (for example being transferred to accommodation elsewhere), or simply because they do not know what is available. These people generally live in the most disadvantaged areas and are insufficiently articulate or educated to seek out the services which would help them.

- A considerable proportion of people refuse services which are thought by professionals to be needed. This is particularly the case with the home help service - apparently because it is perceived to be intrusive or unreliable. Also some people may resent an outsider making judgements about what is or is not needed, or about whether living conditions are unacceptable according to the standards of others. In suggesting the need for a service or services one has to be sensitive that this is intrusive and may be construed as interference. One must also be confident that the help provided will be reliable, and that it will be possible to maintain the support offered for as long as it is required. The real test is whether the recipient is likely to be happier with the support, and it is important that he or she is not made more dependent or less healthy as a result. Meals on wheels for example undoubtedly provide a vital service for some people. However for others they may reduce self esteem (by taking away basic self reliance) and actually predispose to ill-health by decreasing the quality of the diet (for example if there is little fresh fruit, or if the vegetables are overcooked) and food may be left because it is not liked, or served at the wrong time.

- For reasons such as these serious consideration must be given to the role of self-assessment focusing on quite simple questions such as ‘what help would you like?’ and ‘why?’.

(2) The perception and use of child health clinics in a sample of working class first time mothers

During 1981 and 1982 an investigation was conducted by a social scientist of 80 first time mothers and children in order to determine their views of child health clinics. The majority of clinic visits were undertaken for routine purposes such as immunisation, developmental assessment and especially test weighing. Relatively few visits were undertaken for the purpose of obtaining advice or assistance on matters of infant care and only about one third of mothers reported receiving help from the clinic. Such assistance usually concerned difficulties with infant feeding or minor health problems.

Attendance at the clinic had very different meanings for the mothers and the health professionals who staffed them. For the professionals it was about prevention and the supply of support and advice. For most mothers it was about weighing, obtaining supplies of milk and the provision of a useful social outlet and a valuable network of peers. Only one in four mothers indicated that they would have missed the service personally. Even those items of assistance which mothers did receive from the clinic were assessed of being of only minimal significance in relation to their experience of motherhood as a whole. The sample exhibited a preference for informal forms of support and a corresponding dislike of impersonal or formal organisational settings. It was their own lay networks that the mothers turned to for help.

As far as infant care was concerned the great majority considered personal experience to be superior to the “book knowledge” which, they assumed, formed the basis of professional expertise. This meant that problems with infant care were frequently taken to
another family member in preference to the clinic. There was little understanding of the preventive role of the clinic. Indeed the mothers had only a very limited concept of health maintenance and prevention in general. There was little evidence of health as a positive concept but a strong fatalistic element to their beliefs about the occurrence of disease.

Many mothers resented receiving unsolicited advice and complained of the directive style of some clinic staff. In the mothers’ view such an approach patronised them and called into question their competence as mothers. What the mothers wanted was a form of service provision in which they could initiate consultations in accordance with their own perceptions of their needs as opposed to having gratuitous, and often unwelcome, advice thrust upon them.

(c) Some views of the Professionals

1. Investigation of hearing impairment amongst elderly residents of Greater Glasgow Health Board Long Stay Hospitals

The prevalence and severity of hearing loss amongst 221 residents from 15 wards in nine long stay hospitals was investigated during 1990. The main findings were as follows:-

Over 70% of the sample residents had a significant hearing impairment (hearing loss greater or equal to 40 dB in the better ear). This is the level above which sound amplification is likely to be beneficial. Over 47% of these people said that they would agree to specialist referral, with a view to accepting a hearing aid.

2. Screening residents for hearing impairment is either lacking or haphazard and often depends on requests from nurses on the basis of informal observations.

3. Referral of elderly hospital residents for specialist auditory assessment and subsequent management is problematic, with long waits for appointments and difficulties in coping with the particular needs of highly dependent elderly people.

4. The minority of residents who owned a hearing aid frequently failed to use the aid.

5. For 90% of the time spent in observation, high noise level and disruptive background noise (mainly from televisions, radios, and interac-

tions between staff which were not patient centred) were considered to be potentially disabling in terms of communication opportunities for hearing impaired people.

6. Nursing staff were not trained to meet the communications needs of elderly patients with problems; this applied equally to hearing aid users and non-users.

The following conclusions were reached:-

7. The identification and management of hearing problems should be seen as a priority health care need of elderly residents.

8. Hearing should be assessed routinely on admission to long stay hospital, and appropriate referral made whenever indicated. Hearing assessments should be undertaken annually thereafter. A discreet record of auditory rehabilitation should be kept with the patient’s medical notes and nursing documentation should contain recent information about the patient’s hearing abilities and difficulties.

9. Hearing problems should be identified and effectively managed before health circumstances lead to the necessity for long term hospital care. All the elderly persons in long term care in the present study were admitted from rehabilitation units, but had received no auditory assessment.

10. The transfer of patients who need pure tone audiometry from long stay wards to audiology departments by ambulance is very wasteful of nursing staff time and ambulance resources. A patient and nurse may be away from the ward for five hours or more. It would almost certainly be more cost effective for audiology technicians to visit the wards. During the visits other patients could be screened if this had not been done in the recent past.

11. Speech therapists are responsible for issuing communication aids from a pool of equipment. However, both the equipment and speech therapists tend to be available only sporadically. It would therefore, be of great benefit if a senior nurse with relevant expertise could be responsible for the supply of such equipment for patients in long stay wards.

12. Doctors, nurses, occupational therapists and
Completing the Picture: The Consumer View

physiotherapists, particularly those specialising in the care of the elderly, should be educated in the needs of hearing impaired people during basic and subsequent training. Health care professionals must recognise that age related hearing loss is a problem that warrants intervention and active management. Complacency leads to unnecessary suffering.

13. Existing audiological services for elderly hospital residents warrants review. For example, a maximum waiting time between initial referral of a resident and the first appointment with the hearing clinic should be established.

14. Hearing, eyesight and good dental health are essential to the adequate functioning and self-esteem of everyone. All elderly people in institutional care should be screened periodically for these functions. For hearing this could be conducted by an audiometrical as suggested above. Alternatively, a "nurse expert" could be trained to screen patients for hearing problems, to promote understanding and to educate staff, and to arrange referral for those who require further investigation or assistance.

15. It would be most helpful if nurses could take responsibility for reporting information about equipment that is not fulfilling its intended purpose. For example, information concerning hearing aids and communicators which are known to be of little benefit could be conveyed to manufacturers and precipitate design modification.

16. Addressing the hearing problems of residents is a relatively small but important aspect of care. This report highlighted scope for improvement, but in no way is it intended to devalue the tremendous amount of hard work and expertise expended by staff on the study wards.

(2) Glasgow Community Stroke Project

The purpose of this investigation was to identify the needs of stroke patients following admission to hospital and after discharge. The research was carried out over one year commencing August 1990. 95 patients were followed-up over a six month period. Assessments of function, social and psychological status, and of the needs for services were carried out, both in hospital and at home.

The majority of functional abilities improved while in hospital, but a significant minority deteriorated following discharge home. Some patients were suffering from more handicap than would be expected from the degree of physical disability: in some cases patients were still awaiting the provision of necessary services six months after their stroke, and a significant number of patients and carers were suffering from depression.

Despite attempts by hospital staff to plan discharges carefully, there were many problems. People who were referred did not arrive at their destinations or were unable to be provided with their needs due to chronic shortages. Hospital staff, although generally aware of the role of primary care health workers, still did not refer appropriately. Patients and carers were given little information about their condition, their outlook or what help to expect from statutory agencies.

On the community side, many disabled patients were not visited either by their general practitioner or other member of the primary health care team. While patients were still attending outpatient therapy of some kind, they felt that they had some hope. However, when this ended they felt abandoned and often socially isolated. This in turn seemed to lead to lack of motivation, and symptoms of depression become apparent. Patients and carers did not now who to turn to for help as no one had made themselves known to them as a concerned and interested professional. Many subtle pleas for help went unnoticed by professionals who were 'passing through' the home to perform a specific task.

The overall impression with this group of patients, with some exceptions, was that stroke is still viewed in a negative light. Professionals were not keen to become involved in care because it was felt that not much can be done. The patients needed a lot of emotional support, but the professionals felt they had neither the time nor resources to provide this. Furthermore, they failed to refer patients to the voluntary agencies who may have been able to provide services. The stroke patients were not a group who could fight for their rights, and their carers were too busy managing from day to day to actively organise better care for their relatives.

Shortages which have become commonplace in the community such as lack of chiropody or lack of finance for aids and adaptations had a direct and detrimental effect on stroke patients, causing them unnecessary handicap and placing more dependence on both formal and informal carers.

Patients were also disadvantaged by the lack of
routine assessments of both functional and social capabilities. Carers in constant contact with the patient failed to see both improvements and deteriorations unless these were marked. This led to discouragement and lack of referral for remediable problems.

Carers were given little support considering the appreciable strain they were under. No carers had heard of the Chest, Heart and Stroke Association which can provide support and give advice. No carers knew of the relatives’ support group, despite there being notices in many public places and health centres. Carers expressed concern about many practical issues, particularly their own psychological well-being and that of the patient. In many cases they were very relieved to have someone to listen to their problems even though nothing practical could be done and only reassurance given.

(3) Health surveillance of elderly people living in Castlemilk

Since 1990 health visitors attached to one general practice in Castlemilk (23,000 patients) have undertaken a systematic assessment of the health and health care needs of those in the practice aged 75 years and over (378 people).

285 people aged 75 years and over were visited at home during the year 1991/92: 190 women and 95 men. Sixty-five people were aged 85 years and over, and 26 were aged 90 years and over.

Of 254 situations where the carer was identified, 48 were reported to be under moderate or severe stress and there was no change in the proportion compared to the previous year.

Almost 80% of patients were on long term medication. Of these 218 patients re-assessment of medication was thought to be necessary in nine cases because of apparent lack of effect, lack of compliance, adverse effects or possible overdosage.

Of eight ‘activities of daily living’ 190 people were able to perform all and a further 43 needed help with only one activity. Fifty-two people needed help with more than one activity, eight needed help with seven and five people needed help with all eight activities.

About 80% of people were assessed as having satisfactory hearing, mobility and physical health - although often with some form of aid or assistance. Only 57% however had satisfactory eyesight (172 people with spectacles and 4 without). Ninety per cent or more were assessed as satisfactory for continence, mental state and social condition.

It was felt that functional improvement might be achieved with appropriate help (aids, equipment etc) in 29 people with unsatisfactory vision, 23 people with unsatisfactory hearing, nine with continence problems, and in a few others with mobility problems or in an unsatisfactory mental, social or general physical state. Apart from continence problems these numbers represented considerable reductions over the values for the previous year: almost half the problems previously assessed as requiring further action had received this and as a result functional status had improved. The increase in the number requiring help with continence problems may have been due to improved identification of these problems as rapport between health visitors and the patients improved.

The patients were receiving many services - for example 65 had a home help, 120 attended or were attended by a chiropodist, 19 used a zimmer, 20 used other forms of walking aid, about 30 had raised toilet seats, bath handles or other aids, and 13 had incontinence aids or supplies. One hundred and thirteen had a concessionary travel pass and 28 were in receipt of attendance allowance.

As a result of the surveillance process, 114 new referrals were made, including 24 for chiropody, 14 for district nursing, 11 for rehousing or housing improvements, 13 for bath handles and other bathing aids, 12 for attendance allowance, 11 for a telephone (but unlikely to be supplied), eight for incontinence aids or supplies, five to the general practitioner and two each to a dentist and physiotherapist.

In 110 instances a referral considered desirable by the health visitor was refused by the patient - for example for a home help (36 times), chiropody (36), meals on wheels (nine), day centre (six), housing (four) and dental care (three).

In terms of measurable improvement in functional status, the surveillance process is clearly of greatest benefit for identifying possible remediable vision and hearing problems and for initiating the appropriate referrals. However many additional benefits are achieved by referrals both to health care professionals (eg, the chiropodist, district nurse, general practitioner, dentist and physiotherapist) and to other agencies (eg, for a home help, aids, appliances and allowances). The review of medication is also important in detecting possible non-compliance, lack of effect or the presence of adverse effects of drugs.
The fear that an enormous burden of unmet need will be identified during surveillance is not justified. In general necessary services were being adequately provided - both by the health service and by other agencies. Where such services were not being provided, this was usually because people did not want them. In the remaining instances referral usually led to the patient receiving the service required within a reasonable period of time, with the exception of minor aids and appliances required to assist with bathing, toileting and general mobility in the home.

Conclusion

Sensitively conducted surveys of people in specific categories (eg, stroke, multiple sclerosis, physical disability in general, working class first time mothers) identify many unmet needs and other problems - most of which can be resolved with little or no expenditure. It is important to focus on the needs of specific groups if real needs are to be identified and addressed.

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There have been three health service priority documents since 1974. All three identify as priority areas the care of elderly people, those with mental illness or handicap, those with physical disability, prevention, and community care. The first two identify also services for people in areas of multiple deprivation. These priorities, together with reinforcement of primary care and its closer integration with other health services in the community, form the basis of the Greater Glasgow Health Board strategy.
PRIORITY SETTING

Because of the lack of concordance between need, demand and supply one of the most important and difficult tasks of health boards is to set priorities for the services which they intend to purchase. Priority setting requires an assessment of needs, quantification of the benefit likely to accrue from a particular service and knowledge of the potential benefits if the same resource were provided for a different service or for another client group. Detailed information of this nature is only beginning to become available, and so priority setting almost always involves adjustment at the margins of services rather than radical change. This evolutionary approach is appropriate because major changes over a short period would be difficult to put into effect (because of implications for staff and equipment) and unacceptable to the public.

Criteria For Setting Priorities

Diseases or conditions have high priority for health care where

* They give rise to a serious loss of health and/or well-being with recovery being unlikely in the absence of health care intervention.

* Cost-effective health care (treatment or supportive therapy) is available.

The Existing Pattern of Care Provided by the Health Service

"It is often implied that the existing pattern of care is entirely misplaced, represents 'vested interests' bearing no relation to 'need' and is generally lacking in 'health gain'. In fact, the existing services which have evolved over time, from an interaction with patients and their carers, reveal considerable health gain". (M.F.H. Bush, 1991).

The complex matrix of health care and other health related services which exists in Glasgow has evolved over many years in response to demand for health services. It could not and should not be rapidly dismantled in order to establish new interventions - for example in an attempt to achieve the national targets. What is needed is to gradually redirect existing resources in ways to achieve greater gains in health or in quality of life than at present.

The Four Domains of Health Service Activity

Health service activity falls mainly into four domains -

1. Health Promotion - concerned with promoting good health, preventing diseases and protecting health (e.g., environmental and food safety).

2. Family practitioner Services - provided by general medical practitioners, general dental practitioners, community pharmacists and opticians.

3. Community Services - health care in the community for elderly people; children; people with mental, physical or sensory disabilities; and for those with problems such as drug or alcohol misuse.

4. Hospital care for people who need diagnostic or therapeutic procedures which cannot be provided or are not available in the community.

At present (1991/92) Greater Glasgow Health Board spends a total of about £815m on these services. Of this total, about 0.3% is spent on health promotion, 18% on family practitioner services, 5.5% on community services and 71% on hospital care (55% acute, 16% long stay). Expenditure on medical services is determined largely by national norms. There is however scope for reducing some types of expenditure, for example prescription costs; there is also considerable opportunity for supporting general practice by providing additional staff and other resources in order to improve health, particularly for communities and client groups which have the greatest needs for health care. All health services are preventive to the extent that they are concerned with altering favourably the natural history of disease; the aim is to move the balance of treatments towards those which have the highest preventive components.

High Technology in Health Care

Health care operates at three levels of technology:

1. Low technology or supportive therapy, for example with people with dementia or severe physical disability.

2. Half-way technology, for example dialysis for kidney failure or pharmacological treatment for diabetes or Parkinson's disease where there is no possibility of cure (or of prevention) and where treatment therefore has to be continued indefinitely.

3. High technology, for example many investigative
and diagnostic procedures, and treatments for cancer and coronary artery occlusion. Procedures which have an outright capacity to prevent or cure (such as most immunisation procedures, cataract removal, are at the apex of the "technological pyramid").

High technology medicine can be expensive, and it is therefore essential to ensure that its use is limited to circumstances where it is appropriate. If high technology medicine is exploited too enthusiastically, there are dangers that it will not only be expensive but possibly also unnecessary, unsuccessful, unsafe, unkind or unwise.

**Health Service Priority Documents**

**The Way Ahead (1976)**

The following priority areas were identified:

1. The need to promote health care in the community through the progressive improvement of primary care services and community health services.

2. More positive development of health services for families in areas of multiple deprivation.

3. Lessening the growth rate of the acute sector of the hospital service in order to finance essential developments in other sectors.

4. Continued improvements in hospital and community health services for the elderly, the mentally ill, the mentally handicapped and the physically handicapped.

5. Encouragement of preventive measures and the development of a fully responsible attitude to health on the part of the individual and the community.

**Scottish Health Authorities Priorities for the 80's (1980)**

**Category A**: Programmes to grow faster than all health service revenue expenditure:

- Prevention
- Services for the Multiply Deprived
- Community Nursing Services
- Care of the Elderly
- Elderly with Mental Disability
- Mentally Ill
- Mentally Handicapped
- Physically Handicapped

**Category B**: Programmes to grow but at a lower rate than category A programmes:

- Primary Dental Services (General Dental Services and Community Dental Services)
- Maternity Services
- General Medical Services
- General Ophthalmic Services

**Category C**: Programmes to remain almost static in real terms or actually decline (and expenditure on any developments to be met from savings):

- Child Health
- Acute Hospital Services
- General Pharmaceutical Services

**Scottish Health Authorities Priorities for the 80's and 90's, SHARPEN (1988)**

The SHARPEN priorities are, in order of importance:

1. Services for old people with dementia, both in hospitals and in the community.

2. Care in the Community with particular reference to:
   - Services for elderly people
   - Services for people with mental handicap
   - Services for people who are mentally ill

3. Health Education, Prevention and Health Promotion.

4. Services for the Younger Physically Disabled.

**Proposed Shifts in Strategy**

It has been shown that the poor overall health of the Greater Glasgow Health Board population is accounted for mainly by the very large proportion of the population living in poor socio-economic and environmental circumstances. Although living conditions are improving in many of the least healthy areas, the process of change is slow; and economic conditions in these areas are probably deteriorating. In the absence of major economic improvements, significant improvement in the health of Greater Glasgow requires interventions which can succeed despite social disadvantage. In order to achieve this the following shifts in strategy have been proposed:

1. Greater attention to health promotion.
2. Stronger system of primary health care.
3. More appropriate use of acute hospitals.

In addition, in accord with the recommendations of the SHARPEN Report (1988), it is proposed:

4. To upgrade the treatment of longer term illness and handicap.
The Health Board has already made major and imaginative investment in health promotion - both by restructuring and greatly enlarging its own department, and by its involvement with other agencies - particularly through the Healthy Cities Project. The appropriate use of acute hospitals has been alluded to in the present chapter (High Technology), and this will be a key concern of the needs assessment and contracting processes. The proposed shift in the strategy towards the primary health care and towards longer term illness and handicap should however be explained in a little more detail.

Primary health care

For most people, the community health and primary care services are the first point of contact with the NHS. Community health services include, child health services (eg, “baby clinics”), family planning clinics and community based paramedical services. Primary care services are provided by a primary care team which includes the family doctor, health visitor, district nurse, practice nurse, receptionist and a number of other professionals. General Medical Practitioners are independent contractors to the Health Board as are General Dental Practitioners, General Ophthalmic Practitioners and Pharmacists.

The advantages of the primary health care system include -

* Almost universal registration of people with a general practice.
* A defined population (about 2,000 people) registered with each general practice.
* Direct access of patient to doctor and of doctor to patient.
* Responsibility for continuous and continuing care in the domiciliary setting.

Griffiths (1988) observed “the general medical service (general practice) is unique in having near universal contact with the whole population. I do not believe that the full potential of the contact has been realised”. Primary health care teams are ideally placed to assess the diverse needs of the different practice populations which together constitute the Greater Glasgow Health Board population, and to deliver health promotion, caring and therapeutic services which are appropriate to individual practice populations. The health care needs of communities within Greater Glasgow Health Board are extremely varied, and services require to be tailored accordingly. The primary health care team provides the only credible way of achieving this.

The Board’s policy is to support primary care teams in the delivery of an increasingly comprehensive range of high quality services within the community. Many family doctors have historically provided a wide variety of curative and health promoting services but the range of services offered has been uneven throughout the Board’s area. However, the new general practitioner contract has resulted in an expansion of activity and the reasonable expectation that most primary care teams will provide the following: assessment, diagnosis and treatment of all health problems, referral for specialist services where appropriate, child health surveillance, family planning, well person services, other more specialised health promotion services, surveillance for the elderly and, in some cases, minor surgery.

Similarly, the new general dental practitioner contract has extended the range and emphasis of dental services in the community so that first priority is now given to the maintenance of dental health.

A new role is anticipated for general medical practitioners under the new purchaser/provider arrangements described in Chapter 11. Family doctors are very close to the population and understand their needs. They also know the services which are available in hospitals so they have a key role to play in advising the Board which services should be “purchased” to meet the health needs of the population.

The recent report of the joint working party on the future role of the community pharmacy service identifies an expanded role for this service also.

Community Health Services

The Board’s overall strategy for services in the community is to build a strong partnership between community health and primary care services. The philosophy of partnership also applies to relationships with local government, the voluntary sector and others who jointly provide long term care in the community.

Since the primary care team is to become increasingly the main focus for a broad range of health care in the community, community health services will be redeployed to support the activities of general practitioners and to concentrate on those services which general practitioners do not at present provide. In particular the Board will seek to enhance the level of paramedical support available in the community. Child health surveillance will become part of primary care but the Board will ensure that the care of children with special needs either at its child growth and development centres or through its relationship with the education service is enhanced. The community
nursing services will be targeted to specific vulnerable groups of children and its focus will increasingly shift to elderly and disabled people.

In some cases, however, community services will be required in order to provide choice for the population. For example, although women have a notional choice of several hundred general practitioners who can provide family planning and well women services, family planning clinics remain popular and will continue to have a role in the service provision.

As community health services respond to changes in primary care activity, the Board will further develop its policy of targeting resources to areas of greatest need.

Acute illness demands a rapid response and is usually amenable to measurement - both in terms of the amount of distress caused, and of the effectiveness of treatment. Chronic ill health is less easily measurable, and usually requires supportive therapy to maximise function and to delay deterioration rather than dramatic interventions.

It is most important to ensure that resources are deployed equitably between acute and longer term illness. Greater health gain may well be achieved by removing more cataracts, replacing more hips or providing more support at home than by providing more heart transplant operations or providing more aggressive treatments for cancer.

**Care In The Community**

Certain groups of people (eg, the frail elderly, the mentally ill, the physically handicapped, those with sensory impairment) have ongoing needs for both health care and social support. The Government has given lead responsibility for planning community care to local authorities but indicated that they should plan jointly with health boards. Greater Glasgow Health Board and Strathclyde Regional Council (SRC) have set up joint planning arrangements including a series of client group based teams. These will enable the agencies to develop a common understanding of joint working on a range of issues and the resulting joint planning arrangements will enable the Board and SRC to express their common objectives and targets. For its part, the Board will contribute to the work of defining the size and nature of the groups requiring community care, assessing the health needs of these groups and of individuals within each client group and outlining its strategy, with relevant resource implications, for improving health within each group.

Although there are large numbers of patients in most of the categories requiring care in the community, the needs of each person are different so, if appropriate care is to be provided, individual assessments will be necessary. This personal assessment of needs, which will be followed by the allocation of a "key worker" to supervise service provision, is one of the most important of the new reforms.

There are still large numbers of people who are being cared for within hospital settings who would be better provided for through nursing homes, day hospitals, day care or domiciliary care. In addition, the Board must ensure that those receiving care in the community have the right level of care.

In all of these changes increasing emphasis will be given to making care more sensitive to client needs and wishes.

**Conclusion**

Community health services will be redeployed to provide additional support to general practice. This support will be targeted towards disadvantaged areas and specific vulnerable groups, and will increase the range of services available. There will be particular emphasis on health promotion and on the management and support of people with longer term illness and handicap.
Annual Report 1991/92

[Text continues on the page]
The most fully developed example of health needs assessment for Greater Glasgow is for services for cancer patients, a summary of which follows. The possibilities are explored of making improvements in prevention, diagnosis, treatment, terminal care and in the way in which patients are treated (eg, the way in which the diagnosis is communicated). The Health Board has established a multi-disciplinary "Task Force" to develop a strategy for the care of the dying and bereaved within Greater Glasgow, in line with the Scottish Health Service Advisory Council report "Everybody's Death Should Matter to Somebody". It consists of representatives from the medical profession, voluntary organisations, hospices and the Regional Council. Its focus will include all groups which are classified as having a terminal illness.
HEALTH NEEDS ASSESSMENT - CANCER

One in 3 of the population develop cancer at some time in their lives and 1 in 4 die of it. 63% of cancer cases in GGHB occur over the age of 65. In 1991, 67% of inpatient accommodation for cancer was for people aged 65 and over.

In 1991 in GGHB cancer accounted for 162,631 bed days with an average length of stay of 8 days. There were 5,339 incident cases and the prevalence of cancer within the Board’s area is estimated at some 11,171 individuals.

Glasgow retains its unenviable record, having the highest rates for cancer (both in men and women) of 147 locations over 5 continents where comparable data exists. Since 1982 lung cancer has been the commonest cause of mortality from cancer among women in Greater Glasgow.

Cigarette smoking is responsible for at least 40% of cancer mortality in Glasgow. In males, up to 62% of cancer mortality is cigarette smoking related. The European Organisations Against Cancer have placed action against smoking at the top of their priorities; so have 30 European Countries at the World Health Organisation conference on Cancer Policy in June 1992.

In this assessment we have identified 5 areas in which we believe ‘health gain’ is possible:

*  Improving Prevention
*  Earlier Diagnosis
*  Improving In-patient Treatment
*  The paradox of terminal care
*  Finding the consumer view

Towards Earlier Diagnosis

Early diagnosis undoubtedly improves outcome in people with cancer; encouraging people to seek medical help when they experience signs or symptoms that may mean cancer is therefore an important strategy. The following observations are relevant to this:

a. Table I from the West of Scotland cancer registry, shows that for many cancers there is a consistent survival advantage for patients from more affluent areas. This is likely to be a reflection of earlier presentation.

Table I

<table>
<thead>
<tr>
<th>Cancers Where Survival Is Related To Social Deprivation</th>
<th>Deprivation category</th>
<th>5 year survival (%)</th>
<th>Potential Improvement in Survival</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>Affluent</td>
<td>1,2</td>
<td>3,4,5</td>
</tr>
<tr>
<td>Melanoma</td>
<td></td>
<td>84</td>
<td>73</td>
</tr>
<tr>
<td>Colon</td>
<td></td>
<td>40</td>
<td>35</td>
</tr>
<tr>
<td>Testis</td>
<td></td>
<td>85</td>
<td>82</td>
</tr>
<tr>
<td>N H Lymphoma</td>
<td></td>
<td>58</td>
<td>45</td>
</tr>
<tr>
<td>Bladder</td>
<td></td>
<td>70</td>
<td>64</td>
</tr>
<tr>
<td>Kidney</td>
<td></td>
<td>41</td>
<td>38</td>
</tr>
<tr>
<td>Prostate</td>
<td></td>
<td>45</td>
<td>42</td>
</tr>
<tr>
<td>Head/Neck</td>
<td></td>
<td>46</td>
<td>46</td>
</tr>
<tr>
<td>Skin</td>
<td></td>
<td>93</td>
<td>90</td>
</tr>
</tbody>
</table>

If survival in the deprived areas was improved to that observed in affluent areas an additional 130 patients in GGHB would be cured (ie alive after five years) of cancer every year.

b. In malignant melanoma early diagnosis followed by early treatment improves survival.

c. Patients with cervical cancer from deprived areas present (ie, seek medical help for the first time) with more advanced disease than those from affluent areas.

d. Studies on populations from Glasgow,
Manchester and Leeds show that individuals in Manchester and Leeds know more about cancer than their equivalents in Glasgow and are more likely to comply with cervical screening.

e. Breast cancer incidence is much greater in affluent than in deprived areas but mortality is the same in both. This is due to survival being considerably better in affluent than in deprived areas, strongly suggesting that this is related to stage of presentation.

f. Testicular cancer, the most common cancer in the age group 15-34 years, shows a striking difference in survival between affluent and non-affluent areas, and this too relates to earlier presentation.

g. There is evidence that older people with signs and symptoms suggestive of cancer present later.

Improving Cancer Treatment In Greater Glasgow Health Board

There is increasing evidence that adherence to protocols and guidelines with specialist management and treatment improves outcome. For example it is now considered inappropriate for childhood tumours to be treated outside specialist centres. There is also evidence that joint specialist clinics (for example, in the case of lung cancer, joint clinics with chest physicians, oncologists, cardio-thoracic surgeons and palliative care physicians) confer survival advantage. In order to enable the effectiveness of different forms of treatment, patients should be included in national clinical trials wherever possible.

If this approach is to be effective, all participants must be consulted and have input to what is a programme for the care of cancer throughout GGHB. Such a programme will attract many patients for diagnosis and treatment from outside GGHB. Since all participants would have to be consulted, the programme would have a major educational impact within and well beyond Glasgow and would serve as the basis for the evaluation of new therapies as they become available. Because of the many special areas of treatment mentioned, consideration would have to be given to their use on a regional rather than a local basis. This would be administratively simpler to operate, more cost effective and result in a better outcome for patients.

Despite the known desire of many patients with cancer to die at home only about 30% of all cancer patients in Glasgow do so. Over 52% die in the acute wards of general hospitals and 20% within a hospice.

The average length of stay for admissions which terminated in death is 14 days, but there is little evidence that active treatment is being undertaken. This suggests an inappropriate use of acute NHS beds. If it is assumed that 67% of all terminal phase bed days in acute hospitals are inappropriate, this amounts to a total of 15,734 bed days or 43 beds. 43 places in an additional hospice would provide much more satisfactory care for terminally ill patients and their families at probably less cost than in an acute hospital.

To enable those who wish to die at home to do so assessment, good symptom control and if possible rehabilitation are necessary - either in an acute hospital bed or in a hospice. After this, carefully planned discharge home may be possible. Thereafter, there is a need for regular surveillance of cancer patients in the community from both a medical and nursing point of view. Problems relate not only to the control of symptoms, but also to psychological, social, spiritual and practical matters. Problems of communication may also occur.

Measures that might be taken to facilitate more patients to die at home, if that is their wish, include:

1. Hospital support teams which are formally linked with hospices.
2. Carefully planned discharges, with speedy response to the needs of the individual patient and family.
3. The provision of more specialist community palliative care nurses.
4. Greater coordination of hospice facilities.
5. Adequate staffing provision for terminal care cases in the community.
6. Adequate and responsive community services to meet health and social needs.
8. Education of Health Care Professionals regarding symptom control and communication.
The Consumer View

The following views were expressed during a discussion involving some 20 people from the TAK TENT cancer support organisation.

Medical Staff
The opinion that surgeons on the whole are less forthcoming and communicative with patients than those in other branches of cancer services was forcibly expressed by almost all of the group.

General Medical Care
All commented favourably on the general medical care received, and found that the young doctors were polite and approachable. The Consultants varied in their approachability but only one instance of an unapproachable Consultant was mentioned. Instances of impoliteness on the part of medical staff were rare but did occur.

There were many criticisms about the way the diagnosis had been communicated. Confirmation of the diagnosis had a very deep effect on the patients, and they considered they were not in a good position to comment on services provided until the significance of the diagnosis had fully 'sunk in'.

Access to Health Service
Because of the quality of care given no-one complained about difficulties of access to hospital though these were real.

The group was emphatic that the surroundings in hospitals were unimportant compared with the need for high quality specialist services. The patients were willing to travel long distances for treatment at a specialist centre. Complaints about waiting times for admission were very few.

General Practice
Almost all were concerned about the time from perception of symptoms or signs that may mean cancer to diagnosis. Many were angry about the problems they faced during this time and the failure of general practice to cater for their fears or to investigate their symptoms thoroughly. These views were strongly expressed though the group did appreciate that diagnosis was an imprecise science.

In one case there was no contact with the patient by the general practitioner throughout the whole course of the illness. Even repeat prescriptions for chemotherapeutic agents did not elicit a visit from the general practitioner.

Relationships between general practitioners and hospitals require to be improved. This often relates to problems of communication at all levels from secretarial to understanding of treatment policies or home circumstances.

Administration
There were few complaints about waiting times for clinics though when at clinics people often spent a considerable amount of time waiting to see the doctor.

Most patients appreciated the good quality of nursing offered but were concerned by the lack of time nurses had to deal with their problems on an individual basis.

The group had the fullest admiration for home care services and hospice care in the final terminal phase of the illness.

Amenity
The group appreciated attempts being made to improve the amenity of the wards and their surroundings and the general atmosphere of the hospital. However, they felt strongly that amenity was less important than the quality of medical care being given. Most preferred 4-5 or 6 bedded wards. Only one or two felt they would have liked a room to themselves and one person preferred the large Nightingale ward.

Most patients complained about the loss of the 'cleaning ladies' as they represented a friendly point of contact with reality and the outside world.

Basic items such as adequate provision of toilet rolls need attention. Patients do not like paper substitutes for proper linen. Meals in hospital were mostly cold when served and the standard of food was considered by almost all to be poor. Patients did not like the modern aeroplane type of catering and appreciated proper crockery and cutlery.

Conclusion

Many aspects of the health care of cancer patients have been identified which - if modified as suggested - could lead to an improvement in outcome in terms of mortality and morbidity and to greater patient satisfaction.
SECTION 3 - NHS REFORMS - A MAJOR OPPORTUNITY

CHAPTERS 10 TO 14

What this section says:-

* The recent NHS reforms provide a valuable opportunity to improve health.

* Health has been elevated in importance - Health Boards are not just concerned with health care.

* Health Boards must assess needs, set priorities, purchase health care and work with others for improved health status.
The Government White Paper ‘Scotland’s Health - a challenge to us all’ presents a series of targets for Health Boards to improve health. These relate to coronary heart disease, cancer, HIV infection, road accidents, dental health, smoking, alcohol misuse and drug misuse. In addition efforts are to be made nationally to improve the diet, encourage exercise, improve housing conditions and protect the environment. The eight targets (each with a specified incidence or prevalence to be achieved over a period of time - usually by the year 2000) provide a valuable opportunity to focus efforts on major causes of mortality and morbidity. However for most of the targets there is no specific action available which is likely to result in the target being achieved with any degree of certainty. The exceptions are dental health (for which fluoridation of the water supply would quite possibly lead to the target being achieved) and smoking and alcohol misuse (where a considerable increase in cost and abolition of advertising would reduce consumption).
IMPROVING HEALTH STATUS: THE WHITE PAPER

The White Paper is an unparalleled chance to make the NHS reforms work in the interests of the people’s health. As health professionals we should seize this opportunity (John Gabbay, 1992).

The preceding chapters show that health status depends on the interaction of a large number of factors, and that health services are relatively minor determinants of the health of individuals and populations. Because Health Boards now have the improvement of health of their populations as their primary concern it is necessary for them to determine the potential for health gain in its various aspects, and to conduct careful and continuing analyses of the ways in which health and other services require to be re-directed in order to realise this potential.

The publication in July 1992 of the government White Paper ‘Scotland’s Health - a challenge to us all’ and of its English equivalent ‘The Health of the Nation’ represents a major change in the focus of the health services from sickness and measures of health service activity to the improvement of health. The fact that health outcomes rather than matters of organisation and process are now central to the health service agenda provides the opportunity required to improve the health status of Scotland and of the population of the Glasgow area in particular from its current position among the less fortunate Eastern European countries to a level more akin to other Western European and industrialised nations.

Priority Diseases

A key feature of both White Papers is the specification of targets for five priority diseases or conditions. For Scotland these are:

* 40% reduction between 1990 and 2000 in mortality from coronary heart disease among those under 65.

* 15% reduction between 1986 and 2000 in mortality from cancer among those under 65.

* Local targets (because of variations in prevalence and transmission category) to prevent the spread of HIV infection.

* 33% reduction in road casualties by the year 2000 measured against the average number of casualties over the years 1981 to 1985; local targets for the reduction of other accidents.

* 60% of 5 year old school entrants to have no cavities, fillings or extractions by the year 2000; less than 10% of 45-54 year olds to be without their own teeth by the year 2000.

The definition of five priority areas for targeting in the English version of the white paper differed from ‘Scotland’s Health’ in two main respects. Firstly ‘The Health of the Nation’ included mental illness rather than dental health as a priority area. Secondly, the English targets were often more extensive and specific, for example

* Reduction of 40% in mortality from stroke as well as from coronary heart disease; reductions in mortality in 65-74 year olds by 30% for coronary heart disease and 40% for stroke.

* Reduction in mortality from lung cancer under the age of 75 by at least 30% in men and 15% in women by 2010; reduction in mortality from breast cancer in the population invited for screening by 25% by 2000; reduction in the incidence of invasive cervical cancer by 20% by 2000 (1986 baseline); to halt the annual increase in the incidence of skin cancer by 2005.

* Significant improvement in the health and social functioning of mentally ill people; reduction in the overall suicide rate by at least 15% by 2000; reduction in the suicide rate of severely mentally ill people by at least 33% by 2000;

* Reduction in the incidence of gonorrhoea by at least 20% by 1995 as an indicator of HIV/AIDS trends; reduction by at least 50% the rate of conceptions among the under 16s by 2000 (baseline 1989).

* Reduction in the death rate from accidents among children under 15 by at least 33% by 2005; reduction in the death rate from accidents among young people aged 15-24 by at least 25% by 2005; reduction in the death rate from accidents among people aged 65 and over by at least 33% by 2005.

Personal Behaviour

‘Scotland’s Health’ specified the types of personal behaviour which contribute most to ill health, and set targets for some of these -

* 30% reduction in the number of smokers in the age group 12-24 years between 1986 and
2000; 20% reduction in the 25-65 year age group over the same period. If these targets were to be achieved there would certainly be a considerable reduction in the incidence of lung and certain other forms of cancer, coronary heart disease and stroke.

* For diet, national targets for Scotland are being drawn up. It was acknowledged that Scotland has a "more unhealthy diet than almost any other country in the Western world" and that this was a major cause of premature death and of dental decay. It was also acknowledged that it is in the deprived areas that diet is worst - "with consumption of fresh fruit and vegetables being particularly low, and the incidence of coronary heart disease highest".

* 20% reduction between 1986 and 2000 in the proportion of men and women drinking more than 21 and 14 units* of alcohol per week respectively. Alcohol misuse is associated with liver cirrhosis, raised blood pressure, stroke, various forms of cancer, accidents and suicide. In 1986 about 24% of men and 7% of women were exceeding these limits in Scotland, and it is estimated that alcohol contributes to about 3000 deaths in Scotland each year.

* For drug misuse it was suggested that local targets be set.

* Further steps to be taken to encourage wide participation in appropriate exercise and recreational pursuits.

The association between health and wealth was discussed, with particular emphasis on the relationships between socio-economic standing and behaviour and lifestyles which predispose to ill health.

The Health of the Nation specified additional targets for personal behaviour for England. These included reduction from 40% to 35% in the amount of food energy derived from fat in the diet by 2000, lowering of energy derived from saturated (mainly animal) fat from 17% to 11% by 2000; reduction by 25% and 33% respectively in the proportion of overweight men and women; and a reduction in pregnancies in girls aged 13 to 15 years from 9.5 per 1000 to no more than 4.8.

* one unit is a single measure of spirits or wine, or half a pint of beer.

The Environment

The white paper described action being taken by government to improve the physical environment in recognition of its important influence on health. These measures include:

Housing
Taking unsatisfactory housing (including the incidence of dampness and condensation) into account in allocating resources to local authorities.

Encouraging local surveys in order to enable resources to be better targeted on houses and households with the greatest need.

Providing special funds for projects designed to demonstrate energy improvements (in council housing).

Licensing houses in multiple occupation.

Regular review of the Building Standards Regulations - for example to make the fitting of smoke alarms in all new dwellings compulsory from late 1992.

Environmental Protection
Establishing the Scottish Environment Protection Agency to achieve more consistent pollution control.

New powers to control industrial and vehicular air pollution, waste disposal, noise and litter.

Conducting a review of exposure to lead in drinking water by mid 1993.

Ceasing the disposal of sewage sludge at sea by 1998.

Ensuring the adequate treatment of all significant sewage discharges by 2005.

Encouraging District Councils to employ safety officers.

Other Initiatives

Schools
The previous chapter indicates that for a number of reasons better educated people are likely to be healthier. There are also a number of more specific ways in which schools contribute to a
healthy society, and these include physical education, health education, the provision of courses in health and lifestyle, and by exemplifying a healthy lifestyle both as an employer and as centres for community activity (for example in relation to school meals, the provision of occupational health services and by encouraging teachers to adopt the role of exemplars).

The Workplace
The first essential is for the workplace to be safe, but it can also encourage good health by promoting policies such as smoking restriction, healthy eating, and by providing facilities for exercise, health screening and occupational health services. It is suggested that the health service take a lead in developing this role. Also, employers' representatives will be encouraged to promote the development of health in the workplace.

The Scottish Diet
The White Paper proposes that the Scottish Office Agriculture and Fisheries Department will be considering with representatives of the farming, food processing and retailing organisations what changes should be made to improve diet in Scotland.

Coordination of Activity
A Scottish Office interdepartmental group on health has been established "to ensure continuing coordination of all health-related activities across the range of Scottish Office responsibilities", including health, the environment, industry, education, agriculture, fisheries and home affairs. The Scottish Office is also represented on the Ministerial Group on Health Strategy to ensure coordination of UK-wide issues affecting health, such as tobacco and alcohol.

Local authorities also have a major role in safeguarding and improving health - particularly the departments responsible for housing, social work, environmental health, leisure and recreation, education, water and sewerage, roads, the police and fire services.

Others with a major health contribution include voluntary organisations, employers, the media and the Health Education Board for Scotland.

A Scottish Health Survey
This is to be established in 1992/93 to provide an information base for monitoring, developing and evaluating changes in the health status and lifestyle of the Scottish people.

Conclusion
Most of the targets in the White Paper are projections for the next 10 years based on recent trends. There is little that the Health Board can do to influence their achievement except to reinforce its successful work to prevent the spread of HIV infection, to press for fluoridation of the water supply and to continue to promote a healthy lifestyle. The Board must therefore encourage the government to fulfil the commitments it has made in the White Paper, especially to assist local authorities to improve housing conditions, and to encourage farming, food processing and retailing organisations to make available a more healthy diet.
Health Boards in the past have been too involved with providing services to be able to consider how effectively these services were responding to the changing and diverse health needs of their populations. The separation of provider functions enables Health Boards now to concentrate on assessing health needs, determining priorities, setting standards, purchasing high quality health care and monitoring outcomes. This should result in the development of an increasingly effective service in relation to cost.
THE PURCHASER - PROVIDER 'SPLIT'

Until recently Health Boards in Scotland were concerned much more with the provision of health services than with improving the health of their populations. This began to change in the Greater Glasgow Health Board in 1989 when its department of health promotion was considerably reinforced and restructured and the Board committed itself to a series of objectives or targets for the improvement of health.

Under the recent health service reforms, direct operational management of health services has been delegated to hospitals and other units (eg, community unit, mental health unit). This releases a "slimmed down" health board to concentrate on strategic issues like measuring health status, assessing health needs, determining priorities, "purchasing" health care and ensuring quality of care and services.

Therefore, from 1st April 1993, the Board will use its allocation of funds from central government to "purchase" the best possible package of services to meet the health and health care needs of its population. These services will be purchased from a variety of "providers" including the Board's directly managed units (albeit they will have greater autonomy), National Health Service Trusts (those hospitals and possibly other units such as community care which decide to 'opt out' from Health Board control), the private sector, the voluntary sector and other health authorities.

This division between "purchaser" and "provider" should ensure that the people of Greater Glasgow are provided with an increasingly cost-effective and people-centred service. The key to a successful health service in Greater Glasgow will however be effective communication and joint working between "purchasers" and "providers".

Central to the process of purchasing is the assessment of health and health care needs. This is a complex process but it is designed to answer simple and relevant questions like: what type of volume of health care does the population "need"? Is the balance between hospital and community services the right one to maximise benefit? In other words, important strategic questions will be addressed by an objective assessment of population need.

Health needs assessment will also inform more specific decisions. The Board has to determine how many of each type of operation, procedure or service it will "purchase" for the population. For example; how many hip operations are "needed"? What is the "need" for chiropody? Do children "need" sight and hearing tested, and if so, when? This type of decision will be based on an assessment of the seriousness of the health problem which is to be addressed and the population's or individual's capacity to benefit from the proposed intervention.

The Board will also set the standards which will be required of the services it "purchases". In addition, audit of clinical practice will be used increasingly to provide professionals with the information they require to raise and maintain standards.

Identifying health care needs and allocating resources to meet them (the purchaser function) requires different skills from those required for organising services (the provider function). Separating these two functions removes the confusion which previously existed between improving the health of the population and providing a service whose prime function was - in the public perception - to treat illness.

Because demand will always exceed supply, choices between services have always been necessary. By removing responsibility for providing services, purchasers are able to take purchasing decisions objectively, without regard to historical patterns of care. These decisions however will have to be made overtly, and preferably with public involvement, rather than covertly (mainly by clinical judgements about priorities) as in the past. These clinical judgements were usually based on urgency, with resultant neglect of the less urgent but more prevalent and more socially important care needed for chronic, progressive and disabling disease and for the prevention of illness and promotion of health (Alwyn Smith, 1992). The fact that health care has to be rationed will in future be apparent to all, and this may have benefits from the point of view of allocation of resources to the health service. Purchasers will also analyse information from providers about costs and effectiveness in order to plan their services. Variations in costs, activity and outcome will become apparent, and the services of those whose performance is inadequate will gradually cease to be purchased. Purchasers and providers have a joint responsibility to ensure that unnecessary, unapproved, unsafe or otherwise inappropriate care is not provided.
The Purchaser - Provider 'Split'

PURCHASERS TASKS: Contract Planning

1. Assessing health status - what we know about health problems.
2. Assessing health needs - what we know about services which can or could address health problems.
3. Assessing the need for health care.
4. Defining the role of other agencies.
5. Establishing priorities.
6. Specifying services and setting standards.
7. Formulating contracts (see figure 1).
8. Negotiating contracts with providers.
9. Monitoring outcomes and improving the quality of what is being done.
10. Ensuring that case selection (for admissions, preventive measures, operative procedures etc) reflects relative need.

PROVIDER'S TASKS: Business Planning

1. Assessing health care needs.
2. Appraising options.
3. Deciding what should be done.
4. Developing health care systems
   - setting objectives
   - defining criteria.
   - agreeing standards.
5. Total quality management.

General Practice Fundholding

Paradoxically, at a time when Health Boards are relinquishing their provider role in order to become purchasers of services, general practitioners are being encouraged to adopt a purchasing role in addition to their traditional responsibility for the provision of primary care. General practitioners and the primary care team, working with patients and their families in generally quite well circumscribed areas and localities, are ideally equipped to identify the health care (and social) needs of individuals, communities and groups (eg elderly people or those with disabilities).

There are two fundholding practices in Greater Glasgow at present, with two more preparing to become fundholders and a further 22 (comprising 94 doctors) expressing interest. At present fundholders are able to purchase services such as certain hospital procedures (a variety of in-patient, day case and outpatient treatments and diagnostic services), and physiotherapy and counselling (eg, psychiatrist) services. As the scheme grows however the range of services available for purchase will increase.

The range of services will be further extended in 1993 to take into account other professions allied to medicine and community nursing, so that general practitioners can use their special knowledge and expertise to make best use of these resources for their patients. Clearly this will be an evolving programme, depending largely on the type and quality of existing practice facilities.

One of the great virtues of the fundholding scheme is that it allows practitioners to concentrate their efforts in areas which they regard as the ones where there is most potential for improvement in their local circumstances.

The scheme offers considerable potential for bringing about a shift of emphasis from secondary to primary care. Already the channels of communication between primary and secondary care are opening up, with the providers becoming more responsive to general practitioners. If these shifts of emphasis gain momentum, general practitioner fundholding will have a significant role to play in putting primary care at centre stage, with improved quality and expanded facilities.

Conclusion

Because Health Boards now have the improvement of health rather than the provision of health services as their primary concern, health services will gradually undergo considerable change. Activities which result in relatively little improvement in health will gradually be replaced with others which have greater benefits. The role of Health Boards is therefore now a compensating one, and may be compared to that of a gardener - to cajole new ideas and developments in some fields, and to restrain dynamic growth in others.
Health care is appropriate only where there is a clearly demonstrable health need and where there is a form of health care available which will meet this need, at least in part. Health care includes prevention, health promotion, diagnosis, rehabilitation, continuing or supportive care (including care for carers) and terminal care as well as treatment for acute conditions. The object of assessing the need for health care is to divert resources from activities of little, dubious or no benefit to others where there will be benefit or 'health gain'. However 'health gain' must not be pursued at the expense of increasing inequality; a reduction in health inequalities should be a prime health service objective. Also it is important to develop indices of 'health gain' for those aspects of health care such as rehabilitation and the continuing care of the elderly or people with disabilities where measurement is more difficult; otherwise resources are likely to be concentrated on activities where measurement is relatively easy.
THE PURCHASER'S ROLE - ASSESSING HEALTH CARE NEEDS

In health service terminology 'need' is the population's ability to benefit from health care. In this sense it is measurable (or at least potentially so), and is not to be confused with need defined subjectively as something that is wanted or desirable but which may have no health or other benefit.

Health Needs and Health Care Needs

The earlier chapters of this report were concerned principally with assessment of the health needs of the population of the area serviced by Greater Glasgow Health Board (GGHB). Health Boards are now responsible for purchasing services which will meet these needs with the greatest effect. Before this can be done the results of the health needs assessment must be translated into an assessment of health care needs. A need for health care depends on there being a health need, but it also depends on the availability of health care services (including prevention) which will lead to an improvement in health.

A need for health care only exists therefore where:
- a health need is clearly demonstrable.
- there is a form of health care available which will effectively meet the health need in whole or in part.

The spectrum of health services

Until recently the success of the health service has tended to be measured mainly in terms of supply or utilisation rather than need - for example the number of hospitals or of hospital beds, the number of operations per thousand people, or the number of treatments per consultant. Measures of health care need are now being developed. These should include all aspects of health services - including prevention, health promotion, diagnosis, rehabilitation, continuing care and terminal care as well as treatment for acute conditions. Measures of health care thus include supportive care (including relief for carers) and prevention as well as clinical activity.

Need, demand and supply

Health services will be most effective where there is a clear health need (especially where this is a serious problem which affects a considerable proportion of the population), which leads to demand (from the public and/or professionals) and for which there are sufficient resources to supply effective treatment. However services which are demanded are often not needed because they are inappropriate or ineffective. For example, prescriptions for self-limiting illnesses are ineffective and many 'tonics', antibiotics, anxioytics and antidepressants are used in inappropriate circumstances. Some tonsillectomy, cholecystectomy and other operations, and many X-rays and other hospital investigations, are often ineffective. Conversely, many services which are needed cannot be supplied because there are insufficient resources. One of the main purposes of assessing health care is to redeploy resources from activities which are unproven, or of dubious or no benefit, to others where there will be clear health gain.

Chapter 6 (figure 1) illustrated the relationship between the three concepts of need, demand and supply and shows the principal factors which influence them. Greatest harmony will exist when there is greatest overlap or maximum concordance between need, demand and supply. More usually the degree of overlap is relatively small, with needs being met only in part or not at all.

The demand for services is influenced not only by need and factors such as the media and education, but also by supply itself. Supply therefore creates its own demand. This is evident where a service which is no longer necessary on the basis of health need is threatened with withdrawal.

Population and individual ability to benefit from health care

The ability to benefit from health care does not mean that in each individual case a beneficial outcome from a particular intervention is guaranteed; it means that when the intervention is made a number of times there will be an overall benefit - with some individuals benefiting perhaps considerably, and others possibly not at all. The population benefit is the sum of the benefit for individuals; it depends on the incidence of the health problem at different levels of disability and on the effectiveness of the intervention. Health care needs are influenced by:

(a) The distribution of the condition in the population.
(b) The sufferers' possibility of benefiting from a particular intervention.
The Purchaser's Role - Assessing Health Care Needs

(c) The sufferers wish to avail themselves of the intervention.

Achieving health gain

There can never be sufficient resources available to ensure that all those with health care needs have all the health care from which they would benefit. The need for health care will therefore always exceed the supply. For this reason resources must be deployed in favour of those activities which are likely to have the greatest benefit or potential for 'health gain'.

Ideally, health gain should be measured in terms of reduced mortality or improvements in physical, mental and social well being. Such measures include standardised mortality ratios (for all causes, and specific causes - mental as well as physical), indices of functional status and self-perceived health status. Where health care is of proven effect, as for example with hip replacement, cataract removal and immunisation, it is possible to use service utilisation rates as proxy measures of health gain.

For preventive and health promotion measures and supportive care "health gain" must be assessed in terms such as the adequacy of support provided, including relief for family carers.

The risk of targeting resources where health gain is most easily measured

The opportunity to re-distribute Health Service resources on the basis of the likely benefit to health or 'health gain', rather than on the basis of past patterns of care or pressure from individuals, is a most welcome advance. However, there is a danger that emphasis will be placed on activities where measurement is easy (eg, mortality, hospital utilisation) rather than on areas where measurement is much more difficult (eg, the care of physically disabled or elderly people, or those with mental illness or handicap, and of their carers). This would lead to resources being shifted towards activities where there is more easily measurable health gain, but not to others where health gain may be even greater but is more difficult to assess. It is most important therefore that measures of health gain are developed for example for rehabilitation, the continuing care for people with physical or mental disabilities (including elderly people) and for the terminally ill.

Achieving equity

The greatest health gain may sometimes be achieved by targeting resources on those communities which already enjoy the best health. This may be true particularly for preventive measures (eg, for screening, immunisation and health promotion activities); but it may also apply to remedial measures such as hip replacements and cataract operations. If resources are deployed in favour of the healthiest population groups in order to achieve maximum health gain, then clearly this would lead to an increase in health inequality. A reduction in health inequalities should be a prime social and health service objective; resources therefore should not be deployed to achieve maximum health gain where this is likely to be achieved at the expense of increasing inequalities.

Equity should be sought not only between geographical areas and communities but also between services and client groups. If 'health gain' is pursued as the major objective, then this is likely to result in increases in inequalities in health status and in an increasing imbalance between needs and resource provision for particular services and client groups: for example acute hospital care gaining at the expense of community care, or services for children being developed whilst neglecting the health care needs of homeless or physically disabled people. Within the NHS purchasing process equity should be seen to be of equal importance as achieving health gain.

Conclusion

The assessment of health care needs requires development of measures of health gain for the whole spectrum of health care activities - comprising health promotion, diagnosis, rehabilitation, continuing and terminal care. Health gain must not be pursued at the expense of increasing health inequalities.
Health Boards are now required to seek patients' views on the management and delivery of services, the quality of care and on the provision of information about health and health services. These views must be taken into account when purchasing services. Determining patients' views however may be difficult, particularly with disadvantaged people, people who are not well educated, or people who have not been provided with sufficient information to be able to make informed judgments. The process therefore requires to be conducted sensitively and - for many important groups - requires personal discussion. The way in which views are sought and the types of question asked will depend on the background of the patient and the use he or she makes of the health services.
ASSESSING THE CONSUMERS’ VIEW OF HEALTH SERVICES IN GLASGOW

The principal role of Health Boards is to assess the health needs of the population and, through the planning and purchase of services, to achieve the optimum improvement in health. Health Boards are likely to be more persuasive and successful in their negotiations with provider units if they secure local support for change.

A FRAMEWORK FOR CONTRACTING

An operation framework for contracting has been produced by the Management Executive of the National Health Service in Scotland in its "Procedural Manual on Contracting". Instruction is given to both purchasers and providers that in deciding on priorities for service improvements they must take account of how:

1. General practitioners’ preferences may influence services.
2. The views of patients can increasingly influence the management and delivery of services at all levels.
3. The speed of access to health care may be improved.
4. The quality of the environment within which patients are treated and cared for may be improved.
5. The standard and level of communication with patients and relatives may be improved.
6. Improvements in efficiency may be addressed.
7. Clinical effectiveness may be reinforced.

These instructions make clear that Health Boards must actively seek patients views on the management and delivery of services, the quality of the health care environment, and on the provision of information about health and health services. This requirement for Health Boards to consult with consumers on these key issues was later reinforced in the Patients Charter, launched in September 1991.

Assessing local views on health services: Developing a framework

The assessment of local views on health services is not a new concept. Already in Glasgow a number of ad hoc studies of consumer satisfaction have been undertaken. Many have highlighted areas of concern. Absent however, has been an ongoing framework of consultation whereby those receiving health care may influence and shape the services provided to them. The NHS Management Executive have now advised Health Boards to develop such an ongoing framework, and in the consultation process to achieve three key objectives.

These are:

1. To involve local people at different stages of the purchasing process.
2. To promote an informed debate about local health services and local health issues.
3. To ensure that different groups in the community are able to make themselves heard.

Aspects of health care

Aspects of health care on which consumers views may be ascertained may be divided into those which are primarily the responsibility of purchasers, and those which are the responsibility of providers.

Purchaser responsibilities

a) Knowledge of health services, and the role of health professionals

In general, consumers are unclear about the objectives of specific health services, the role of individual health professionals, and of the different responsibilities of health and social services.

b) Access to health services

Access may be limited because of difficulties in provision (for example in quantity or location), because people are reluctant to avail themselves of a service (for example because it may be inconvenient, of low priority to them or feared) or because the need for a service is not perceived timely by the patient or doctor (eg the need to seek attention for or be operated upon for a breast tumour).

c) The effectiveness of interventions

Medical audit "the systematic critical analysis of the quality of medical care, the use of
resources, and the resulting outcome and quality of life of the patient” is the main method of evaluating the effectiveness of health interventions. However, patients’ views on the positive and negative aspects of treatments are also important. For example, in cancer treatment the psychological effects of surgery and the physical side effects of drugs should be taken into account; and the consumer view is of paramount importance in relation to community services.

d) Unmet needs

The present range of services may fail to address important aspects of patient care. For example, carers in the community may become isolated and suffer from exhaustion and depression; or people who have suffered a stroke may not be provided with or even informed about important sources of help.

e) Priorities

Patients priorities for health care delivery should have an important influence on the purchase of health care. For example, patients with mental illness may prefer more community based services as opposed to in-patient services. Mothers may prefer more open access to their family doctor as opposed to child health clinics. Patients may prefer more preventative care as opposed to hi-tech hi-cost interventions.

**Provider Responsibilities**

f) Administration

For example, providers should ensure that patients have advance information on the reason for hospital visits and what will happen on arrival. Also, patients should have adequate notice of discharge from hospital and receive instructions on follow up arrangements, medication and lifestyle.

g) Amenity

This aspect of care relates to the physical environment of the service, patient comfort and catering facilities. These amenities are the shop window of the health service, but they may also be important to patient well-being.

h) Interpersonal communication

It is important that all health professionals learn to communicate well with patients. Issues of responsibility may arise when difficult and sensitive issues such as diagnosis and prognosis are communicated and discussed.

i) Patient dignity

Patient dignity is a most important issue, but one which in the setting of a busy and demanding service may sometimes be overlooked.

**THE DIVERSITY OF INTERESTS AMONG HEALTH SERVICE USERS**

**The Health Service User**

The views of health service users are important in assessing health needs. The health service is provided for the benefit of users, and is paid for by them. Users views however differ, depending on the individual, his or her background and on the type of service provided (eg, preventive measures, treatment or continuing care). In general, people from the least healthy and materially most disadvantaged areas see health in terms of reasonable housing and having a job, and their prime concern is that the health service should be there to return them to good health when they are ill. People from more advantaged areas are likely to regard good health as a positive concept; they are likely to readily make use of opportunities for health promotion and disease prevention, and are likely to want freedom to choose and to make demands for health care which accord with their own perception of need. These diverse requirements of health service users are illustrated in Table 1. It is important to appreciate the differences between groups and communities in their expectations of the health service and, particularly, to recognise the obstacles for people in the more disadvantaged areas in achieving adequate uptakes of preventive measures and encouraging healthy lifestyles.

This table clearly demonstrates that health service users are not a homogeneous group, but fall into several distinct types of user and any one individual may move between user types from time to time or as an illness progresses. Because of this, and because of the very different perspectives of views from advantaged and disadvantaged areas assessment of the ‘consumer view’ is a complex process which cannot be conducted in a single survey. Rather the
views of the different types of user in different situations have to be sought individually. A good example of this is given in Chapter 7 ("the perception and use of child health clinics in a sample of working class first time mothers")

Conclusion

Assessing the consumer view is a skilled process which in most cases requires surveys which are tailored to the needs of specific groups (eg, people with physical disabilities) and types of user (eg, advantaged or disadvantaged). It requires considerable time and insight for example to persuade people with long term disabilities living in deprived circumstances to voice their concerns.
### Table 1: HEALTH & HEALTH SERVICE ISSUES OF MOST IMPORTANCE TO USERS

<table>
<thead>
<tr>
<th>Type of User</th>
<th>Least Advantaged</th>
<th>All Users</th>
<th>Most Advantaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Users Of Services (people with chronic illness or disability)</td>
<td></td>
<td>Information empowerment choice 'key/adviser counselling home support respite for carers occupational therapy hospital discharge arrangements</td>
<td></td>
</tr>
<tr>
<td>Users of Primary Care &amp; Community Services</td>
<td>Prefer informal forms of support; personal approach; opportunity for client-initiated 'drop-in' consultations; less directive style; wary of unsolicited advice. Problem relating to care of dependents during consultations.</td>
<td>Professional competence accessibility environment (friendliness waiting time, facilities etc) information dignity/privacy</td>
<td>Choice</td>
</tr>
<tr>
<td>Users and Potential Users of Preventive Services</td>
<td>Accessibility; convenience; perceived relevance; environment; conflict with other priorities/needs, Provision of social outlet/peer network.</td>
<td>Potential benefit</td>
<td>Choice</td>
</tr>
<tr>
<td>Episodic Users Of Acute Hospital Services</td>
<td></td>
<td>Successful outcome professional competence waiting times information relationships with staff quality and organisation of services continuity of care discharge arrangements, privacy/dignity</td>
<td></td>
</tr>
<tr>
<td>Users of Maternity Services</td>
<td></td>
<td>Healthy baby (including delivery at home)</td>
<td>Choice accessibility quality and organisation of services</td>
</tr>
<tr>
<td>General Population (most people for most of the time)</td>
<td>Housing; employment; environment; crime/vandalism; transport; avoidance of ill-health; accessible services</td>
<td>Professional competence</td>
<td>Choice</td>
</tr>
</tbody>
</table>
An important objective of the recent NHS reforms is to ensure that all services are delivered to high standards, and that consumers play an important part in setting these standards. Standards have been developed to cover a variety of non-medical and support services and various aspects of customer relations; these include process measures such as waiting times, the way in which patients are communicated with, the quality of the hospital environment and standards for services such as catering and cleaning.

Over the past year a clinical audit strategy has been published and debated, and a framework for clinical audit has been established - including the appointment of an audit coordinator, and hospital, general practitioner and pharmacy audit staff. The aim is to progressively incorporate standards for clinical practice, based on process and (particularly) outcome measures, into contracting procedures.

One important aspect of quality which has received little attention and which now requires development is that of 'case selection'. Public Health has a major role to play in ensuring that needs are fully taken into account in the delivery of services, and that no individuals, groups or communities (eg, unvaccinated children, women who have not been screened for breast or cervical cancer, or people in long-stay accommodation) are neglected.
QUALITY OF HEALTH CARE AND QUALITY OF SERVICE

There are four major components of quality of health care and quality of service:


b) Non medical and support services: eg paramedical services, medical records, catering and laundry services.

c) Customer relations: these comprise
   i) interpersonal relationships - eg, communication.
   ii) amenity - eg, the hospital environment.

d) Case selection: eg, ensuring that services are received by individuals, client groups and communities according to relative need.

The Greater Glasgow Health Board is committed to improving quality of health care and quality of service. As the purchaser-provider arrangements develop, the Board will increasingly specify in greater detail the type and quality of care and service it wishes to purchase from provider units. Part of the drive for increased quality is a commitment to technical (medical or clinical) audit which will soon become a routine part of all clinical activity.

The pursuit of quality however also depends on public participation in decisions about the development of services. We have therefore to ensure that relevant information is made available; that the rights of individuals and groups to participate in decisions is made clear; that proper support for representatives is provided; and that there are strategies to ensure that the views of those who cannot participate are taken into account.

Current service specifications

The Board in its Purchaser role has required each hospital to develop a comprehensive Quality Assurance programme to ensure the delivery of agreed standards.

Written specifications which include measurable standards have been developed by the providers to cover the following services: Accident and Emergency; Support Services; Day Patient Services; Health Promotion; In-Patient departments; Medical Records; Out-patient Departments; Paramedical Services; Patient Discharge Arrangements.

Supported by management, these quality initiatives have been built into the Board’s contracting process as In-Patient and Out-Patient Charters; these have been displayed publicly to demonstrate the commitment from all staff to improve standards of care.

Clinical Audit

Current service specifications comprise standards for non-medical and support services, and for process measures such as waiting times. There is so far a virtual absence of measures in contracts to improve and reduce unwanted variation in clinical processes and outcomes. It is most important to begin to incorporate standards for clinical practice into contracting procedures. High quality clinical practice will be promoted by clinical audit, including measurement of outcomes and conformity to clinical guidelines. Attention to clinical guidelines, audit and outcome monitoring is required both by the purchaser and the provider. A key role is played by clinicians on behalf of both purchaser and provider. The purchasing team requires a direct relationship with clinicians, without any managerially separate monitoring team intermediary, in order to link the population-wide health gains sought by purchasers with clinical audit in provider units.

As regards audit, the purchaser is primarily concerned with the extent to which the Board’s audit strategy is being implemented.

Clinical guidelines can be developed only in close association with clinicians, through a long-term programme for their progressive introduction into clinical practice and contracting. Where appropriate, the same guidelines will apply to hospital medical staff as to general practitioners and will include elements of quality assurance and delivery in nursing and prescribing practice.

Clinical standards should not be pursued in isolation from other aspects of a comprehensive monitoring framework, including nursing procedures, support service standards and organisational audit (eg for risk management, health and safety, health promotion and control of infection).
Quality of Health Care and Quality of Service

Over the past year an audit strategy has been formulated and an audit framework has been established within hospitals and in the community. The aim of these developments is to help all professional staff within the Greater Glasgow Health Board to become involved in clinical audit. By helping clinical staff to look at the quality of the care they give, in a systematic way, it is anticipated that high quality care will be promoted in an ongoing manner.

The Audit Strategy

The aims of the Greater Glasgow Health Board audit strategy are to ensure that:

a) Meaningful and appropriate approaches to audit are adopted by all professional staff in Greater Glasgow Health Board.

b) Strategic issues are addressed through audit as a matter of priority.

This document represents the Health Board’s view of aspects of care where a particular need is felt for information on quality. The responses to this document are in the process of being collated and reviewed and are for the most part positive in tenor. It has established a mechanism for debate between the Health Board and individual units which holds promise for the future, with purchasers and providers working together to improve the quality of care.

The Audit Framework

Eight general practitioner audit facilitators have been appointed on a part time (one session per week) basis each with a “patch” of general practices in which they promote and facilitate audit activity. The care of diabetes patients in general practice has been an early subject for audit, and some groups have now re-assessed their management of diabetic patients, and shown that monitoring for diabetes complications has improved greatly.

In hospitals, nine audit facilitators are in post, and a tenth position is in the process of being filled. Eight facilitators are hospital based, within the seven acute sector units (including the Royal Hospital for Sick Children) and the mental health unit. The other two facilitators are working on the care of the elderly and on surgical audit. The tenth facilitator will work in the field of maternal health. The facilitators help to set up and develop both medical and nursing audit, with the longer term aim that these will integrate more completely. The Unit Audit Committees are increasingly recognising their role within the units as well as that of putting forward bids for specific audit funding from Area Audit funds.

Two pharmacy audit staff are currently taking up their posts, and over the past year the developments within pharmacy in terms of computerisation mean that a great deal of basic information on drug use is now available to both hospital and general practice.

An area audit office has been established within GGHB, in the Department of Public Health. This is directed by an audit co-ordinator, whose role is to train and provide advice and support for the audit facilitators, and to supervise those working on an area-wide basis. The audit co-ordinator also has a role within the Health Board in providing audit advice and expertise to the purchasing organisation, and facilitating good liaison between them and the Area Audit Committee(s). In the future such liaison should ensure that clinical staff are involved in the setting of quality standards for the work they do.

Monitoring Functions

Monitoring will require the purchaser to develop a mechanism of the types at present used in the statutory registration of nursing homes and partnership developments, and in the inspection procedures employed for longer stay institutions by the Mental Welfare Commission or of Scottish Health Services Advisory Council. High technology assessment must be developed to promote the use of effective technologies and to eliminate those which are ineffective. At present there is wide variation between centres and professionals in the use of technologies. Factors such as quality of life both during and after treatment are important aspects of assessment, and so public involvement is needed in the process. Many new technologies will reduce the need for inpatient hospital care and some (including new diagnostic techniques, systems of drug delivery and aids for disabled people) will reduce the need for hospital services.

Conclusion

Good progress has been made in setting standards for quality in non medical and support services, in customer relations and, more recently, by audit in clinical practice. Emphasis now requires to be placed in ensuring that services are received by individuals, client groups and communities according to relative need. For example if some groups fail to come forward for screening, preventive or health promotional
services then different approaches of encouraging them to do so must be tried. Similarly people who are unable to or have difficulty in drawing attention to their needs (e.g., disabled people living in home in deprived circumstances, or elderly people in long-stay accommodation) must have their real needs established and responded to.
SECTION 4 - CURRENT APPROACHES TO THE PROBLEM

CHAPTERS 15 TO 17

What this section says:-

* Much is already happening to improve health status.

* Intersectoral work is progressing to address all the determinants of health.

* However, problems still remain and much more could be done.
The Board’s strategy for improving health in Greater Glasgow is based on inter-agency collaboration, primary care, health promotion, targeting resources on areas of greatest need, increasing the priority given to physically and mentally disabled people living at home, working with providers to purchase high quality and cost-effective health care, and by encouraging participation by individuals and groups in decision making. However much of the success of this strategy will depend on encouragement and help from the government - particularly in relation to housing and employment, but also to the national diet and (for smoking, alcohol misuse and accidents) to legislative measures.
STRATEGY FOR IMPROVING HEALTH STATUS IN GREATER GLASGOW

Better health is “everyone’s business” and the key to success is to cooperation between all relevant sectors and the Glasgow public. Participation by the community in decisions concerning their health is also vital and the Board seeks to involve the public in decisions about health needs, priorities and service delivery.

The Board’s strategy to improve health status is to:

1. Collaborate with other agencies which influence health
   By working with others in local government, the media, the voluntary sector, schools, universities/colleges and elsewhere, much can be done to influence the determinants of health which are outwith the Board’s direct control. The Healthy Cities project has provided the main means by which the Board will achieve this goal, but more direct forms of collaboration with individual agencies are now needed.

2. Strengthen primary health care
   This will be achieved by providing additional support and encouraging partnership with community services, particularly in areas of deprivation.

3. Further development of health promotion programmes
   This will be achieved by high profile media campaigns; training and resources for all relevant professionals; topic based programmes addressing smoking, diet, exercise, alcohol, addictions, AIDS, and dental health; setting based programmes in local communities, schools and colleges, the workplace, the primary care setting and in hospitals; and creation of health promoting environments through projects like the “health promoting health centre” and “health promoting school” and the advancement of smoking and other policies.

4. Target health promotion initiatives and community services to areas of greatest need
   The Board will continue to give increasing priority to disease prevention programmes and health promotion activities in areas of priority treatment but, for the first time, community services will devise locality plans with specific targets for health gain based on assessments of local health needs.

5. Use the hospital and primary care settings for prevention and health promotion as well as treatment
   Admission to hospital can be an important life event and provides a major opportunity for prevention and health promotion. The Board will ensure, by means of its contracts with hospital units, that appropriate support and advice is given to all those in hospital on healthy living, disease prevention and other relevant topics.

6. Increase the priority given to the care of physically and mentally disabled people and others with special needs, both in the community and in continuing hospital care
   Collaboration with Strathclyde Regional Council (as the lead agency for community care), with the voluntary sectors and with other providers is fundamental to this process.

7. Purchase cost effective health care
   To meet the needs of the population.

8. Work with providers
   To ensure that resources are used in the most effective way to provide high quality and accessible health services.

9. Promote quality and the pursuit of excellence
   By defining standards, promoting audit and valuing staff who are our greatest and most important resource.

10. Encourage a patient centred approach and participation by individuals and groups in decision making.

Conclusion

The strategy is based on an assessment of the health needs of Greater Glasgow, and each component is essential for meeting these needs. An additional essential influence is that of central government, and much of the success of the Board’s strategy will depend on encouragement and help from the government - particularly in relation to housing and employment, but also to the national diet and (for smoking, alcohol misuse and accidents) to legislative measures.
In 1988, the Greater Glasgow Health Board joined with Strathclyde Regional Council, Glasgow District Council and a variety of community-led organisations to establish the City of Glasgow as a member of the WHO Healthy Cities Project. This is the principal mechanism available to the Board for working with others to influence the determinants of health which are outwith the Board’s direct control. More direct forms of collaboration with individual agencies are now needed, and two such projects which have been established are the successful long-running Glasgow 2000 campaign against smoking, and the much more recent Women’s Health Policy for Glasgow.

In 1989 the Health Promotion Department was extensively reinforced and re-structured and established ambitious programmes with clearly specified targets; these programmes are successful and are being developed continuously. In response to the last year’s annual report the Board agreed to target community resources to areas of greatest need, to ensure that secondary prevention (particularly smoking cessation) is given high priority during admission to acute hospitals, to further influence other bodies with responsibility for social and environmental determinants of health and to pilot two innovative approaches to prevention and health promotion in selected inner city areas and peripheral housing areas at an estimated cost of £400,000 per year for two financial years.
ESTABLISHED PROJECTS AND ACTIVITIES TO IMPROVE THE HEALTH OF THE GREATER GLASGOW HEALTH BOARD POPULATION

The Healthy Cities Project

The city of Glasgow became a member of the European Healthy Cities Project in 1988. Among the reasons for the World Health Organisation invitation to participate and Glasgow's enthusiasm to join were:

* The relatively poor overall health of Glasgow, with some areas having levels of health as good as anywhere in Europe but with others being among the least healthy in the developed world.

* Realisation by these agencies that the main cause of the poor health of Glasgow was its high levels of poverty and deprivation.

* Determination by Glasgow City Council, Strathclyde Regional Council and the Greater Glasgow Health Board to work together to improve the health of Glasgow by concentrating efforts on those areas (the peripheral estates and inner city areas) with the poorest health.

* Work already done in urban renewal, economic regeneration, environmental improvements and in the involvement of the voluntary and community sectors.

At the heart of the project is the belief that with suitable social, economic and environmental improvements dramatic reductions in the incidence of disease and death will be achieved.

Glasgow District Council has published a consultation document 'Glasgow's Environmental Action Plan' on the links between the environment and health, and a working group on this subject has been established. The Council has also made major inroads into refurbishing houses in the peripheral estates, and in tackling the massive problem of damp housing. An initiative is also underway, in Easthall, to try to quantify the health benefits of providing warm, damp-free housing. A consultation document is also about to be published on the Council's strategy for people with special needs - 'meeting needs, protecting health'.

Strathclyde Regional Council has published a consultation document 'Health for All, Whose Responsibility?', and has also created a 'Health for All' working group. Health is also an integral part of the Regional Council Social Strategy document.

The Project funds four working groups (on housing and health; the environment and Health; transport, traffic and health; women's health) which report to the Project Steering Group. The Project is also an active member of the Strathclyde Poverty Alliance which includes among its concerns the relationship between unemployment, poverty and health.

The achievements of the project so far fall into four main areas:

1. **Policy Development**
   A City Health Plan is due to be published in December 1992 which will incorporate a community development and health strategy for the city. The project funded a discussion document on the need for a women's health policy. The project office lobbies for the inclusion of a health perspective in a variety of policy and strategy documents.

2. **Local Action Programme**
   The Project is committed to innovative health promotion and has funded a local action programme which is now well established. The objective is to put 'Health for All' principles into practice in participation with local communities and to demonstrate practical benefits. Programmes have been established in Drumchapel, Haghill, Dalmarnock (diet), Castlemilk, Househillwood (accidents), and Gorbals.

3. **Information and Training**
   This is important in order to help formulate and take forward proposals, to allow those involved to discuss their work in a broad health context and to explore collaborative ways of working on health issues. The project supports this activity by organising forums, conferences, lectures and seminars, by its publications and by providing informal advice. Publications include a 'Positive Health Directory' of statutory and voluntary health promoting services and activities, 'Your Patients' Rights to Welfare Benefits' and Working Group publications.

4. **Networking**
   The Project builds links between services, projects and communities by funding, information exchange, giving advice and by participating in conferences and working parties.

**The Health Promotion Department**

The GGHIB Health Promotion Department is one of
Established Projects and Activities

the major agencies acting to fulfil the Health Board’s Health Promotion Strategy but it also makes a major contribution to the activities of Healthy Cities described above.

The Board’s Health Promotion Strategy sets out three broad aims:

1. Prevention of illness.
2. Promoting healthy lifestyles.
3. Creating healthy environments.

The Health Promotion Department is committed to working through “Health for All” principles to achieve these broad aims by influencing the following areas of activity:

1. Health Services within Greater Glasgow.
2. Health related behaviours and lifestyles.
3. The local environment.
4. Education in all forms.
5. The media and popular culture.
6. Local policies which influence health.

These areas of activity are influenced by using the following approaches:

* The provision of resources for health education which are provided free of charge for all who need them.

* Training of individuals and groups involved in health promotion is provided to support health promotion programmes.

* Media campaigns are conducted using newspapers, television, radio and outdoor advertising to raise awareness of health issues.

* Five key settings (local communities, the workplace, the primary care system, hospitals and schools/colleges) are the site of major health promotion programmes.

* The Department also runs a series of topic-based programmes dealing with smoking, nutrition, addictions, HIV/AIDS, child safety, exercise, child and adolescent health, dental health, women’s health and stress.

* The creation of healthier environments permeates much of the Department’s activity although this function is fulfilled mainly through the workplace and community programmes and through collaboration with the Healthy Cities Project.

* Evaluation is carried out of large scale or innovative health promotion activities so that future plans can be based on a sound evaluation base.

Information about health and its determinants is provided by the department to a wide variety of interested parties.

Priority Areas

The Department is working on five priority areas during 1992/93.

1. Implementation of the “Get Up and Glasgow” media campaign which targets 15-25 year olds through TV, radio, outdoor media, press, local networks and business.

2. Establishment of a youth project and a GP support project aimed at addressing inequalities in health.

3. Health promotion in hospitals with particular emphasis on the GGHB Food Policy and Smoking Policy.

4. Developing links with the GGHB Community/Primary Care Unit to devise and implement locality based plans.

5. Development and implementation of a new health check programme.

Special Initiatives

In the past year the Health Promotion Department has developed a number of special initiatives which include the following:

1. Intensive health promotion in the Govan, Ibrox/Cessnock, Kinning Park area. Urban Aid funding has been secured for this project which will take an intensive and innovative approach to health promotion in a defined inner city area.

2. The Healthy Business Project. This research project is funded by the Glasgow Development Agency and supported by the Govan Initiative and Healthy Cities Project. The aim of the research is to find out whether health promotion at work produces measurable business/economic benefits to companies as well as health benefits to their employees.

3. East End Health Promotion Strategy. The
East End Health Promotion Strategy has been approved by the East End Management Group and will focus initially on three localities in the East End.

4. A comparison of different health check interventions. This research project in the Rolls Royce factory and a separate control site is designed to evaluate different components of a health check methodology. This information will be vital to the further development of this approach to health promotion.

5. Evaluation of the Healthy Cities Pilot Project in Drumchapel. Funded through a mini project grant awarded by the Chief Scientist Office this takes an “action research” approach to evaluating the very successful Healthy Cities Project in Drumchapel.

The above is a brief summary of the various programmes and activities being carried out by the Health Promotion Department. All of these are designed to further the strategic health promotion aims of the Board but should be seen as a small part of the overall health promotion endeavour which is developing in a wide variety of ways throughout the city.

Glasgow 2000

Glasgow 2000 is a good example of an approach to health promotion which involves many sectors of the city’s life. It began as a project which was financially supported by the Greater Glasgow Health Board, the Scottish Health Education Group, Strathclyde Regional Council and Glasgow District Council. Funding and management has been taken over by the Health Promotion Department but the inter-sectoral links for operational activity remain.

Recognising the complex issues involved in tobacco control, Glasgow 2000 is based on a comprehensive approach:

- to encourage children not to start smoking.
- to help those who wish to stop smoking.
- to promote the expansion of smoke-free environments.
- to raise issues about tobacco for public debate.

The project’s activities have reflected the breadth of these aims, and particular successes include:

No Smoking Days:
A large network of local activists has been created, with the result that awareness and participation figures in Glasgow are consistently above the UK average.

Innovative children’s work
Glasgow has one of the first and now the largest Smokebusters Club, with 27,000 young members. The Club formed the focus of a European Conference on Young People Against Tobacco in 1990, and has been awarded a medal by the World Health Organisation.

Innovative materials:
“Take Control In Your Home” was a practical guide to reducing children’s exposure to tobacco smoke, designed for and distributed direct in areas of deprivation. Cessation materials for teenagers have been produced, including a pack for non-smoking children who want to help their families stop smoking.

Collaborative policy and strategy work:
Glasgow 2000 has worked with a wide range of local, national and international organisations both to advise on tobacco control policy and to plan strategy. The project now represents Glasgow on the Healthy Cities Multi-City Action Plan on Tobacco group.

Future strategy for Glasgow 2000 will focus on collaborative work by Glasgow’s many partners in tobacco control. While education and cessation services are well established, progress is needed in the expansion of smoke-free public places and in the reduction of tobacco promotion to which children are exposed. Existing partners (statutory and voluntary agencies) will be encouraged to continue their activity, and new partners in the private sector will be approached to participate appropriately. Smokebusters will continue to develop by expanding members’ direct participation, and by addressing the needs of older teenagers including those who start to smoke.

Women’s Health Policy for Glasgow

The Glasgow Women’s Health Policy was launched in June 1992 with the aim of improving the health and well being of women in Glasgow. The policy document was prepared by the Women’s Health Working Group of the Healthy Cities project which is open to all women and has representation from Greater Glasgow Health Board, Strathclyde Regional Council, Glasgow District Council, Glasgow University, Natural Childbirth Trust, Scottish AIDS Monitor, One-Plus, Clydeside Women’s Health Campaign, Scottish Trade Union Congress, and Glasgow Council for Single Homeless.
Established Projects and Activities

Support for proposals for a Centre for Women's Health in Glasgow has now been agreed by the main funders of the Healthy Cities project and it is hoped that soon these proposals will be realised. It is hoped that the work put into both the Women's Health Policy and the Centre for Women's Health will form the basis for expanding and developing practices which will have a real effect in the health and well being of women in Glasgow.

It is intended that the policy should be followed whenever and wherever women's health is of concern to agencies working within Glasgow. It covers women's health in the workplace, in their private lives and in their contact with the health and other services. Specifically, it makes recommendations to create first, a new awareness about women's health and secondly, to create improvements in policies and practices which involve issues of women's health.

The need for such a policy grew from the realisation through years of contact with statutory and voluntary agencies that a women's health perspective was lacking. New initiatives and good practice do exist but all too often women's health needs - at whatever level - are not recognised and provided for in ways which best suit women. The Healthy Cities strategy offered a framework within which to create this policy.

The aim and objectives have universal application and it is recommended that all statutory and voluntary organisations should adopt them. In addition organisations should implement all the recommendations which relate to their activities.

The objectives and recommendations are as follows:

1. Raising awareness about women's health needs and an understanding of a women's health perspective (Objective 1).

2. To introduce this awareness into policy and planning processes of statutory and voluntary agencies (Objective 2).

3. Ensuring women's health needs and a women's health perspective is incorporated into the delivery of general health care (Objective 3).

4. Ensuring the provision of services and support specifically for women (Objective 4).

Response to the Director of Public Health's Annual Report for 1990: Proposals for Reducing Health Inequalities

Background

The 1990 Annual Report of the Director of Public Health drew further attention to the fact that health in Greater Glasgow compares unfavourably with Scotland as a whole and that, within the Board's area, there are very large differences in health status. There is a consistent relationship between social circumstances and health status, and in Greater Glasgow, poor social circumstances and poor health status cluster in inner city areas and peripheral housing estates.

Actions to be taken

Defining Target Groups

Action directed towards reducing inequalities in health should be directed mainly towards younger people since the health of many people currently in middle age and later life has been determined by environmental and behavioural influences which began to have their effects several decades ago. If the health of Greater Glasgow is to change, the main potential for improvement lies with an enhancement in health status of those who live in the least healthy areas. However, within these areas there are individuals and groups who have such profound social and economic difficulties that they are unlikely to respond to traditional preventive medicine. These groups require initiatives directed at poverty, housing and associated factors in the first instance.

Influencing Others

The Health Board can do little to influence directly the city's environment but it can analyse the health effects of a wide range of environmental and social determinants of health and use this information to influence the activities of local government and other relevant bodies. For example, education is a major influence on behaviour and the Board has a role in advocating effective health education in schools and the creation of a school environment which reinforces and supports health education (eg healthy school meals, playground safety etc). The promotion and support of smoking, alcohol and food policies in many settings is another important example of advocacy for health. Other issues could also be addressed.
Specific actions agreed by the Health Board

One of the main actions the Board can take is to influence the work of other organisations. In addition more specific Board initiatives are required. The following proposals have now been agreed by the Board:

1. To support the principle that community services should be explicitly targeted to areas of greatest need and written plans for prevention and health promotion should become the norm among all community staff.

2. To introduce clauses in service specifications for acute hospitals to ensure that secondary prevention (in particular smoking cessation) is given high priority during admission to acute hospitals.

3. To pilot two innovative approaches to prevention and health promotion in selected inner city areas and peripheral housing schemes at an estimated cost of £400,000 for two financial years (1992/94).

4. To note the need for the Board to further influence other bodies which have responsibility for social and environmental determinants of health within Greater Glasgow.

1. Targeting Existing Community Services

It is intended that all community staff should devise and work to explicit locality based health promotion plans which have clear outcome indicators against which success can be judged. Under this system of planning, natural communities or 'localities' have been identified and community staff are using a variety of techniques to assess local need. Plans will be drawn up to work with general practitioners, local government workers and others to improve local health outcomes. For example, if drug abuse, child safety and high levels of smoking are identified as problems in a given area, specific plans will be drawn up for accident prevention, drug prevention/harm reduction and smoking prevention/cessation. Locality plans of this nature do not currently exist so, in the first instance, the methodology will be piloted and refined in two communities (probably Easterhouse and Maryhill) during 1992/93. Locality plans will be complemented by a Board-wide Community Strategy which ensures relatively higher levels of staffing in areas of greatest need.

2. Increasing Emphasis on Prevention in Acute Hospitals

People from the less advantaged parts of Greater Glasgow are admitted to hospital more frequently and stay longer than is the case for the population in general. However, the hospital setting is utilised in a very uneven way for prevention and health promotion. Disappointingly, the Board’s Smoking Policy has not been used as an opportunity to formalise advice and support for smokers. Therefore, the Board as a purchaser of services will introduce the need for prevention as a quality clause in contracts with acute hospitals. Support for smokers who want to stop can be achieved fairly simply by introducing a clear protocol of advice and support which starts at the time of admission. Nurses and doctors already have detailed admission protocols, and a more proactive approach to smoking and related issues will be established for the period of admission.

3a. General Practitioner Project

The primary care team is the main focus for health care and health promotion within the community and therefore is a natural location for additional activity aimed at improving the health of people living in areas of multiple deprivation. The additional advantage of the primary care setting is that the general medical practitioner has a defined list of patients about whom information on smoking, blood pressure and screening status is increasingly being recorded in a systematic way.

General practitioners from selected practices in deprived areas have been invited to bid for a defined staff and material resource for a time-limited period in order to extend the range of health promotion services available and to promote their uptake. The Health Promotion Department will oversee and support this resource to ensure that a suitable service is delivered which addresses issues directly relevant to health inequalities.

The general practitioners were asked to specify which outcome indicators would be used to evaluate the success of the intervention. These included reduced smoking prevalence, increased healthy eating, increased regular exercise, reduced obesity, reduced blood pressure, and increased uptake of breast screening/cervical screening/well person checks and family planning. Selection was based on the quality of the bid, the enthusiasm for the selected topic, the need identified within the practice and the appropriateness of the proposed methodology. Seven practices were chosen, and these have been allocated
usually one member of staff with specific skills and expertise, depending on the needs of the practice.

Eight primary health care promoters have been appointed to manage the projects which are as follows:

* One project focuses on working with families, particularly single parent families and those with particular problems such as children with behavioural difficulties or facing social problems such as housing difficulties. Parents will be offered increased support for such things as management of minor illnesses and parenting skills; educational inputs will be offered on topics such as nutrition, with the aim of improving the health of parents and children.

* Two projects explore what can be achieved by addressing a full range of general lifestyle issues in multi-practice settings, working with deprived practice populations. One of these has a strong nutritional slant.

* Young people within practice populations are the target of a further two projects. A variety of means will be used to identify and address the health needs of this client group. Collaboration with community agencies, such as recreation facilities and addiction projects, will be especially important.

* Ethnic minority and mental health issues are being addressed in a project focusing predominantly on supporting, educating and promoting the health of women. Both individual and groupwork approaches will be used and links with a number of community-based agencies will be developed.

* Nutrition is the focus for the seventh project. A number of approaches to promoting healthy eating will be used, both in direct teaching and discussion sessions and in adding a nutritional dimension to a range of pre-existing activities.

Each initiative will be formally evaluated at the end of the allotted period using the chosen indices.

3b. Youth Health Promotion Project

The second pilot project breaks newer ground and so will require some innovation and improvisation as the project proceeds. The target group is defined as young people aged 11-18 years living in disadvantaged communities. There are several reasons for focusing activity on young people. There is increasing evidence that many of the health inequalities expressed in adult life originate in youth and most health-related behaviours are initiated and consolidated in the teenage years. Furthermore, existing health services are very rarely used by young people, being poorly tailored to their needs.

The proposal is to provide, in four pilot localities, a range of health promotion programmes designed to address the health needs of young people. Teams of 4 staff, comprising a community nurse, a health promotion officer, a youth worker and a counsellor, will work intensively within the chosen pilot localities. Each pilot project will seek to increase youth involvement in healthful activities, improve health related behaviours like smoking and provide information and skills which will enable young people to stay healthy. The final choice of indicators for evaluation will depend on local circumstances but the success of the project will be measured in terms of reduced prevalence of harmful activities (smoking, drug use, alcohol abuse) and an increase in health enhancing activities (eg exercise, sport, school attendance, youth training). The following projects are now being established:

* Easterhouse: St Leonards and Lochend Secondary Schools are the venue for a project targeting both pupils and teachers. Issues which have already been identified for attention include lifestyle issues, drug abuse, sexual health and stress. Emphasis will be placed on assessing needs and on consulting and liaising with all concerned groups. Activities will include health events, development of training programmes for teaching staff and provision of support in terms of youth resource materials.

* Cambuslang: This project is based in a community flat and will link strongly with local community groups, youth projects and other local agencies. The main aims are developing the knowledge and skills of groups with young people through methods such as peer education, carrying out training work with local youth workers, developing a resource base and carrying out advocacy on youth health issues. Specific issues to be addressed will include sexual health, HIV and AIDS, and substance misuse, though set in a wider health context.

* Gorbals: This project operates from a base within the Gorbals Youth Project premises,
and will link very closely with this and other local agencies (such as the Addiction Service and Community Education). Priorities will be consulting and involving young people in planning projects, assessing needs, supporting and arranging training for youth workers and others on health matters, and identifying supporting resources. A full range of health issues will be addressed by the project.

* Claremont Terrace: Based at the Claremont Terrace headquarters of the Family Planning Service, but operating on an out-reach model, this project will provide information, advice, support and training on relationships, sexual health and sexuality. The targets will be young people and those who work with them. The project will focus on venues where ground work has been done and where there is potential for following up the issues raised.

Conclusion

Collaborative work with agencies which have responsibility for social and environmental determinants of health (particularly housing, social work, education and central government) must be strengthened. Health promotion activities should continue to be targeted on areas of greatest need and preventive measures (eg, smoking cessation) are being included in contracts for hospital services. In response to the Annual Report of 1991, ambitious health promotional activities are now being focused in specific deprived areas; these provide a valuable opportunity to quantify the extent to which the health service can bring about measurable improvements in the health status of people who live in severely disadvantaged circumstances.
It has been emphasised throughout the report that most of the determinants of health and of the factors responsible for the generally poor health of the Greater Glasgow population are not within the direct control of the Health Board. The Board must therefore collaborate closely and effectively with those agencies - including central government - which have direct responsibility for these determinants. Developing more effective forms of collaboration is vital if a significant impact is to be made on the health problems of Greater Glasgow. A possible collaborative venture to improve the thermal efficiency of Glasgow's housing stock is described.
A POSSIBLE MULTI-AGENCY PROJECT TO IMPROVE HEALTH

One area where more direct collaboration with a non health service agency could have a major beneficial influence on health is housing. Glasgow District Council has already made considerable efforts to improve the thermal efficiency of its housing stock, and it is important that the council be given every assistance to continue this work.

Warm Homes - A Prerequisite for Good Health

The poor quality of much of Glasgow’s housing stock

The House Condition Survey of 1985 suggested that at that time 46,000 of 164,000 local authority homes in Glasgow (28%) had condensation problems, and that in half of these (i.e. 14%) condensation was severe. Over half the houses were thermally inefficient. Insulation in many houses is less than 30% of current building regulation requirements for new residential dwellings, and in some houses below 20%. These problems of condensation, dampness and poor insulation are confined mainly to the post war tenemental houses in the peripheral housing areas.

Within these dwellings, poor thermal performance is compounded by inadequate and inappropriate heating. Central heating systems are uncommon, as is whole house heating. Heating provision is often just an electric bar fire or gas fire in the main living room only. Elsewhere in the house, heating appliances - if provided at the householders own expense - are likely to be the more expensive types to run such as bottled gas or peak-rate electric fires.

The cost to the tenant of thermally inefficient housing

As a result of these problems of poor insulation, condensation, penetrating dampness and inadequate heating many households are paying up to twice as much for a useful unit of heat, and this heat is being lost through the walls at 2.5 to 4 times the rate in houses built to modern standards. Such households therefore require to pay between 5 and 8 times as much to provide adequate warmth compared with those with more satisfactory accommodation. Since the occupants of these houses are almost exclusively living on low incomes (40% of families are in receipt of Income Support), they clearly would have difficulty in adequately heating even a thermally efficient house. The Council is therefore in the impossible position of having to offer many clients accommodation which they simply cannot afford to heat. The dampness resulting from inadequate heating and poor thermal efficiency leads to mould growth and ill-health. It also creates a completely unacceptable living environment, and damages carpets, wall coverings, furniture and fittings.

The ‘Glasgow Action for Warm Homes’ strategy

The Independent Housing Enquiry of 1986 (The Grieve Report) recommended that eradication of dampness be accorded top priority, and suggested that the council should:
- develop cost effective proposals for adequate insulation
- establish a ten year programme of heating and insulation
- phase out wasteful compensation payments and ‘reactive’ repairs.

This report caused a major re-examination of the Glasgow Council investment programmes for housing, culminating in an energy strategy - 'Glasgow Action for Warm Homes' - which was launched in January 1990.

In partnership with the fuel boards and the private sector the council undertook to reduce fuel costs to ‘affordable’ levels (calculated as a proportion of the disposable income available under Income Support) by:
- directing financial resources from both the private and public sector to achieve high standards of thermal insulation and heating in all council homes
- replacement of the present reactive repairs programme with ‘whole life asset management’
- greater investment in efficient space and water heating
- more competitive prices for the sale of space heating units
- support for a city wide energy advisory service
- support for energy efficiency labelling of appliances.

Contrasting investment in the peripheral housing and central city areas

The need to revitalise the peripheral housing estates in a similar way to that achieved for the central area of Glasgow was graphically described:

"New investment totalling some of £2.5B (the £26m
International Concert Hall, the £60m Saltire shopping centre, the £13m Glasgow Hilton Hotel, the Broomielaw office shop and hotel scheme costing in excess of £200m, and the planned expansion of Glasgow Airport totalling some £100m) underpins the image of a city characterised by wealth and growth. No other city outside London can boast a property investment programme of two billion pounds and there is now an air of confidence across all sectors. This success, however, has been restricted mainly to the inner areas and has failed with some notable exceptions to permeate the outlying public sector housing estates. Residents in these areas find themselves without the necessary skills or training to take advantage of the employment opportunities offered elsewhere and live in dwellings that are characterised by a stigma of decline with problems of disrepair and dampness. The challenge facing the City of Glasgow is how to break down these barriers and transfer the success of the inner City to outlying areas”.

The costs and benefits of achieving thermal efficiency

Much revitalisation of the peripheral housing areas has already been accomplished, with many four storey and three storey apartments being reduced to three storeys and two storeys, windows being replaced and double glazed and insulation enhanced - leading to a reduction in fuels cost of some 60%. There have also been major environmental improvements - both to the houses (renewing exterior surfaces, adding porches and other features) and to the gardens and streets. Large areas of the major peripheral estates have been transformed by this process and it is most important that investment is allowed to continue at an adequate rate. However, there remains a need to greatly improve thermal insulation in the majority of houses where there is poor thermal efficiency with or without condensation and damp, and which are otherwise sound both in structural and environmental terms. People living in thermally inefficient houses tend to keep their houses at a relatively low temperature and often heat only one room. The cost of adequately heating an unimproved post war dwelling (in 1990) varies between £16 and £25 per week. The cost of heating the same dwelling upgraded to current building standards is between £10 and £12 per week, whereas the cost of fuel for a demonstration model (with gas efficient whole house heating, 200mm of loft insulation, under floor insulation and both cavity fill and external insulation - reducing heat loss by up to 90%) is only about £5 per week.

It costs about £3,000 to improve the thermal efficiency of an average house to the standards stipulated in the revised building regulations.

If all city housing were improved to these standards it would be possible to increase the average household temperature by 4 deg centigrade at a saving of £3-£5 per week - equivalent to £8m-£10m each year for the city as a whole. A similar additional sum would be saved in repair costs and compensation payments under the ‘Dampness Ex-gratia Scheme’.

Not only would householders benefit from lower fuel costs, improved amenity and warmer homes, but the council or other landlord would benefit from lower maintenance costs, higher property values, lower rent arrears, more satisfied tenants and reduced turnover of houses. Emission of carbon dioxide into the atmosphere would be reduced by about two thirds. The work required to improve the houses would give a boost to the local economy, particularly to the construction industry. Eventually there should also be reductions in the demands made on the health service (e.g. for respiratory illnesses in children) and for state benefits.

The kind of problems which need to be addressed

In order to provide the investment necessary to bring the thermal efficiency of public sector housing to modern standards, it would be necessary to:

- increase capital resources available for investment in energy conservation across all socially rented tenures. For Glasgow that means increasing the Capital Borrowing Consent.
- write off outstanding debt, particularly for housing demolished, disposed of to another agency or sold
- relax restrictions preventing local authorities from fulfilling their enabling role in entering into convenant scheme and joint ventures with the private sector (bearing in mind that capital costs will be met from predicted energy savings).
- recognise that current pricing policy, particularly with regard to flat rate fixed charges, is a major disincentive to energy conservation and places an unacceptable burden on those least able to pay
- persuade fuel boards to develop a more reasonable pricing policy for low income groups. Possibilities include the bulk purchase of fuel, commercial tariffs aggregated metering,
joint maintenance of plant and equipment and the more extensive use of tele-switching.

- provide an independent Energy Advice service

**Special energy efficiency project proposed by Glasgow District Council**

Following the announcement in January 1992 of additional resources for energy efficiency in houses, the City of Glasgow Housing Department formulated a proposal to achieve up to 90% reduction in heat loss from 56 four storey 3 apartment tenement flats in Springburn, Glasgow. At least 18% of these houses are affected by condensation dampness and 9% are the subject of ‘live’ complaints. The improvements, which would cost an average of £10,700 per house, include cavity wall insulation, glazing-in balconies, window replacement, the provision of gas heating with condensing boilers, advance control systems and establishing an energy advice counselling service. It is anticipated that the proposed modifications would enable adequate temperatures to be achieved across the whole house, whilst reducing annual fuel costs by at least £570 per house per annum.

**Possible collaborative project to investigate the effect on health of introducing ‘The Action to Warm Homes’ programme**

Two areas would be selected. One would be the site of an existing urban initiative and the other would be as similar as possible to the initiative area but with no inter-sectoral urban initiative. In both areas there would be a step-wise introduction of the “Action for Warm Homes” programme. Such a methodology would create four groups for comparison:

(a) Initiative area with housing intervention
(b) Initiative area without housing intervention
(c) Non initiative area with housing intervention
(d) Non initiative area without housing intervention.

A broad spectrum of indicators could be used to evaluate health/ well-being/quality of life in each of the four comparable areas.

**Conclusion**

It is imperative that the Board establish more direct and more effective collaboration with those agencies - including central government - which have direct responsibility for the factors (eg, housing, employment, benefits/taxation, diet and the environment) which contribute to the poor health in Greater Glasgow.
SECTION 5 - LOOKING TO THE FUTURE

CHAPTERS 18 AND 19

What this section says:

* Health is improving in Greater Glasgow.

* However, health is improving more rapidly in the rest of Scotland.

* Inequalities between Scotland and Greater Glasgow's health status will increase unless action is taken.
Chapter 18

Targets for Health in Greater Glasgow

The Health Board enthusiastically accepts the target areas which have been set for improving health in Scotland, apart from omission of any target for reducing health inequalities; in fact all of these targets were included in its health promotion strategy of 1989. The main components of the programmes for reducing coronary heart disease and cancer are anti-smoking measures and screening (for risk factors for heart disease and for early breast and cervical cancer). There are extensive and successful multi-agency programmes for containing the HIV epidemic, and these have been described in detail in the two previous annual reports. There are also small scale multi-agency programmes for accident reduction in a few specific localities but it would be difficult to extend these much more widely except as part of a national campaign. Similarly, reduction in drug and alcohol misuse requires major efforts by a variety of other agencies, although the Board is making efforts to reduce drug injecting and to minimise the prescription of drugs of addiction. The Board also has an ongoing programme for improving dental health, but this is unlikely to bring about much further reduction in dental decay unless it is agreed to fluoridate the water supply.

Apart from the targets which the Board itself has set for the control of HIV infection and drug misuse, there is considerable doubt whether the other targets will be achieved. Measures which would help in achieving the targets include increasing the relative cost of cigarettes and alcohol, legislative measures to reduce road accidents, fluoridation of the water supply and measures to make available a more healthy diet. There should also be explicit recognition of the need to reduce inequalities in health.
TARGETS FOR HEALTH IN GREATER GLASGOW

GGHB TARGETS, 1989

In 1989 the Greater Glasgow Health Board set targets for improving health status as part of its health promotion strategy. Since then National Targets have been set which cover virtually the same range of topics as the earlier Glasgow targets except that they do not include reduction of health inequalities, reduction in stress related disorders or the need to increase awareness of the need for ‘safe sex’. The national targets are more ambitious than the Glasgow targets, particularly for deaths from heart disease.

Higher targets however do not represent greater commitment to improving health as much as possible. The choice of target is based on recent disease trends and knowledge of the likely effect of preventive interventions. Greater Glasgow will probably not reach the national targets because its health problems are qualitatively and quantitatively different from the rest of Scotland, but the Board’s commitment to and activities in health promotion bear comparison with any health board in Scotland. Since 1989 there has been a fall in smoking prevalence and last years premature heart disease death rates indicate that a sharper decline may be beginning. Nonetheless it would be premature for the board to change its targets so soon after the commencement of its health promotion strategy, particularly if it does not believe that it is within its power to achieve them. The targets relating to HIV infections and drug misuse however have been made more specific. All targets will be reviewed early in 1993.

THE NATIONAL TARGETS, 1992

These are described in Chapter 10, and may be considered under three headings:

a) Those Based On Recent Trends And Optimistic Forecasts Of The Effect Of Intervention

The national targets were chosen because ‘they indicate the areas where action must be taken and where improvements may occur’. There are however no specific actions available which are likely to lead to a reduction in heart disease deaths by 40% or cancer deaths by 15% within 10 or 14 years. These targets are estimates based on recent secular trends and current knowledge of the effectiveness of preventive measures such as smoking cessation, blood pressure control and early treatment. The best that can be done is to reinforce present interventions and to hope that significant reductions in mortality can be achieved. It would be wrong to spend large amounts of new resources in attempting to reduce heart disease and cancer because there is no guarantee that any commensurate benefit would be achieved.

b) Those Which Depend Mainly On Concerted Effort Nationally

The only certain ways to reduce cigarette and alcohol consumption are to greatly increase their price, to ban advertising and to impose the severest penalties for all convictions for drink related traffic offences. Local campaigns to help people to stop smoking and - more importantly - to stop people from starting to smoke have some effect, and advice directly from the general practitioner to individual patients is also effective. However these measures are likely to have most effect if integrated with concerted actions nationally to dissuade people from smoking and drinking to excess. The target reductions in cigarette smoking and alcohol consumption are unlikely to be achieved without coordinated actions on a large scale.

c) Those Which Probably Can Be Achieved By Effective Action Locally

There are a number of measures which can be taken to reduce accident rates. Virtually all of these involve collaboration with other agencies, and several projects have already been established - for example ‘Safe Castlemilk’ and the Househillwood Project.

A comprehensive multi-agency programme has also been established to contain (rather than prevent) the spread of HIV infection; and cost effective measures to reduce the health, social and economic costs associated with drug injecting are being developed, although it has not been possible to identify effective methods for reducing other types of drug misuse.

As elsewhere in Scotland and the UK dental health has improved greatly in Glasgow over the past 5 years, although there has been little improvement relative to Scotland, and Glasgow still has amongst the highest levels of decayed, missing and filled teeth. However if fluoridation of the water supply goes ahead and the present program of community dental care continues, then the national targets for dental health may be achievable by the year 2000.

OTHER IMPORTANT TARGETS

Achievement of all of the national targets is most desirable, but for two very important reasons these
targets must not be pursued to the exclusion of others. First, as has been shown, there is no evidence that some of the targets (for example those relating to mortality from heart disease and cancer, cigarette smoking and alcohol consumption) could be achieved however much additional resource was allocated for this purpose locally. Second, there are many other health problems and conditions for which there are known cost effective ways of providing treatment or support; deploying resources in favour of these problems and conditions (eg, hip replacement, cataract operations, supportive therapy for disabled people) is likely to result in greater health gain than redistributing the same resources to many of the national 'target' objectives.

It is also important to strive for a reduction of health inequalities between communities, and for an equitable distribution of resources both between client groups and between services. The national targets, unlike the earlier GGHB targets ignore inequality in health. In Glasgow, whose poor health status is almost entirely attributable to the inequalities associated with material and social disadvantage, health inequality has to be addressed as the major issue. The health board has also to ensure that groups such as the physically and mentally disabled and the elderly receive their share of resources, and that outcome measures or targets are developed to reflect their needs and to form the basis of effective programmes of care.

There are some other concerns about the national targets, which must be taken into account in the development of local health strategies. For example, targets give a spurious priority to what is measurable. Also, targets for the whole population may conceal important variations within it. In many cases therefore targets should be set for subgroups of age, sex, ethnicity, geographical area and social class. For example, basing targets on the entire age range 0 to 64 years rather than using standardised rates means that demographic change alone (i.e. the age structure of the population) will influence trends in mortality.

Health strategies should include many objectives other than those which we know how to achieve and measure - for example the amelioration of problems such as back pain, arthritis, anxiety, depression, sensory disfunction and disability. Targets should be set for the development of reliable measures of these common health problems.

Whilst it is necessary to focus on a few targets initially, groundwork should continue across the full spectrum of need so that other topics can become areas of priority in due course.

**MONITORING PROGRESS TOWARDS TARGETS**

For some of the targets (relating to cigarette smoking, accidents, alcohol and drug misuse, dental health in older people and diet) there are no adequate mechanisms for monitoring the scale of the problem locally, or for monitoring progress towards the target. Some of these variables (relating to cigarette smoking, diet and possibly to adult dental health and alcohol consumption) will be monitored in the proposed national lifestyle survey, although it will be important to ensure that the population sample selected for GGHB is sufficiently large to permit meaningful analysis for the populations in all deprivation categories. For accidents and drug misuse however new methods of monitoring are urgently required.

**MORTALITY BASED TARGETS**

All cause mortality (population aged 0-64 years)

Two of the targets (Chapter 10) require a reduction of death rates in the population under the age of 65 years: from ischaemic heart disease by 40% between 1990 and the year 2000 and from all cancers by 15% between 1986 and the year 2000. In pursuing targets for the reduction of deaths from specific causes such as heart disease and cancers it is important to monitor all-cause death rates. This is because it would be possible to achieve reductions in death rates from one or two major causes without achieving a corresponding reduction in the overall death rate. Also, focusing attention on particular causes of death may influence the way in which deaths are recorded; this could change the proportions of deaths attributed to particular diagnoses without altering the underlying death rate. Finally, recent work by Watt and Ecob (1992) suggests that the high rates of mortality from all the major causes of death in Glasgow are probably caused as much by a general increase in susceptibility to disease as by risk factors for specific diseases (See Chapter 4). This means that it may be more appropriate to consider major causes of death together rather than to try to modify risk factors for and to monitor changes in individual diseases.

Table 1 shows that 1,891 male and 1,134 female residents of the GGHB area under the age of 65 years died during 1990, the death rates (after adjustment for differences in the age and sex composition) being 26% and 16% above the average for Scotland.
Mortality in the GGHB area compared with the Scottish average (population aged 0-64 years)

TABLE 1

NUMBERS OF DEATHS AND STANDARDISED MORTALITY RATIOS (1990) FOR DEATHS FROM ALL-CAUSES AND MAJOR SPECIFIC CAUSES: 0-64 YEAR AGE GROUP

<table>
<thead>
<tr>
<th>CAUSE OF DEATH</th>
<th>0-64 years</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>males</td>
<td>females</td>
<td></td>
</tr>
<tr>
<td></td>
<td>no.</td>
<td>SMR</td>
<td>no.</td>
</tr>
<tr>
<td>all causes</td>
<td>1891</td>
<td>126</td>
<td>1134</td>
</tr>
<tr>
<td>coronary heart disease</td>
<td>520</td>
<td>120</td>
<td>195</td>
</tr>
<tr>
<td></td>
<td>(27%)</td>
<td></td>
<td>(17%)</td>
</tr>
<tr>
<td>all cancers</td>
<td>504</td>
<td>128</td>
<td>456</td>
</tr>
<tr>
<td></td>
<td>(27%)</td>
<td></td>
<td>(40%)</td>
</tr>
<tr>
<td>Lung cancer</td>
<td>190</td>
<td>134</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>(10%)</td>
<td></td>
<td>(12%)</td>
</tr>
<tr>
<td>breast cancer</td>
<td>-</td>
<td>-</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(7.4%)</td>
</tr>
<tr>
<td>cervical cancer</td>
<td>-</td>
<td>-</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(1.7%)</td>
</tr>
<tr>
<td>All accidents</td>
<td>224</td>
<td>101</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>(11.8%)</td>
<td>(6.2%)</td>
<td></td>
</tr>
<tr>
<td>stroke</td>
<td>93</td>
<td>122</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>(4.9%)</td>
<td>(5.6%)</td>
<td></td>
</tr>
</tbody>
</table>

NB values in parenthesis are the proportions of all deaths attributable to the cause specified.

Stroke is not included in the national targets for Scotland, but is included in the table because it is a major cause of death and many of the factors which predispose to it (eg smoking and diet) are common to those for coronary heart disease and cancer. In both sexes coronary heart disease, all cancers, accidents and stroke together account for almost exactly two thirds of the total deaths.

The main causes of the excess mortality in the younger (0-64 year) GGHB population compared with Scotland are coronary heart disease and lung cancer - the standardised death rate (SMR) for both sexes combined being about 15% higher than the average for Scotland for heart disease and 50% higher for lung cancer.

Of particular concern however is the deterioration in SMR values for the younger (0-64 year) GGHB population relative to Scotland (Chapter 5, fig 7). In 1984 the standardised death rate was 13% above the average for Scotland both in men and in women. Only six years later (1990) this had risen to 26% in men and to 16% in women. Once the results of the 1991 census becomes available, it will be possible to determine whether this worsening of mortality rates relative to Scotland is general throughout the GGHB area or whether it is confined to particular socio-economic groups.

Mortality for the GGHB population and for Scotland in specific age and sex groups

About 3,000 or 25% of the deaths each year in the GGHB population are in the age group 0-64 years; almost two thirds (63%) of these deaths are in males. Apart from infant deaths and deaths from accidents, there are relatively few deaths in age groups younger than 35-44 years. During 1990, 162 men and 81 women died in the age group 35-44 years, 394 men and 259 women in the age group 45-54 years, and 1106 men and 685 women in the age group 55-64 years. There were thus twice as many deaths in the age group 55-64 years as in the two younger age groups (35-54 years). Trends in death rates differ considerably between the sexes and among these three different age groups - both in absolute terms and relative to values for Scotland.

Fig 1 shows the age specific all-cause death rates for men and women in the age groups 35 to 44, 45 to 54 and 55 to 64 years for the period 1974 to 1990. In each graph values for GGHB residents are compared with those for Scotland as a whole. The following conclusions may be drawn from the graphs:

(i) death rates for the GGHB residents are substantially higher than the average for Scotland in all age and sex groups.

(ii) in the 35 to 44 year age group deaths rates for GGHB residents appear to be improving relative to those for Scotland, at least in women. In the older age groups however the differences are increasing, particularly
over the past five or so years.

(iii) in Scotland as a whole death rates have fallen since 1974 in all age and sex groups, although since 1981 or 1982 rates have been fairly constant in the 35-44 year age group; the fall however has continued in the 45-54 year age group and appears to be accelerating in the 55 to 64 year age group. In contrast, in the GGHB population, the decline which was evident in all six age-sex groups between 1974 began to level off about 1984, since when rates have remained fairly constant in all age-sex groups.

If present trends continue, then it is quite likely that deaths rates in young adults in Scotland as a whole will fall by perhaps as much as 25% over the next 10 years. However in the GGHB area, where death rates appear to have ceased to decline in all age-sex groups within the 35-64 year old population, the situation is much less hopeful. It would seem unlikely therefore that a substantial reduction in death rates will be achieved in the younger GGHB population.

Deaths from heart disease in the under 65s

Death rates from coronary heart disease for Scotland have been declining fairly consistently since 1974 in all groups apart from 35 to 44 year old women, for whom rates have increased since 1986. For the GGHB population the pattern has been similar, except that mortality rates since 1984 in the older (45-64 year) age groups have generally fallen to a lesser extent than for Scotland (fig 2).

Mortality rates from coronary heart disease for GGHB and Scotland per 100,000 population aged 0-64 years (period 1980-90) are as follows

<table>
<thead>
<tr>
<th>Year</th>
<th>GGHB</th>
<th>Scotland</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>119.4</td>
<td>104.7</td>
</tr>
<tr>
<td>1982</td>
<td>108.4</td>
<td>101.0</td>
</tr>
<tr>
<td>1984</td>
<td>113.4</td>
<td>99.8</td>
</tr>
<tr>
<td>1986</td>
<td>110.1</td>
<td>94.6</td>
</tr>
<tr>
<td>1987</td>
<td>104.8</td>
<td>92.3</td>
</tr>
<tr>
<td>1988</td>
<td>103.0</td>
<td>88.2</td>
</tr>
<tr>
<td>1989</td>
<td>101.7</td>
<td>83.2</td>
</tr>
<tr>
<td>1990</td>
<td>91.2</td>
<td>76.9</td>
</tr>
</tbody>
</table>

Over the four year period 1986-90 the death rate fell by 17.2% for GGHB, and by 18.7% for Scotland. However there are several reasons why this recent trend should not be used to make future projections and why we feel that at present it is unsafe to adopt the target 40% reduction in heart disease mortality by the year 2000.

First, the similarity of the rates of decline in mortality for GGHB and Scotland over this four year interval 1986-90 is largely due to the rapid decrease in mortality achieved for GGHB during 1990. Over the three year interval 1986 to 1989 there was a decline in mortality of only 7.6% for GGHB compared with 12.0% for Scotland; the rate of decline for GGHB was therefore less than two thirds of that for Scotland. It seems prudent not to assume that the sudden fall in mortality achieved during 1990 will necessarily continue.

Second, the Annual Report for 1990 shows that the standardised mortality ratio (SMR) for deaths from coronary heart disease in the 0-64 year age group (sexes combined) has gradually increased from about 102 in 1982, to 109 in 1986 and 1987, and then to about 118 in 1989 and 1990. The coronary heart disease SMR for GGHB is therefore steadily increasing (relative to Scotland) in adults under the age of 65 years. Further analysis shows that this is due almost entirely to an increase in the SMR for young women mortality is declining at a similar rate in GGHB and Scotland.

Although the 0-64 year SMR for coronary heart disease (sexes combined) has increased by 9 points since 1986, crude mortality rates for coronary heart disease over the same period have declined at similar rates for GGHB and Scotland. The main reason for this discrepancy is that the SMR takes account of differences in the age and sex distribution of the population within the 0-64 year group. Almost exactly half of the deaths from coronary heart disease in people (both sexes) under the age of 65 years occur in men aged 55 to 64 years. Table 2 shows that the proportion of people in this age group has fallen since 1986 by 1.5% in Scotland, but by 3.9% in the GGHB area; the proportion of people in the highest risk groups has therefore progressively declined in GGHB relative to Scotland and this factor on its own results in a fall in the crude mortality rate for the 0-64 year age group for GGHB. Over the period 1990 to 2001 this effect will be considerably greater: the proportion of people under the age of 65 years who are in the 55 to 64 years age group has fallen from 4.6% to 3.5%.
year age band will increase by a further 3.0% in Scotland, but decrease by 9.7% for the GGHB area. Use of the crude 0-64 year mortality rate means that changes in the age distribution within that group are not taken into account, and a substantial decline in the crude death rate in Glasgow is almost inevitable simply because the proportion of people in the age group most at risk (55 to 64 year olds) is falling rapidly.

Table 2

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SCOTLAND</th>
<th>GGHB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-64 yrs</td>
<td>55-64 yrs</td>
</tr>
<tr>
<td></td>
<td>(pop)</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>4,426,650</td>
<td>12.3</td>
</tr>
<tr>
<td>1986</td>
<td>4,378,500</td>
<td>12.6</td>
</tr>
<tr>
<td>1990</td>
<td>4,341,000</td>
<td>12.4</td>
</tr>
<tr>
<td>2001</td>
<td>4,233,600</td>
<td>12.8</td>
</tr>
</tbody>
</table>

Third, recent trends in mortality for the older groups of men (ages 55 to 64 years, and 45 to 54 years) in which over two thirds of the total deaths from coronary heart disease in the 0-64 age group (both sexes) occur suggest that the national target is unlikely to be reached in Glasgow. In the age group of men 55-64 years for example (which accounts for half of the total deaths for coronary heart disease in the 0-64 year age group) the fall in mortality between the three years 1985/87 and the three years 1988/90 was only 3.6%, or 1.2% pa.

Fourth, a four-year interval is quite a short one over which to establish a target based on a trend. Unless there were some specific interventions commencing around 1986 or at the present time there must be some doubt that changes over the next ten years will reflect those which occurred over the past five years rather than those which occurred over the past 10 or even 15 years. Over the past 10 years death rates from coronary heart disease for GGHB men have fallen by about 40% in the 35 to 44 year age group, by about 30% in the 45 to 54 year old group and by 10-15% in the 55 to 64 year old age groups.

If present trends continue it should be possible to achieve a 30% reduction in death rates from coronary heart disease in GGHB men, over the age range 34 to 54 years. However in the older age group, in which most of the deaths occur, a reduction of 10-15% is more likely - or perhaps 20% at most if the declining deaths rates in the younger age groups are indicative of a general improvement in health so that those individuals moving into the 55-64 year old group will experience more rapidly decreasing death rates in future. In the women however any reductions in death rates from coronary heart disease are likely to be considerably smaller.

Cancer deaths in the under 65s

During 1990 there were 504 deaths from cancer in males aged below 65 years: 197 (39%) from lung cancer, 44 from colorectal cancer and 35 from stomach cancer. For females in the same age group there were 456 deaths from cancer: 137 (30%) from lung cancer, 84 (19%) from breast cancer, 39 from cervical cancer and 34 from colorectal cancer.

The SMR (0-64 years) for cancer deaths for GGHB residents in 1990 was 26% above the Scottish average for men, and 14% above for women. These values have remained fairly constant over the past 10 years in the men, but have tended to rise by ½ - 1% pa in the women.

Since 1980-1982 death rates for all age groups of men and for 35 to 44 year old women have remained fairly constant both in the GGHB area and in Scotland generally, although in recent years death rates in 55-64 year old men have increased slightly for GGHB, but have decreased slightly in Scotland (fig 3). In the 45 to 54 year old women the rate for GGHB has increased by about 10% whereas that for Scotland has declined by the same amount. In older (55 to 64 year old) women the rate has increased by almost 15% for the GGHB area, but has increased only by about 5% for Scotland.

There can therefore be little optimism that the 'target' reduction of 15% in deaths from cancer will be achieved by the year 2000, and deaths rates for Greater Glasgow Health Board relative to Scotland will almost certainly deteriorate. Values for all cancers however conceal considerable variations between types of cancer, and it is only reasonable to consider separately those cancers which are to a large extent amenable to preventive measures.

The incidence of death rates from cancer are determined by habits over a lifetime, particularly in smoking but also in relation to other factors. Changes
between now and the end of the century will not influence rates dramatically thus emphasising the need for much greater efforts in health promotion for children and young adults.

Mortality from lung cancer

Lung cancer accounts for 38% of cancer in younger men, 30% of cancer in younger women and for 33% of cancer deaths in people aged 65 years and over. The SMR (0-64 years) for GGHB residents in 1990 was 34% above the Scottish average for men, and 65% above in women. These values have fallen from a peak of 56% above the Scottish average in 1987 for the men, but have risen from a value of 36% above the Scottish average in 1988 for the women.

In the 35-54 year groups death rates are decreasing in the men (by about half since 1975 in the 35-44 year age group and by about 30% in the 45-54 year age group), but there has been no change in women; the trends are of similar magnitude in the GGHB population and for Scotland and so the differential (which amounts in the 45-54 year age group to some 30% in the men and to over 50% in the women) has remained fairly constant over the past 15 years (fig 4).

In the 55 to 64 year age group of men the GGHB death rate has been consistently above 30% above the Scottish average, although both rates are declining — by about 20% over the past 10 years. However in women of this age group rates have more than doubled since 1975 and are continuing to increase; and the increase for GGHB is taking place at a faster rate than for Scotland.

If present trends continue - and this must be likely since they depend on smoking habits over a considerable number of years - then death rates are bound to increase substantially in women; the effect of this will probably outweigh the more modest reduction in death rates for men.

Mortality from breast and cervical cancer

Since 1975 death rates from breast cancer have been virtually identical for the GGHB population and Scotland for each of the age groups 35 to 44 years, 45 to 54 years and 55 to 64 years (fig 5). Over this 15 year time period there has in these age groups been a decline in mortality of about 20% in the youngest group but virtually no change in the others.

Since 1975 death rates from cervical cancer, as with breast cancer, have been virtually identical for the GGHB population and for Scotland as a whole in each of the three age groups 35 to 44 years, 45 to 54 years and 55 to 64 years (figure 6). Over this 15 year time period death rates have remained almost constant in the 35 to 44 year age group, declined by 1986 by almost 50% in the 45 to 54 year age group (since when the rates have risen, particularly in Glasgow), and have declined fairly consistently by almost 60% in the 55 to 64 year age group.

If the local breast and cervical screening programmes are effective it should be possible to extend the reduction in death rates from breast cancer to the older age groups and to reduce mortality overall by about 25% over the next ten years. It may be possible to reduce deaths from cervical cancer by up to 50% over a ten-year period, although the number of deaths due to this cause is small (just over 30 pa).

Deaths from cerebrovascular disease

In GGHB residents aged between 0 and 64 years 5% of deaths in men and 6% of deaths in women are attributed to stroke; about 13% of deaths in those aged 65 years and over are due to stroke.

During 1990 deaths from cerebrovascular disease in GGHB residents amounted to 8 men and 6 women aged 35-44 years, 21 men and 13 women aged 45-54 years, 62 men and 42 women aged 55-64 years, and 412 men and 809 women aged 65-74 years.

Death rates from stroke for the GGHB population have been fairly consistently higher than the average for Scotland in the three age groups of men between 35 and 64 years, and in women between 35 and 54 years; for the 55 to 64 year old women the rates have been very similar (fig 7). In all groups death rates for Scotland have declined fairly steadily since 1974; there has been a decline of similar magnitude for GGHB women and for the older (55-64 year old) men: by over 40% in women aged 35 to 54 years, and by about 20% in the 55 to 64 year age group (both sexes). Death rates in GGHB men aged between 35 and 54 years however remained virtually unchanged - although the numbers are very small. If present trends continue the death rate from stroke in people under the age of 65 years would fall by 15-20% over the next 10 years.
ACCIDENTS

Each year in Glasgow, approximately 340 people are killed in accidents, 30 are murdered, and 90 commit suicide. In addition, 11,000 people are admitted to hospital following accidents and almost 2,000 are admitted following assaults. In contrast to most other conditions, injury and death from accidents, assaults and suicide has a major impact on the health of young people. Indeed, accidental injury is the leading cause of death in young persons aged 1-34 years. A section on accidental death and injury in Greater Glasgow was included in the annual report for 1990. This showed that elderly people and the very young are the age groups most at risk of death or hospital admission following an accident. However for specific causes of death the pattern sometime differs. For example for assaults and road traffic accidents young adults are most at risk.

Since 1975 death rates from accidents have fallen in most age and sex groups. However the rate of decline has been faster for Scotland than for the GGHB population. During the 1970s death rates for GGHB were generally lower than for Scotland, whereas during the late 1980s, the position was reversed for most groups.

Death rates for GGHB are higher than for Scotland for pedestrian accidents (by 29%), house fires (by 25%) and for choking (by 42%). Death rates from falls in GGHB are about same as for Scotland, whereas that for vehicle occupant deaths and 'other' accidents are below the values for Scotland. The relatively low rate for vehicle occupant deaths probably reflects the relatively low rate for car ownership in Glasgow, but this makes the relatively high rate for pedestrian deaths all the more disturbing. Intoxication is one possible common risk factor for pedestrian accidents, house fires and choking.

Between 1980 and 1990, death rates from road traffic accidents and falls have fallen by over 30%. However, there has been no change in the death rate from house fires. It is suggested that the prevention of pedestrian accidents, house fires and choking, each of which is at least 25% higher than the Scottish average, are made a priority. The target should be to reduce mortality from these types of accident to the Scottish average.

Promoting safety and preventing injury have been relatively neglected areas. One of the reasons for this is that responsibility for safety rests with many agencies. Local communities also have a part to play and joint action is required. At local level however, the main concern is not simply that of accidents, it is overall safety. The Safer Cities Programme in Scotland, of which the communities of Castlemilk and Greater Easterhouse are participants, is designed to address this issue. Being secure and feeling secure are important determinants of health. Injury and fear of injury can lead to social and physical handicap.

For these reasons it is argued that a co-ordinated inter-sectoral safety strategy should be developed for Glasgow. The key agencies involved should formulate common aims and objectives, identify priorities for action, clarify areas of responsibility, and set strategic goals for improving safety and commit resources.

Target Setting

Following production of a safety strategy it will be necessary to set targets to monitor progress. However, the information base in this area is weak. One possibility is the analysis of mortality data. However, secular trends based on mortality must be interpreted with caution. For example, advances in life saving technologies might reduce overall mortality but the underlying trend of severe injury could be upwards. Hospital activity might provide a better reflection of injury in the community, but there are other factors which may again obscure real trends. These include changes in the age profile of the population, changes in clinical and recording practice, and changes in population expectation, demand and access to health care.

Trends in mortality and hospital activity (standardised for age and sex) for accidents, assaults and suicides in Glasgow for the 12 year period 1980-1991 are presented in Table 3. Baseline mortality and hospital activity has been set at 100. A standardised mortality of 110 means mortality has increased by 10% from the base year. A standardised admission rate of 95 means hospital admissions have decreased by 5% since the base year.

Road Traffic Accidents

Standardised mortality from road traffic accidents has fallen by 33% since 1980. Hospital admissions after road traffic accidents have also fallen by a similar amount. It appears that there has been a significant improvement in road safety in Glasgow. It is difficult to predict if this encouraging trend will continue. The law of diminishing returns suggests that momentum will be difficult to maintain. However a realistic target would be to reduce mortality and hospital activity by an additional 20% over the next 12 years.
Non-Traffic Accidents

Standardised mortality from non-traffic accidents fell by 13% from 1980 until 1992. However, hospital admissions rose by an alarming 22%. It appears that while mortality from non-traffic accidents is on the decrease, severe accidents in Glasgow which require hospital in-patient treatment are increasing. The target should be to reduce hospital activity following severe accidents to the 1980 level.

Assaults and Homicides

Homicides in Glasgow have shown a disturbing upward trend. Since 1980 they have risen by around 20%. The trend in hospital admissions following assault, while prone to annual variation, is also upwards. In 1990 hospital admissions following assault were 20% above the 1980 figure, and in 1991 they were 40% above. It therefore appears that Glasgow is becoming a more violent society. It is important to investigate the reasons behind this increase and to put in place a comprehensive prevention strategy. The target should be to reduce violent crimes against the person to the 1980 level.

Suicide

Suicides in Glasgow have not increased since 1980. From a baseline between 1980 and 1982 they decreased by around 10% before rising again. During the three year period 1989-1991 they decreased by almost 25%. The factors which precipitate suicide are complex. It remains difficult to identify those most at risk and to effectively monitor their safety. Prevention strategies will necessarily involve action by the whole community. The target should be to maintain the suicide rate at its present level.

Summary

A strategic approach is necessary to improve safety in Glasgow. While injury following road traffic accidents is on the decline there is disturbing evidence that serious injury related to non-traffic accidents and assaults is increasing. There is an urgent need for agencies responsible for safety in the environment to liaise with local communities and formulate a comprehensive safety strategy for Glasgow.

Table 3

<table>
<thead>
<tr>
<th>Year</th>
<th>Road Traffic Accidents (RTA) Deaths</th>
<th>Admissions</th>
<th>Non-RTA Deaths</th>
<th>Admissions</th>
<th>Assaults Deaths</th>
<th>Admissions</th>
<th>Suicide Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1981</td>
<td>104</td>
<td>110</td>
<td>103</td>
<td>111</td>
<td>99</td>
<td>115</td>
<td>88</td>
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</table>

* data for this year incomplete due to Health Service Strike
OTHER NATIONAL TARGETS

30% reduction in Cigarette Smoking in 12-24 year olds, with 20% reduction in 25-65 year olds between 1986 and the year 2000

During 1986 a survey was conducted of a random sample of 3,000 GGHB residents aged between 16 and 64 years, 71% of whom agreed to be interviewed at home. 43% smoked every day (both men and women) whereas 5% smoked only occasionally. For social class I and II the proportion of smokers was 26% and for social classes IV and V 53%. 59% of unemployed people smoked.

In a survey conducted during 1990 the findings were as follows:

SMOKING BY SOCIAL CLASS IN GLASGOW (1990)

<table>
<thead>
<tr>
<th>Class</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
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</thead>
<tbody>
<tr>
<td>Men</td>
<td>22.5</td>
<td>21.8</td>
<td>34.2</td>
<td>33.2</td>
<td>48.4</td>
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<tr>
<td>Women</td>
<td>7</td>
<td>27.7</td>
<td>32.9</td>
<td>40.8</td>
<td>48.9</td>
<td>57.1</td>
</tr>
</tbody>
</table>

It would appear therefore that the prevalence of smoking is decreasing, particularly in the social classes I and II. However the national target is an ambitious one, and very great efforts will be required - focused particularly on the young, in women and in social classes IV and V - if it is to be achieved.

Reduction of 20% in alcohol consumption above the recommended limits between 1986 and the year 2000*

Although the misuse of alcohol is clearly a major problem in Glasgow, there are few local data regarding patterns of consumption or levels of alcohol-related morbidity and mortality. There was however between 1986 and 1991 an almost two fold increase (from 1142 to 2189) in the annual number of admissions to acute hospitals in Greater Glasgow associated with alcohol abuse. The main specialties involved were general medicine and accident and emergency - with conditions such as head injury, other trauma and haematemases.

Alcohol consumption is closely related to cost. There is little that the Health Board can do to influence this or other predisposing factors. The target cut in consumption is only likely to be achieved by a vigorous national campaign to which local and health authorities can coordinate their own legislative, educational and other efforts.

To prevent the spread of HIV infection

HIV is spread by penetrative sexual intercourse, inoculation with infected blood and from an infected mother to her baby. As a result of the high quality of epidemiological information available for the Glasgow area, explicit local targets for the year 2000 have been set.

Of about 300 HIV antibody tests carried out on gay or bisexual men in Glasgow during both 1989 and 1990, 5% were positive in 1989 and 4.3% in 1990. Similar results were obtained during the previous three years. These results suggest that the prevalence of HIV in this group is relatively steady at around 4-5%. The local targets which have been set for the prevalence of HIV infection are that it should not exceed:

1. 6% among men who have sex with men
2. 1.5% among injecting drug users
3. 1 in 10,000 among young heterosexual adults
4. 1 in 10,000 live births
5. Zero among health care workers as a result of transmission in the course of their work

To reduce the misuse of drugs

It is clear that drug misuse in the Glasgow area is extremely widespread. Quantitative data is currently only available on the prevalence of drug injecting, which is clearly responsible for a large proportion of the mortality and morbidity associated with drug misuse. Theses include death by overdose, HIV infection, Hepatitis B and other infections, and a host of other health and social problems. It is estimated that in 1990 there were about 9,000 injectors in Glasgow, representing about 1.5% of the adult population aged between 15 and 50. In both 1989 and 1990 there were at least 53 deaths as a direct result of drug injecting. A large, but unquantified, proportion of the drugs misused have been prescribed by medical practitioners. Between 1986 and 1991 the number of admissions to acute hospitals associated alone with drug abuse increased almost three fold from 267 to 734.

The local targets which have been set are:

1. To reduce the prevalence of drug injecting to 0.5% of the Glasgow population aged between 15 and 50 years.

* 21 units or 160g of alcohol per week for men, 14 units or 112g per week for women
Targets for Health In Greater Glasgow

(2) To reduce the annual number of deaths among drug misusers to below 25.
(3) To substantially reduce the amount of prescribed drugs available to drug misusers outwith a controlled therapeutic framework.

Drug Addiction

Over the past 5 years, the three most commonly misused drugs in Glasgow have been heroin, temgesic (buprenorphine - a synthetic opiate) and temazepam, a benzodiazepine. It has now become apparent that temazepam in particular is causing many problems, including convulsions during withdrawal, psychological disturbance and severe vascular injuries not infrequently leading to amputation.

Although temgesic and temazepam are prescribed drugs, it has only recently become possible to determine the extent to which these drugs are prescribed locally as opposed to being brought in by drug dealers from elsewhere. Fig 8 shows that of 619 general practitioners within the Greater Glasgow Health Board area, 12 prescribed between 2,000 and 4,999 temgesic tablets over the three month period July to September 1991 and two general practitioners prescribed more than 5,500 tablets. Fig 9 shows that for temazepam, 75 general practitioners prescribed between 4,000 and 5,999 tablets over the same period, and 50 prescribed more than 6,000 tablets. There is now a growing recognition by general practitioners that there are many difficulties and pitfalls in attempting to provide medical care for drug misusers, including difficulties that can arise from becoming involved in prescribing drugs which are later misused.

Identification of the problems of drugs of misuse has led to a request by the Area Drugs and Therapeutic Committee to hospital doctors and general practitioners to consider a voluntary ban on the use of temgesic tablets. In addition, a Working Group set up by the Local Medical Committee (GP Subcommittee) has now issued, through the Medical Prescribing Advisor, guidelines to general practitioners for the prescription of drugs for which there is potential for abuse.

With the availability of computerised data from the Scottish Prescribing Analysis, it is now possible to define much more clearly the patterns of prescription of these and other drugs of potential misuse. As a preliminary screen questionnaires on drug addiction have been sent to 105 GPs. Analysis of these data by practice, relating them to information on neighbourhood type and estimates of current prevalence of drug injecting by postcode sector, will provide valuable insights into the relationship between overall prescribing and drug misuse. Follow up analysis over time will enable changes in prescribing practice to be monitored. It is intended to use the data as part of a training programme aimed at helping GPs work with drug users in as productive a manner as possible.

To improve dental and oral health

Dental health and the provision of dental care in Greater Glasgow Health Board and throughout the United Kingdom has improved substantially in the last 10 years, particularly in adolescents. The improvement is most evident in areas of high social norms where only 10% of 12 year olds now require treatment, whereas in areas of multiple deprivation the rate is still very high at over 80% in need of dental treatment. The mean treatment need in Glasgow was 32% in 1987, improving to 25.5% in 1992. The number of teeth in 12 year olds which were decayed, missing or filled (dmft) was 4.7 in 1983, reducing to 2.5 in 1988 and a further index giving the proportion with no experience of dental decay (dft=0) was 21% in 1987, improving to 26% in 1991.

After dramatic reductions from the mid 1970s, the improvement in the dental health of 5 year olds has slowed. From the 1983 Scottish level of 3.4, the dmft fell to 2.75 in 1987, to rise again in 1991 to 2.88. This is mirrored in Glasgow five year olds with a 1987 dmft of 3.17, remaining at 3.22 in 1991 and considerably worse than the Scottish mean. This halt in improvement would alter for the better if water fluoridation goes ahead. The zero caries experience (dft=0) in 1987 for 5 year olds was 36.5% improving to 39% in 1991 (Scotland 43.8%). The treatment need was 49% in 1987, reducing to 45% in 1991. These local improvements still leave Glasgow exhibiting a poorer dental disease status than most of Scotland, with Scotland having higher rates than most regions in England. It is now generally recognised that socio-economic circumstances contribute in a major way to dental decay and gum disease.

The targets which have been set for the GGHB area are as follows:

Principal target: by January 1993, 12 year olds in Glasgow will have a mean level of dental caries experience no higher than DMFT=2.4

Secondary targets: by early 1993 the mean level of zero caries experience (dft=0) will be

(a) 40% in five year olds, with the proportion of children in need of treatment being no higher than 44%.
28% in 12 year olds, with the proportion of children in need of treatment being no higher than 25%.

Long-term targets:

1. Glasgow to match the Scottish target (for the year 2000) of 60% of 5 year olds having zero caries experience (dft=0).

2. The Scottish target of 10% for edentulousness in the age band 45-54 years to be matched in Glasgow by the year 2000.

The need for fluoridation

Based on current progress, none of the targets set in Scotland’s Health is likely to be achieved within Greater Glasgow in the absence of fluoridation of the water supply. Adult patterns of dental health and disease are established in childhood and involve a complex mixture of factors such as heredity, the social and cultural environment, diet and the use made of dental services. Any measures aimed at improving the situation must therefore be directed at the child population.

The strong link between sugar and refined carbohydrate consumption and dental decay is a constant theme in all Greater Glasgow Health Board health promotion campaigns, but these would not achieve significant improvements in dental health for many years. Nor can the present problem of dental decay be resolved solely by promoting greater efforts in the use of toothbrushes and other aspects of oral hygiene.

Some success in improving dental health has been achieved by using fluoride products such as toothpastes, rinses and tablets at home. However the improvements are greatest in families in the most advantaged socio-economic groups.

The use of fluoride rinses and tablets in schools has been partially effective. The main disadvantage is that such programmes can only begin at about 5 years of age - after the important early years of tooth formation. The effect is also lost after about the age of 11 years as it is not practical to extend these programmes into secondary schools. Large supplies and large numbers of paid or voluntary helpers are required to deliver school based programmes on a large scale. Again this approach has only been shown to be successful in areas of comparative socio-economic advantage.

Fissure sealants applied to teeth have been shown to be very effective in the prevention of certain types of decay, but require application within dental surgeries and are expensive.

None of the above measures compare favourably with the benefits which would arise from fluoridation of the public water supplies, which has been shown to be one of the world’s most effective and most successful public health measures. Fluoridation involves raising the natural fluoride content of the public water supply to a level of one part of fluoride to a million parts of water (1 ppm). The optimum level of fluoride in drinking water will reduce by about 50% the incidence of dental decay in children.

Fluoride becomes incorporated into the enamel of teeth during their formation and makes this enamel stronger and the teeth more resistant to decay in the mouth after they erupt. There is a voluminous scientific literature establishing this effect and quantifying the benefits to be gained from an optimum level of 1 ppm fluoride in drinking water. Those areas in the United Kingdom where the level of fluoride has been increased such as Bromsgrove and Redditch, are amongst those which enjoy the best dental health. Some 260,000,000 people worldwide already benefit from fluoridated water.

Fluoridation is not a form of mass medication. It is not a drug, but a natural mineral which is present in varying amounts in all water supplies. Reputable and authoritative worldwide scientific opinion is unanimous in supporting fluoridation and allegations of harm have never been substantiated on detailed examination. Many studies worldwide have shown that fluoridation is both safe and effective; if fluoridation is prevented, children - particularly those from deprived areas - will be denied the benefits of strong, healthy teeth and as a result subjected to much suffering and pain.

Safety and reliability

There are many communities throughout the world where the concentration of fluoride in the water supply is around 1 ppm and detailed studies have shown that there is absolutely no harmful effect. Even where the amount of fluoride is above 1 ppm, no illness or disease has been related to fluoride, other than occasional mottling of teeth where levels of fluoride appreciably above 1 ppm occur naturally. The resistance to decay has universally been markedly increased.

In many areas of the United Kingdom the water supply.
does not have enough fluoride. Where an adjustment to fluoride levels to bring them to 1 ppm has been made, the only difference shown in the populations receiving this water has been much better teeth. Water fluoridation is one of the most extensively and thoroughly researched health promotion measures ever undertaken.

In the United Kingdom over 8 million people use fluoridated water daily. Birmingham has had its water fluoridated since 1964. Since then the health of the population has been carefully monitored and apart from markedly improved dental health, mortality and morbidity figures for Birmingham are similar to other matched cities in the United Kingdom.

The United States is the most extensively fluoridated country in the world. Over half of all Americans drink fluoridated water. Safety aspects have been the prime concern of the US Centre of Disease Control, which fully endorses fluoridation and indeed actively promotes it.

Implementation

The Greater Glasgow Health Board has concluded that increasing the level of fluoride in the public water supply is the measure most likely to bring about the improvement in dental health, particularly amongst children, required in order to meet the targets. The Board is empowered by the Water (Fluoridation) Act 1985 to request Strathclyde Regional Council, as water authority, to increase the level of fluoridation within the public water supply. Before deciding on whether to make application to the Regional Council, the Board is initiating a three month period of consultation during which views from all interested parties are invited.

Water fluoridation would be used in addition to programmes of dental health education, healthy eating advice, oral hygiene instruction and the use of fissure sealants as part of a comprehensive strategy of dental health promotion. If, having considered the views received in response to the consultation, the Board decides to proceed with the scheme, it will submit a formal application to Strathclyde Regional Council. If the Regional Council agrees to the Board’s request, arrangements will then be made for the water treatment plants to be adapted to allow for the desired level of fluoride to be added to the water supplies in the same way that chemical agents such as chlorine and alkali are already added. Any costs arising would be met by the Health Board from monies voted by Parliament; they would not fall to the Regional Council.

TARGETS FOR INEQUALITIES IN HEALTH

The clear association between health and socioeconomic circumstances, has been discussed in some detail in Chapter 5. A convenient way of investigating this relationship is to cluster postcode sectors into groups which have similar socioeconomic characteristics as derived from the census (see Chapter 5, and annual reports for 1989 and 1990). Using this computer technique it is possible to identify eight cluster groups which differentiate types of neighbourhood in Greater Glasgow in a way which accords well with people’s own perceptions. ‘Neighbourhood types’ 1 and 2 for example comprise the most advantaged areas, whereas type 7 comprises the peripheral housing estates and type 8 the inner city areas.

Table 4 shows that for people under the age of 65 years living in the GGHB area, there is a 2.2 fold difference in death rates between the combined neighbourhood types 1 + 2 (comprising the 22% of the population living in the most advantaged areas) compared with the combined neighbourhood types 7 + 8 (comprising the 27% living in the least advantaged inner city and peripheral housing areas). There is an association between low socioeconomic status and high mortality for all of the major causes of death, although in the 0-64 year age group this is most marked for lung cancer and coronary heart disease in women (3.5 fold and 3.2 fold differences respectively between neighbourhood types 1 + 2, and 7 + 8) and least for breast cancer (1.2 fold difference). Smoking accounts for a considerable part of these differences, with diet and exercise also being important influences.

<table>
<thead>
<tr>
<th>Neighbourhood Type</th>
<th>Standardised mortality ratio</th>
<th>Greater Glasgow Health Board 1990</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Males 0-64 years</td>
<td>Females 0-64 years</td>
</tr>
<tr>
<td></td>
<td>7&amp;8</td>
<td>7&amp;8</td>
</tr>
<tr>
<td>All Cause</td>
<td>71.1</td>
<td>165.6</td>
</tr>
<tr>
<td>Coronary heart disease</td>
<td>63.6</td>
<td>142.8</td>
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<tr>
<td>All Cancers</td>
<td>79.8</td>
<td>163.2</td>
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<tr>
<td>Lung Cancer</td>
<td>67.0</td>
<td>194.3</td>
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<td>Breast Cancer</td>
<td>--</td>
<td>90.1</td>
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<tr>
<td>Cerebrovascular</td>
<td>64.4</td>
<td>164.1</td>
</tr>
<tr>
<td>Accidental death</td>
<td>52.0</td>
<td>116.0</td>
</tr>
</tbody>
</table>

Table 4
Comparison of Neighbourhood Types
The preponderance of neighbourhood types 7 and 8 within the GGHB area amounts for at least the greater part of its poor health. The challenge is to improve the health status of people living in these areas relative to the average or to the health status of the most advantaged areas. This has been achieved for certain measures of health status such as immunisation and perinatal care, where success has been achieved despite social disadvantage. Similar success however is likely to be much more difficult to achieve for conditions such as heart disease and most cancers because their 'incubation period' is much longer and response to health interventions is unlikely unless these are accompanied by economic, educational and environmental improvements. It is for this reason that collaborative efforts with other agencies to improve the underlying determinants of health, such as those suggested in Chapters 17 and 18, are of fundamental importance. In addition efforts to reduce smoking, to improve lifestyle in other ways (e.g. diet and exercise) and to encourage screening for cardiovascular risk factors and cancers must also be concentrated on the peripheral housing estates and inner city areas.

TARGETS FOR OTHER PRIORITY GROUPS

In any strategy to improve health, the needs of special groups such as people with mental illness and handicap, those with physical disability and the elderly must be considered. No national outcome measures or targets have been specified for these groups in Scotland. However some tentative measures may be suggested, as follows:

(a) for schizophrenia, affective psychosis, depression and childhood psychiatric disturbance, reductions in:
- incidence, prevalence, relapse and readmission rates;
- the number of former patients committing suicide;
- premature mortality or standardised mortality ratios;
- total disability and deterioration in social functioning among schizophrenic patients;
- number of days by which 50%, 75% and 90% of patients have been discharged;
- number of inpatients with psychosis who have been in hospital for over 6 months and 1 year.

(b) for dementia:
- maintain functional capacities for as long as possible;
- reduce the incidence of depression and toxic confusional states;
- ensure adequate training and support for carers.

(c) for mental handicap:
- adequacy of service provision;
- prompt detection and appropriate management of physical or mental illness to avoid hospital admission and readmission;
- prevention of additional disability (e.g. sensory defects, behaviour disturbance, motor disability);
- prevention of avoidable early death;
- improvement of self-esteem and reduction of psychiatric morbidity by developing attainment and social skills;
- care for carers.

Elderly people

Possible target measures include:

- reduction in incidence of cancers, stroke and fractures of proximal femur;
- increases in operations for cataract and hip replacement;
- increased and more effective use of hearing aids;
- increased and more effective use of rehabilitation services;
- abolishing differences between socio-economic groups in the proportions of people operated upon for cataract and hip replacement, using hearing aids, or suffering from a stroke or fractured femur;
- reduction in number of patients retained in an acute hospital for more than 6 days after being declared clinically fit for discharge;
- reduction in the prevalence of daytime incontinence necessitating a change of clothing more often than three times a month;
- increased active (independent) life expectancy at least in proportion to total life expectancy;
- hospitalisation or transfer to long-stay accommodation to take place only when specialist care which cannot be provided at home is necessary;
- at least weekly contact with a caring relative and friend;
- availability of aids, appliances, information and other services to help people remain at home.

People with physical disability

The services provided for this group of people are often poorly coordinated, fail to meet the real needs of users and carers and are often difficult to obtain. Some of the problems faced by sufferers and their
carers are described in Chapter 7 (surveys of people with multiple sclerosis, of families with a spina bifida child, and of people with long-term disabilities in a general practice). The recent community care legislation and the new emphasis on choice and consumer involvement in assessing needs and in the delivery of health and social services it is hoped will provide the opportunity for people with physical disabilities to have access to a variety of services designed to meet their own requirements at times and places that they themselves want.

Conclusion

Without more direct support from central government, it is unlikely that Greater Glasgow will achieve most or even any of the targets which have been set nationally. This is because the targets are projections of recent trends rather than based on the likely effects of specific interventions, because 50% of the population of Greater Glasgow lives in extremely disadvantaged conditions, because the health of adult men in Greater Glasgow has deteriorated markedly relative to Scotland over recent years, and because of what appears to be an increased innate susceptibility of many Glaswegians to disease.
Fig 1
Age Specific Death Rates (All Causes) for GGHB & Scotland 1975 - 90
Rates per 10,000 Population

(a) Males 35 - 44 Years

(b) Females 35 - 44 Years
Fig 1
Age Specific Death Rates (All Causes) for GGHB & Scotland 1975 - 90
Rates per 10,000 population

(c) Males 45 - 54 Years

(d) Females 45 - 54 Years
Fig 1
Age Specific Death Rates (All Causes) for GGHB & Scotland 1975 - 90
Rates per 10,000 population

(e) Males 55 to 64 year

(f) Females 55 - 64 Years
Figure 2
Age Sex Specific Death Rates, 1974 to 1990
Coronary Heart Disease
Rates per 10,000 population

(a) Males 35 to 44 years

(b) Females 35 to 44 years
Figure 2
Age Sex Specific Death Rates, 1974 to 1990
Coronary Heart Disease
Rates per 10,000 population
(c) Males 45 to 54 years

(d) Females 45 to 54 years
Figure 2
Age Sex Specific Death Rates, 1974 to 1990
Coronary Heart Disease
Rates per 10,000 population

(e) Males 55 to 64 years

(f) Females 55 to 64 years
Figure 3
Age Sex Specific Death rates, 1975 to 1990
All Malignant Neoplasms
Rates per 10,000 population
(a) Males, 35 to 44 years

(b) Females, 35 to 44 years
Figure 3
Age Sex Specific Death Rates, 1975 to 1990
All Malignant Neoplasms
Rates per 10,000 population

(c) Males, 45 to 54 years

(d) Females 45 to 54 years
Figure 3
Age Sex Specific Death Rates, 1975 to 1990
All Malignant Neoplasms
Rates per 10,000 population

(e) Males, 55 to 64 years

(f) Females, 55 to 64 years
Figure 4
Age Sex Specific Death Rates, 1975 to 1990
Lung Cancer
Rates per 10,000 population
(a) Males 35 to 44 years

(b) Females 35 to 44 years
Figure 4
Age Sex Specific Death Rates, 1975 to 1990
Lung Cancer
Rates per 10,000 population

(c) Males 45 to 54 years

(d) Females 45 to 54 years
Figure 4
Age Sex Specific Death Rates, 1975 to 1990
Lung Cancer
Rates per 10,000 population

(e) Males 55 to 64 years

(f) Females 55 to 64 years
Figure 5
Age Specific Death Rates, 1975 to 1990
Breast Cancer
Rates per 10,000 population
(a) 35 to 44 years

(b) 45 to 54 years

(c) 55 to 64 years
Figure 6
Age Specific Death rates, 1975 to 1990
Cervical Cancer
Rates per 10,000 population

(a) 35 to 44 years

(b) 45 to 54 years

(c) 55 to 64 years
Figure 7
Age Sex Specific Death Rates, 1974 to 1990
Cerebrovascular Disease
Rates per 10,000 population
(a) Males, 35 to 44 years

(b) Females, 35 to 44 years
Figure 7
Age Sex Specific Death Rates, 1974 to 1990
Cerebrovascular Disease
Rates per 10,000 population

(c) Males, 45 to 54 years

(d) Females, 45 to 54 years
Figure 7
Age Sex Specific Death Rates, 1974 to 1990
Cerebrovascular Disease
Rates per 10,000 population

(e) Males, 55 to 64 years

(f) Females, 55 to 64 years
**Figure 8**
GGHB Prescribing Analysis
July - September 1991
Temgesic

<table>
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<th>No. of Tablets*</th>
<th>No. of G.P.'s</th>
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<tr>
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* Omitted: 514 G.P.'s prescribing less than 500 Tablets

**Figure 9**
GGHB Prescribing Analysis
July - September 1991
Temazepam

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<th>No. of Tablets</th>
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<tr>
<td>0-499</td>
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</table>
The Board has been taking the action necessary to improve health in many of the target areas (smoking, HIV containment, drug misuse, screening for risk factors and for certain cancers, promotion of dental health, and facilitating accident prevention work) for several or many years. It is currently campaigning for fluoridation of the water supply. The need to reduce health inequalities is also a priority, and it is important to ensure that this objective is taken fully into account in the contracting process. The Board also has identified the needs of people with physical and mental disabilities as a priority area in its strategy, and empowerment of these individuals to realise their full mental and physical potential is one of the six principles of the WHO Health for All Strategy. There remains a need for the Board to attempt to convince central government of the seriously adverse effect which poverty, deprivation and unemployment have on health.
IMPROVING HEALTH STATUS: WIDER PERSPECTIVES

The fact that health rather than the provision of health services has become the focus of health board activity is a major and essential first step in the process of improving the health of the population of Scotland and particularly the West of Scotland to more acceptable levels. The provision of health targets is also extremely important in that it provides a focus for action and a basis for monitoring progress. The dramatic reduction in infant mortality over the past 20 years, with elimination of differences between Health Boards and between the West and East of Scotland, has almost certainly derived mainly from the intense public and professional debate during the early 1970s about the unacceptable nature of the generally high and geographically widely divergent rates. If similar success can be brought to bear on cardiovascular disease, cancer, accidents, HIV infection and dental health by the year 2000 then that will be a great achievement indeed. However, in the case of infant mortality the main aim of those who promoted the debate was to reduce infant mortality in those areas where it was high to the values experienced by areas with the lowest rates; an overall reduction in infant mortality was the inevitable consequence of achieving this, but the principal aim was to achieve equity.

Poverty and deprivation

The White Paper 'Scotland's Health' (para 58) recognises that health promotion, health education and preventive services such as screening and immunisation which are now high on the agenda for all health boards must be focused on "groups with particular problems eg people in deprived areas". It also indicates (Appendix B, para 17) that in Scotland's most disadvantaged communities "poor health often co-exists with high unemployment, poor housing and poverty" and identifies four Scottish Office-led partnership initiatives (including one in Castlemilk, Glasgow), and regeneration initiatives led by other agencies in which a "comprehensive multi-agency approach" to these problems is being taken. These initiatives aim to improve living standards by action on training, employment and housing and the White Paper recognises that this should lead to improvements in health.

Although it is acknowledged in the White Paper that poor health is associated with unemployment and poverty, and that preventive and other health services should be focused on deprived areas, poverty and deprivation are not specified as a priority; in fact the importance of increasing employment is mentioned only once and there is no discussion at all of the need to alleviate poverty.

The continuing longitudinal study undertaken by the Office of Population Censuses and Surveys has proved that unemployment and resulting poverty leads to ill health and premature death. Unemployment has been rising since mid 1990, and a report 'Households Below Average Income - a statistical analysis' (1992) indicates that between 1979 and 1988/89 the poorest 10% of households have experienced a 6% fall in real disposable income (after allowing for housing costs) compared with a rise of 30% for the 'average' household. Before housing costs the corresponding values were a 2% rise in income for the poorest 10% of households and a rise of 28% for the 'average' household. The distribution of income is now more unequal than at any time since records began in 1886. The proportion of households living below half the average income (a reasonable proxy for a poverty threshold) rose from 9% to 22% over the ten year period to 1988/89 from 5 to 12 million people. Lone parent families and single people appear to have been particularly disadvantaged over the 12 year period. 25% of all children were living below the poverty threshold in 1988/89 compared with 10% (almost 3.2 million children) in 1979.

The serious health implications of these worsening circumstances of the poor in Britain have been discussed in a recent leading article in the British Medical Journal (1st August 1992). It observed that government policies to improve inner cities have failed: unemployment, poverty and housing in deprived areas had not improved over the past 15 years, and the numbers of those in bed and breakfast accommodation and 'living rough' had increased. Proposed public spending cuts were likely to make matters worse. It seemed that political concern for unemployment "could hardly be less", and that the government appeared to be unconvinced of the well established association between poverty and ill health, with the poor "paying for their poverty with their lives". The improvement over recent decades in the health of Japan from among the least healthy to the nation with the longest life expectancy in the world had been associated with distributing income more equally than in any other country, and the article concluded that making incomes more equal is likely to be the most effective way of improving health, and more so than a rise in the average level of income.

Chris Ham (1992) has also argued that "a credible strategy for improving the nation's health has to acknowledge the importance of health inequalities and put forward policies for improving the relative position of people lower down the social scale. This
calls for coordinated health policies in areas such as housing, education, social security and the economy. Unless all citizens have secure employment, adequate housing and access to education, then the health divide will not only persist but it will widen. Ensuring that future policies on taxation, benefits and the management of the economy help to promote the White Paper's objectives would be a more important step than anything that can be achieved in the health services”.

The needs of the physically disabled, elderly, mentally ill and mentally handicapped

The targets in the White Paper are directed towards the more serious causes of mortality or disease for which there are preventive possibilities and where progress may be measured in quantitative terms. However if efforts are concentrated on attempting to achieve these targets, resources may be diverted from health problems which are perhaps of equal importance but more difficult to measure, for example the care of the physically disabled and elderly, and of people with mental illness and mental handicap.

It is important therefore that health boards take into account, in addition to the recent targets, the priority services identified in the SHARPEN (Scottish Health Authorities Priorities for the Eighties and Nineties) report of 1988. These are specified in Chapter 8.

Health Boards also have a responsibility to try to ensure that the disadvantages suffered by people with disabilities are minimised by enabling individuals with the widest range of capabilities to function successfully in society.

A possible conflict between reducing health inequalities and achieving health gain

It was shown in Chapter 12 that health gains may have a higher unit cost in deprived population groups. There is a theoretical possibility therefore, that resources may be deployed in favour of those groups which are most likely to achieve the best health gain from a given resource input (eg younger people or those with a better life expectancy), at the expense of people with greater health needs (for example those with chronic disabilities and people living in the least healthy - and usually most disadvantaged - communities). This would lead to an increase in health inequalities among the population. Reduction in inequalities in health must be seen as a prime social and health service objective, and the achievement of health gain should be seen in this context.

The Need For Legislative Measures

The White Paper emphasises the need for individuals to improve their own health but makes little reference to the need for Government intervention in health promotion. Education, advice, voluntary agreements and local health promotion measures are an adjunct to, and not a substitute for, fiscal measures, statutory regulation and legislation.

The gradual fall in smoking prevalence in Britain from 42% of adults in 1976, to 30% in 1990 (from 46% to 34% in Scotland) results mainly from people giving up smoking, and not from fewer people taking up the habit (Royal College of Physicians, 1992). 25% of 15 year olds are regular smokers, and 450 children in Britain start smoking every day.

Smoking is encouraged by peer pressure, easy availability and advertising - which is particularly aimed at young people. The main methods available for discouraging smoking are health promotion activities; the exemplar role of parents, teachers and doctors; direct discouragement of patients by health workers; laws on the sale and advertisement of tobacco products; and the provision of smoke free premises for working and leisure activity. The effectiveness of these measures however would be greatly reinforced by firm and decisive leadership from the government - particularly by banning all tobacco advertising and sponsorship and progressively increasing the cost of cigarettes.

Changes in dietary habits are equally unlikely in the absence of legislative change. The national diet does not so much reflect what people want, but is governed more by the pricing and availability of foodstuffs, and the effects of marketing to promote what is profitable to the producers and distributors of food. These in turn are the consequence of political policies governing the use of subsidies and other devices in pursuit of economic objectives (Alwyn Smith, 1992). Cannon (1992) has suggested that “farmers should be given incentives to rear lean animals, to grow fruit and vegetables to be eaten fresh, and to convert their land to sustainable agriculture. The Common Agricultural Policy should be redrawn with public health as a first priority. National and international food policy is manipulated by the manufacturers of fatty, sugary food. The food manufacturing industry should be encouraged to accept that fatty, sugary, salty food is a major cause of premature suffering and death, and to develop new, benign, processes, while phasing out malign processes such as hydrogenation (to turn unsaturated oils into saturated fats)”.

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Health workers and the public must therefore join forces to try to persuade the government that it is necessary for the food industry and agriculture to alter the types and costs of foods available to consumers.

The Principles of Health For All

In 1978 the World Health Organisation in the Declaration of Alma Ata proposed a reorientation of health care from the provision of medical services towards health promotion, prevention and a primary care focus.

In 1985 the 'Health For All by the year 2000' initiative was established, based on a programme of 38 medical, environmental, social and procedural targets for the improvement of health. Only 12 of the targets are quantified, and six of these relate to mortality - reflecting the lack of available data on the determinants of disease and on health outcomes. Lack of enthusiastic support from national governments and professionals with vested interests in sophisticated medical systems persuaded the World Health Organisation to turn instead to the city as "the lowest administrative level which can marshal the resources and has the political mandate and authority to develop and implement intersectoral approaches to health" (John Ashton, 1988). The city is therefore able to confront many of the determinants of health in a coordinated manner.

The Healthy Cities movement is based on the following six principles of the Health For All strategy:

EQUITY: providing services on the basis of health need in order to reduce inequalities in health

EMPOWERMENT: enabling individuals to realise their full physical and mental potential

PARTICIPATION: by communities in decisions affecting their health

COOPERATION: between statutory and voluntary agencies involved in health and social issues

LOCAL PRIMARY HEALTH CARE: as the focus for the provision of services

and

INTERNATIONAL COOPERATION

The White Paper however does not discuss equity as a goal or even as a concept. This is at considerable variance with the report of the US Department of Health and Human Services (1990), which in specifying its targets for health by the year 2000 described the overall goals as being "increasing the span of healthy life, reducing health disparities, and achieving equitable access to preventive services". The provision of health care on the basis of health need is mentioned once in the White Paper, but it is not identified as a principle.

The importance of empowerment is acknowledged in the White Paper, for example in references to education and in efforts to enable consumers to be able to exercise real choice over the foods available for purchase rather than being restricted to what producers and distributors choose to make available. However there are many more aspects than these to enable people to realise their full physical and mental potential. This is a most important objective which requires much more extensive debate.

Participation by the community in decisions which affect health is not mentioned in the White Paper. This is a serious omission because participation by people themselves, particularly in the more deprived areas is a prerequisite for change. If the targets prescribed in the White Paper are to be achieved there must be genuine commitment by clinicians, managers and not least by people themselves; attempts to manage change from the centre will almost certainly be unsuccessful in those areas where change is needed most.

There is general agreement that inter-agency cooperation is essential if fundamental health needs are to be adequately addressed; there is also general agreement that primary care should be the focus for health service provision, and that it should be as responsive as possible to local needs. These matters have been discussed more fully in chapters 8 and 15.

Conclusion

The UK has now caught up with much of the rest of Europe in setting targets and in giving clear directives for improving health. The White Paper places the promotion of good health and the prevention of disease rather than the provision of health services as the focus of responsibility for the NHS. In doing so it provides the first real opportunity to make the health services - with its recent reforms - effective in improving people's health. It is essential, particularly for those populations with the poorest health, that this opportunity is enthusiastically taken up. However it is most important
not to concentrate efforts only on the targets which have been prescribed, because

* spurious priority may be given to what is measurable

* the alleviation of material and social deprivation is fundamental to the improvement of health status

* health inequalities are the major cause of the poor overall health of the population of Greater Glasgow

* health problems such as physical and mental disability are equally important, but more difficult to quantify

* active participation by the community, particularly in deprived areas, is necessary before meaningful changes in diet, lifestyle and other determinants of health can be achieved
It is unacceptable that the health of the population of Greater Glasgow is considerably worse than the average for Scotland, which itself is very poor by the standards of other European and industrialised countries. The Health Board is unable to reverse this position without the active support of central and local government and non-statutory agencies.
A CALL FOR ACTION

The principal message of this report is that the poor health record of Greater Glasgow, and of the City of Glasgow in particular, is attributable almost entirely to the predominance of material and social disadvantage. Disadvantage exerts an adverse influence on health from a very early age, and children who are brought up in an adverse environment are likely to suffer greater ill health and premature mortality throughout their adult life than their more fortunate counterparts.

Health Boards acting alone have limited ability to improve the health of the populations for which they are responsible: most health service activity is directed towards dealing with problems which public health has failed to prevent. Exceptions to this are preventive activities such as immunisation, the early detection of disease (eg by screening or surveillance) and health promotion (eg by discouraging smoking, or encouraging taking exercise and a healthy diet). The Greater Glasgow Health Board is making strenuous efforts on all these fronts and aims progressively to increase expenditure on such preventive activity. Also, it has embarked on innovative approaches to prevention and health promotion in deprived inner city areas and peripheral housing estates. Some of these are based on general practices while others are youth health promotion projects in specific settings.

The Health Board also must keep others informed about the ways in which their own activities influence health. It must work in partnership, in particular, with local and central government to try to address issues such as housing, tobacco consumption, safety, employment, and the availability of healthy foodstuffs - all of which are fundamental determinants of health.

The main focus for joint action with local government is the Healthy Cities movement. This is based on the conviction that health is the outcome of a wide range of activity for which many agencies as well as the individual have responsibility. This broad view of health is reflected in support from all three statutory agencies (the Health Board, Glasgow City District and the Regional Council), the Universities and a wide range of bodies in the voluntary and community sector. More direct forms of collaboration with individual agencies also are needed. One example would be to explore to what extent cost effective interventions are available to combat the health damaging effects of poor housing. Another might be to determine whether an intervention targeted on a single issue such as housing can be successful outwith the context of a more comprehensive approach to urban renewal.

Enthusiastic joint commitment of the statutory agencies is essential if fundamental health determinants such as housing, safety and employment are to be addressed. Considerable financial support from central government is required if the necessary changes are to be put into effect. More specific actions from central government are also necessary if the targets for health set in the White Paper 'Scotland’s Health - An Agenda for Action' are to be achieved, and the health of Glasgow improved to nearer the average for the rest of Scotland. These include measures to reduce cigarette smoking, to reduce alcohol and drug misuse, to make healthy food more readily available and to improve road and other aspects of safety.

Most of the action necessary requires to be targeted specifically on people living in the more deprived parts of Greater Glasgow. Glasgow is important in a national context because it provides a "window" on inequalities in health, which exist in all Boards, although to a lesser extent. Given that national health policy does not address this issue, it is up to Glasgow to take the lead.

In summary, the following actions are required:

**Action required by Health Board**

1. Continue to strengthen programmes for the prevention of disease and promotion of good health.
2. Continue to develop innovative methods of improving health in areas of material and social disadvantage, including measures targeted on adolescents and young adults.
3. Increase commitment to effective joint working with local and central government agencies.
4. Institute locality planning which fully involves local residents and locally based professionals in decision-making about the provision of health services.
5. Develop and implement the concept of the health promoting hospital and health centre.

**Action required by Local Government:**

1. Increase commitment to effective joint working with the Health Board in order to make much greater impact on issues which are the responsibilities of local government but are...
fundamental to good health (eg housing, safety, employment opportunities).

* Make still further efforts to improve the quality of Glasgow's housing stock and to improve living conditions particularly for families with young children.

* Make further effort to reduce accidents.

* Implement, with real resource commitment, the health promoting school/institution programme.

Intersectoral Action:

* Increase commitment to the Healthy Cities movement. All contributing organisations should agree a substantial increase of revenue to fund a programme of major joint initiatives. A Healthy Cities Working Group should draw up a suitable programme and report within six months.

Action Required by Central Government

1. Make Glasgow the subject of special targeting

* Invest in Glasgow's socioeconomic infrastructure - eg, by expanding the approach currently being taken in Castlemilk to other areas of deprivation.

* Review health service revenue allocations.

2. Make healthy choices easier choices

* Take further steps to reduce cigarette smoking (eg by further restricting advertising and by increasing relative cost).

* Review policy relating to the price and availability of healthy food.

* Review policy relating to the price and availability of alcohol.

3. Confront the effect of deprivation on health

* Unless the severe health problems associated with material and social disadvantage are addressed, Glasgow's health relative to Scotland, the United Kingdom and elsewhere is unlikely to improve fundamentally.

Action Required by Voluntary Organisations

* Ensure that voluntary organisations which represent people with problems relating to physical or mental health contribute effectively to the Health Board's assessment of health needs and planning processes. For its part the Health Board should do all it can to facilitate this process.

* Provide greater support in the community for people with disabling conditions.
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