



Health

in Scotland 2004



healthier
scotland
SCOTTISH EXECUTIVE

Health

in Scotland 2004

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FOREWORD

Dear First Minister

It is my privilege to present my fifth Annual Report, *Health in Scotland 2004*. This report touches on the challenges to health and healthcare in Scotland over the last year. It cannot be a comprehensive account but rather supplements and draws from a wealth of data published over the last year which informs debate on these important issues in Scotland. This report covers activity in the whole field of public health, in health improvement and health protection as well as in health services. It has no single theme but there are three issues which I believe are worthy of comment in this short foreword.

The first is that of the effect of poverty and social exclusion on health. I have commented on this matter on previous reports and action designed to tackle the social injustice of health inequality underpins a wide range of Scottish Executive policy. In this report, I have set out some of the action that is being taken within the Health Improvement Challenge. I have also attempted to summarise briefly the exciting new thinking that is emerging from public health research in Scotland and elsewhere about the biological processes underlying the complex relationship between health and wealth.

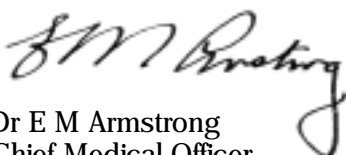
It is clear from this work that the effect of deprivation on health is due not only to poverty of financial capital but also to poverty of social capital, of aspiration and of hope. Our growing understanding of the biological effects of these stresses on individuals is revealing new mechanisms through which evidence of the effectiveness or otherwise of social and fiscal interventions will be more easily and quickly demonstrated than has hitherto been the case in public health research. I very much welcome the lead that Scotland is showing in this important work.

I have drawn attention in previous reports to my concern about the effects of excess alcohol on the lives and health of Scots and, in particular, of young Scots women. I cannot but reiterate that concern. This report contains ample evidence of the adverse effects of excess alcohol on Scots as individuals and as a society. There are steeply rising numbers of deaths attributable to alcohol and a parallel increase in cases of alcohol-related liver disease. Alcohol is a major factor also in fires, domestic and street violence, and road accidents. There are clear associations with poverty and social exclusion, with the most deprived being many times more likely to suffer or to die from alcohol-related problems. Efforts must continue to focus attention and effort on the problems of excess alcohol consumption in Scotland.

Many Scots, however, are responding positively to the choice of healthy living for themselves and their families. This report also celebrates the efforts that are being made in Scotland to tackle those issues that stand in the way of maximising the health of Scots. Nowhere was this more amply demonstrated in 2004 than in the Scottish Executive's commitment to tackling the scourge of tobacco. The year opened with the publication of the first ever comprehensive tobacco control policy for Scotland and culminated, after a public consultation to which a massive 52,000 individuals responded positively, with the introduction of legislation to create smoke-free enclosed public places. This will save the lives of individuals and improve the health of generations to come. I very much welcome this effort and the consistent support which has been shown by Ministers and colleagues across the Scottish Executive.

This report is the last in the series in my tenure of office as Chief Medical Officer for Scotland. As ever, while it has been my privilege to guide and mould its production, it results from the contribution of many colleagues within the Scottish Executive and the NHS in Scotland. My thanks are due in particular to Miss Sandra Campbell who has once again so ably edited the content and to my own office team led by Marion Collins and my Secretary, Eileen Stuart, who have managed the whole process.

Yours sincerely



Dr E M Armstrong
Chief Medical Officer

CHAPTER 1

THE SCOTTISH EFFECT

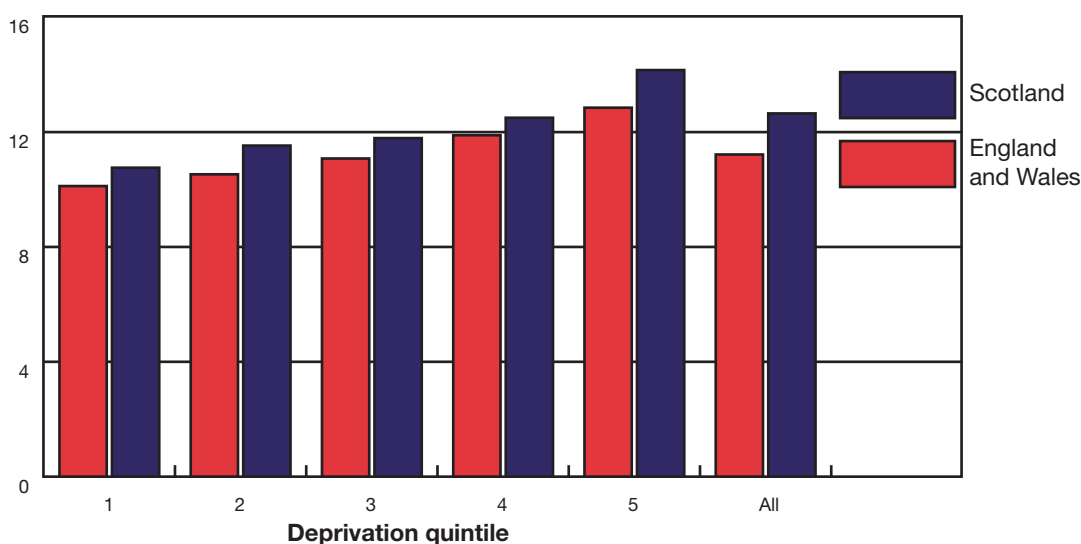
Tackling poverty and social exclusion is the first of the four “health imperatives for the twenty-first century” listed by the World Health Organization (WHO) in its 1997 World Health Report (1).

The relationship of health to wealth, or more specifically of poverty to poor health, has been known since biblical times. Health is a social justice issue. Tackling health inequalities therefore rightly underpins the approach to improving the health of the people of Scotland. Progress over the last year is the first issue covered in the next chapter, which deals with health improvement.

Previous annual reports on the health of the people in Scotland (2) have emphasised the need for good research and clear thinking in the approach to solving these problems. The relationship between health and wealth is complex. One as yet unexplained paradox in Scotland is that, even when matched with their English counterparts of comparable socio-economic status, Scots are relatively less healthy over a range of indicators from age standardised mortality to specific disease outcomes (Figure 1.1).

These findings suggest that there are factors at work, other than simply wealth, which are making Scots more unhealthy than their English counterparts. This unexplained difference has been dubbed ‘The Scottish Effect’.

Figure 1.1: Directly standardised mortality rates per 1,000 population, 1990/92, by country and deprivation quintile.



Source: *PHIS Chasing the Scottish Effect 2001*

The factors behind this amplification of the effect of wealth on health have been postulated to include social and cultural norms (3) and factors affecting social capital of Scotland. This chapter describes some of what is known and what remains to be explored in this area. It also points to new understanding of the molecular biology of the processes underlying the link between poverty and ill health and to the importance of initiatives such as the Scottish Executive's investment of £1 million in the Glasgow Centre for Population Health in taking this work forward.

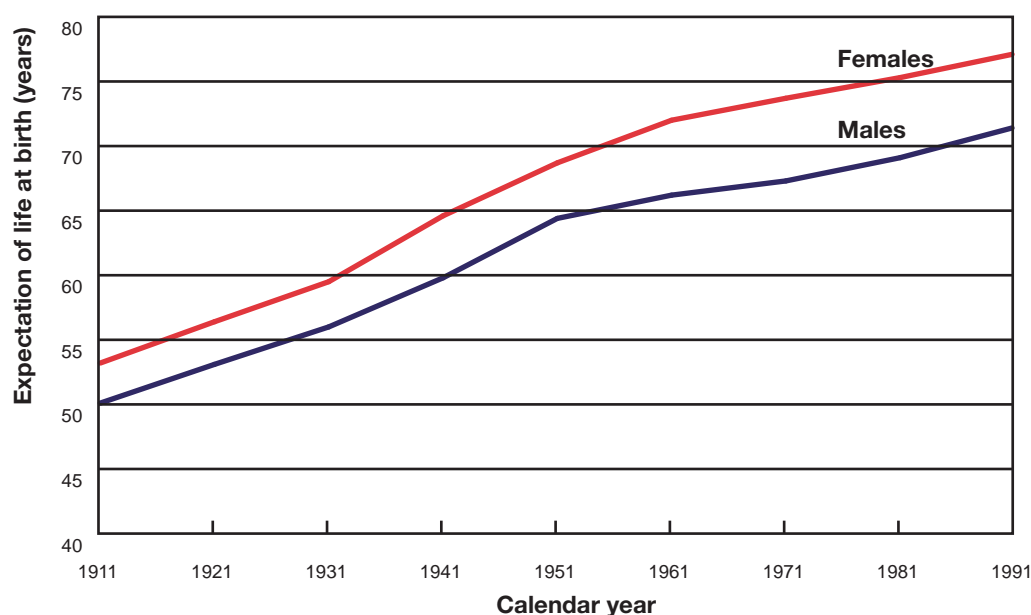
Understanding the 'Scottish Effect'

Scotland's health is improving overall but it is doing less well than many of its neighbours and the differences in health experienced by more and less affluent Scots have been widening. Why is this?

Life expectancy

On average, people in Scotland are living longer than ever before (Figure 1.2). With the exceptions of the First and Second World Wars, average life expectancy for Scottish males has increased steadily from around 50 years in 1910 to 73.4 years in 2001 (4). Female life expectancy has increased even more and now stands at 78.7 years. Infant mortality rates have declined in Scotland to an extraordinary degree, with only about six children in every 1,000 failing to reach their first birthday, compared with 130 a century ago and 20 children only 30 years ago.

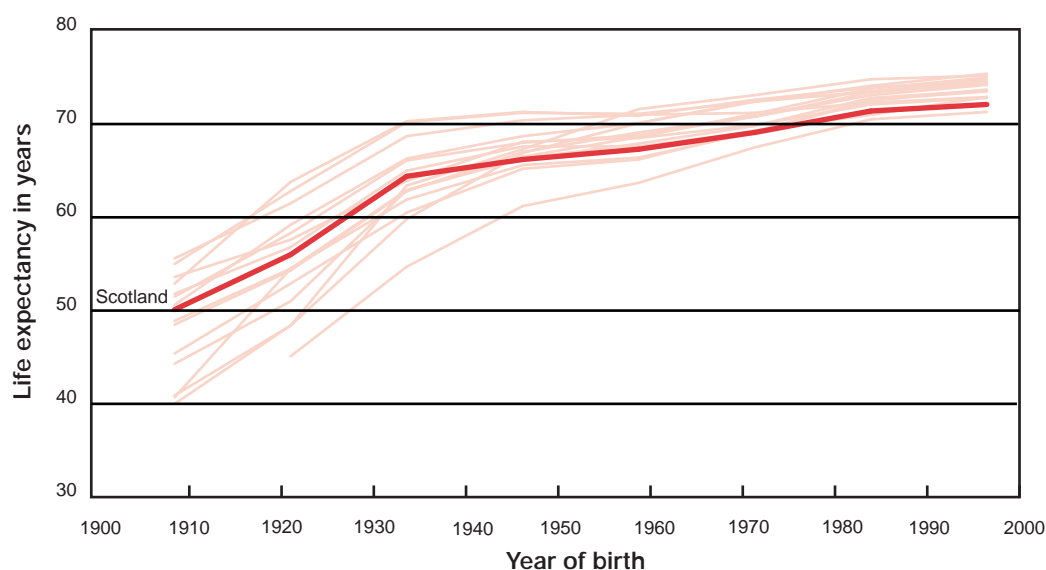
Figure 1.2: Long-term improvement in life expectancy.



The main reason for the increases in life expectancy in Scotland over the last 30 years or so is that diseases of the heart and circulatory system and certain types of cancer are being prevented or delayed. Death rates have been falling steadily for both men and women for stroke for 50 years and for Coronary Heart Disease for about 30 years (5). Death rates from lung cancer among men (but not yet women) have been falling for over 20 years. Much of this can be explained by the decline in smoking rates over the past 30 to 40 years (6) but other factors, including better maternal nutrition during pregnancy (7), better medical care and improved socio-economic conditions, have also contributed.

These advances give no grounds for complacency. Improvements have been slower than in many other comparable countries. In the first half of the twentieth century, Scotland ranked around seventh to ninth best among 16 Western European countries but by the mid-1990s its position had fallen to fifteenth, only slightly ahead of Portugal (Figure 1.3) (8). In particular, Scotland continues to have the highest death rates from heart disease and lung cancer and the second highest death rates for stroke in Western Europe.

Figure 1.3: 20th century trends in male life expectancy in Scotland and 15 other Western European countries.



Effects of deprivation

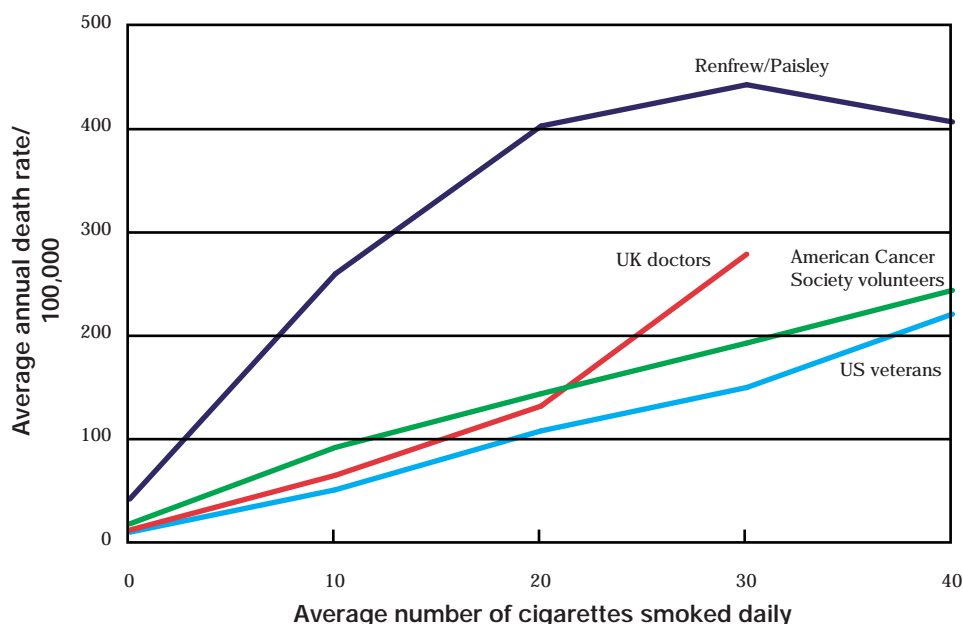
Scotland's overall health profile has continued to lag behind England's. In 1991 the standardised mortality rates were 12% higher than in England. Until recently, this seemed to be related almost entirely to the relatively lower levels of affluence in Scotland. Carstairs and Morris (9) found that differences in levels of deprivation could explain all but 3% of the higher mortality rates in Scotland in 1981. However, Hanlon and his colleagues have shown that, by 1991, deprivation appears to explain only 40% of the excess deaths in Scotland (10).

Gillis and his colleagues have found that, at comparable daily smoking rates and levels of affluence, men in the West of Scotland are more likely to die from lung cancer than other populations in the UK or the US (11) (Figure 1.4).

Health inequalities within Scotland

Health inequalities within Scotland appear to be widening. In the 10 years to 2001, average male life expectancy in Scotland increased by 3% but the rate of increase was more rapid in the most affluent parts of the country, with the least affluent areas falling behind. The gap in male life expectancy between highest and lowest of the 74 parliamentary constituencies in Scotland increased from 7.8 years in 1991 to 13.7 years in 2001 (12). The recent decline in death rates from common conditions such as cardiovascular disease has also been more rapid among the more affluent (13). Thus, despite the overall improvements, the less favoured sections of the Scottish population are falling behind.

Figure 1.4: Comparison of lung cancer mortality in Renfrew and Paisley with three major cohorts in US and UK.



Factors which have been advanced to explain the differences between Scotland and England and within Scotland include emigration, lifestyle and life circumstances. For over 250 years, large numbers of Scots have left the country for England or abroad in search of a better life. It is estimated that between the 1920s and the 1950s over 1.5 million Scots emigrated and it is only relatively recently that the outward flow has slowed (14). It is possible that those who left were, on average, more healthy and energetic than those who stayed and that this could be expected to show through in higher mortality rates among those who remained in Scotland. Unfortunately, no reliable data are available to illuminate this issue, as the health of migrants is substantially affected by their circumstances and lifestyle wherever they settle.

At least part of the cause of the widening differences within Scotland is that a higher proportion of more affluent people have chosen or have been able to adopt healthier lifestyles than the less affluent. Most importantly, smoking rates have declined much more rapidly in the more affluent sections of the population. In the early 1970s, 43% of women in Scotland smoked and there were relatively narrow social class differences. By 1998, this had fallen to 28% but only about 10% of professional women were smokers, compared with over 50% of unemployed or unskilled women (15).

Differences in diet may also be important. For instance, a much higher proportion of both adults and children in social classes I and 2 eat healthy foods regularly compared with those in classes 4 and 5 (16). Relatively few major differences are evident, however, between the diets of the Scots and the English.

The Scottish Mental Survey of 1932

Affluence may itself be a consequence of other factors which also influence health. In 1932, almost all Scottish children born in 1921 underwent a well-validated mental ability test, the Scottish Mental Survey. Recent studies have linked the results of these tests with the subsequent social class and health of almost 1,000 people living in west and central Scotland (17,18). These

showed very strong correlations between lower childhood Intelligence Quotient (IQ) and both subsequent social class and a higher risk of dying over a 25 year period and, in particular, of cardiovascular disease up to the age of 65, even when social class was taken into account.

The authors suggest that higher childhood IQ might be related to better general health, the subsequent development of healthier behaviours and the potential to obtain safer and better-paid jobs. Consequently, these people could afford better housing and to live in healthier environments. A growing list of factors related to socio-economic disadvantage and low social class are now known to affect the development of a child's mental ability and physical and mental health. These include maternal smoking, drinking, illicit drug use and poor nutrition during pregnancy, insufficient breast-feeding and lack of intellectual stimulation during the early years (19, 20, 21, 22, 23). Differences in trends of these behaviours among the social classes may at least partly explain the widening gap between the most and least affluent.

Environment and life circumstances

Recent research suggests other important ways in which the environment and life circumstances can affect biological processes which in turn can make individuals more susceptible to ill health. By following the progress of male civil servants over a 10 year period, Marmot and his colleagues found that mortality was approximately three times greater among the lowest grades than the highest (24). When deaths from heart disease were considered, the recognised risk factors of smoking, high blood pressure and elevated cholesterol levels could only account for a small part of the differences between the groups. Other studies have confirmed that higher levels of risk of death in a working population are only partially explained by health-related behaviours (25). There is mounting evidence that at least part of the unexplained increase in risk across the social classes is related to how the body responds to social stress.

A number of studies of non-human primates have suggested that social stresses can accelerate the progression of Coronary Heart Disease in animals fed high-fat diets. In humans, Everson (26) and colleagues have shown that men who have high levels of negativity about the future deposit fat more rapidly in their arteries. The resulting hormonal responses to such a sense of hopelessness might mobilise the fat that was deposited in arteries. Jousilahti (27) and his colleagues in Finland have found a strong correlation between increased levels of chronic inflammatory proteins in the blood and low income and educational status. Similar observations have been made by other groups who have suggested that chronic activation of the body's defence mechanisms may be the link between low socio-economic status and increased risk of ill health (28).

How a stressful external environment might cause changes in body chemistry is not yet entirely clear. However, there is evidence that chronic social stress produces changes in function in areas of the brain associated with the control of the body's defence responses (29). Low IQ and educational attainment, socio-economic disadvantage, a low sense of control over one's life and other stresses may thus produce neural responses which, over a prolonged period, activate defence mechanisms which in turn damage arteries and lead to an increased risk of diabetes.

Psychological stress might also increase the risk of cancer by a direct effect on the DNA within cells. Epel (30) and her colleagues have shown that women stressed by having to care for a chronically ill child have changes in their chromosomes which are associated with premature ageing and may increase the risk of malignancy. They found that the women with the highest perceived levels of stress were biologically about 10 years older than their chronological age. There is also evidence that people who have little control over their lives may be more neurologically vulnerable to become addicted to drugs such as nicotine, alcohol and heroin, with

consequently damaging effects on their health and, potentially, their offspring, transmitting disadvantage from one generation to the next (31).

Whether Scots are more subject to these types of stress than their counterparts in England or other parts of Western Europe remains an unanswered question. However, these ideas suggest new ways of investigating the causes of health inequalities. As well as attempting to improve the economic conditions of the most deprived sectors of the community in Scotland, it is clear that the necessary social, cultural and psychological resources must be made available to meet the challenges of modern life. Concentrating on making structural improvements through regeneration projects which do not increase the resilience and sense of control of people living in those areas may lead to disappointing results. Effective action to reduce health inequalities must include efforts to prevent young children from being damaged physically and mentally during pregnancy and the early years and to maximise the opportunities for all to achieve their full educational and employment potential in a safe and supportive environment.

CHAPTER 2

IMPROVING SCOTLAND'S HEALTH

Health Inequalities

Tackling health inequalities is a major aim of the Scottish Executive's health improvement policies, as set out in the White Paper *Towards a Healthier Scotland* (1999) and in *Improving Health in Scotland: The Challenge* (March 2003). Improving the health of people living in the most deprived communities is also one of the high level objectives which have been set in **Closing the Opportunity Gap (CtOG)** – the Scottish Executive's anti-poverty programme.

Ministers recently announced a health inequalities target in *Building a Better Scotland* – the 2004 Spending Review. This target is to reduce health inequalities by increasing the rate of improvement across a range of indicators for the most deprived communities by 15% by 2008. Achieving this will be very challenging and requires concerted action by NHSScotland and its partners.

The six indicators are:

- Coronary Heart Disease mortality in people under 75 years old
- cancer mortality in people under 75 years old
- adults smoking
- smoking during pregnancy
- teenage pregnancy
- suicides in young people.

The Coronary Heart Disease and cancer indicators will also be used to measure progress on the health improvement section of the **Closing the Opportunity Gap** work. Focusing on deprived communities recognises the important role community planning partners have in improving health. Community Planning Partnerships are crucial to delivering an improvement in the rate of change to Scotland's health, by developing and delivering a strategic vision for their communities, through the Joint Health Improvement Plan process, and addressing major issues which affect the social, economic and environmental well-being of communities.

The NHS has an important role to play in respect of its own services. There are inequalities in both access and uptake of healthcare services. People in deprived communities are less likely to use services and often present later and have worse outcomes. There is a need for evidence about what is effective in promoting access and uptake for deprived and excluded populations.

The Scottish Executive is therefore providing £15 million over two years to the three NHS Boards (Argyll and Clyde, Tayside and Greater Glasgow) with the highest concentrations of deprivation for pilot studies which focus on access to and use of primary and secondary healthcare services and which seek to improve access by deprived populations. Results of these studies will provide evidence of the effectiveness of these strategies to tackle health inequalities and to reduce the health gap between the most and least affluent, and will potentially influence a review of the Arbutnott funding formula for NHS Boards.

Health and Homelessness

The drive to improve the health of people who are homeless in Scotland has continued this year. All NHS Boards have been scrutinised to ensure that their delivery of Health and Homelessness Action Plans is effective and is giving the direction needed to make a difference to this very vulnerable section of the community. It is a challenge to improve the health status of people whose lives are chaotic in many respects. NHS Boards have received appropriate levels of support to deliver on the expectations set out in the homelessness strategy and the Scottish Executive Health Department (SEHD) has worked closely to assist in the development of effective health interventions.

Over the course of the year, SEHD has supported the development of multi-disciplinary specialist services for homeless people. The Minister for Health and Community Care opened services in Perth and Glasgow and SEHD will work with such services to promote understanding of the benefits of this approach. However, specialist services should only be a short-term response and mainstream health services also need to be accessible, appropriate and responsive to the needs of homeless people.

To develop health and homelessness work, SEHD will publish *Health and Homelessness Standards* in March 2005. These Standards build on the good practice which has developed since the publication of the *Health and Homelessness Guidance* in September 2001 and they will provide a renewed focus for NHS Boards from April 2005 onwards.

Health improvement for homeless people

In Tayside, a nurse-led primary care service for homeless people is being piloted in Perth, together with a prison outreach service and further pilot projects in Dundee and Angus. The aim is to provide help, care and support to homeless, vulnerable and hard to reach groups.

Smoking

Smoking remains one of the most damaging factors in Scotland's poor health record. It is estimated that every year 13,000 people in Scotland die prematurely from smoking-related diseases including lung cancer, Coronary Heart Disease and stroke. The lives of thousands more are blighted and limited by these diseases. However, it is still relatively uncommon for doctors to mention smoking as a contributory cause of death when completing death certificates. In an attempt to overcome this problem, aetiological fractions are applied to the numbers dying from a range of causes (Table 2.1) in order to arrive at a total of smoking-related deaths.

Table 2.1:
Percentage of deaths from diseases attributable to smoking

Disease	Percentage of deaths attributable to smoking
Cancer	
Lung	84
Upper respiratory tract	66
Oesophagus	68
Bladder	37
Kidney	27
Stomach	26
Pancreas	23
Unspecified site	20
Myeloid leukaemia	15
Respiratory disease	
Chronic obstructive airway disease	84
Pneumonia	17
Circulatory disease	
Heart attack	7
Stroke	10
Aortic aneurysm	57
Heart muscle degeneration	15
Hardening of the arteries	10
Digestive	
Ulcer of stomach and duodenum	45

(Source: *Nicotine Addiction in Britain*, RCP)

The age specific mortality rates per hundred thousand of the male and female population in Scotland dying from cancers of the trachea, bronchus and lung are shown in **Figures 2.1** and **2.2**. Up to 2000, death rates from these cancers had been falling for men and rising for women. Since 2000 the rates have been relatively stable for both sexes.

In 2004, as a crucial component of its health improvement drive, the Scottish Executive reinforced its commitment to tobacco control. The launch early in 2004 of *A Breath of Fresh Air for Scotland* (1), the first action plan on tobacco control designed specifically for Scotland, was an important step forward.

The Plan is based on the vision of Scotland as a country where everyone is aware of the health risks associated with smoking, where the health of children is protected and where people are not exposed involuntarily to the dangers of second-hand smoke (passive smoking) in the workplace or elsewhere.

Figure 2.1: Age specific mortality rates per 100,000 population for males dying from cancer of the trachea, bronchus and lung.

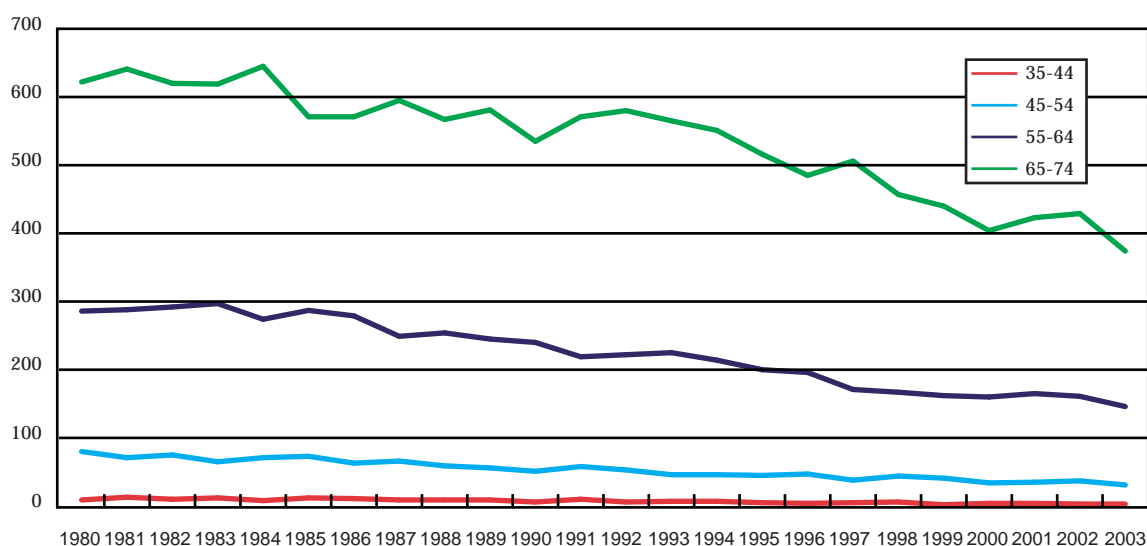
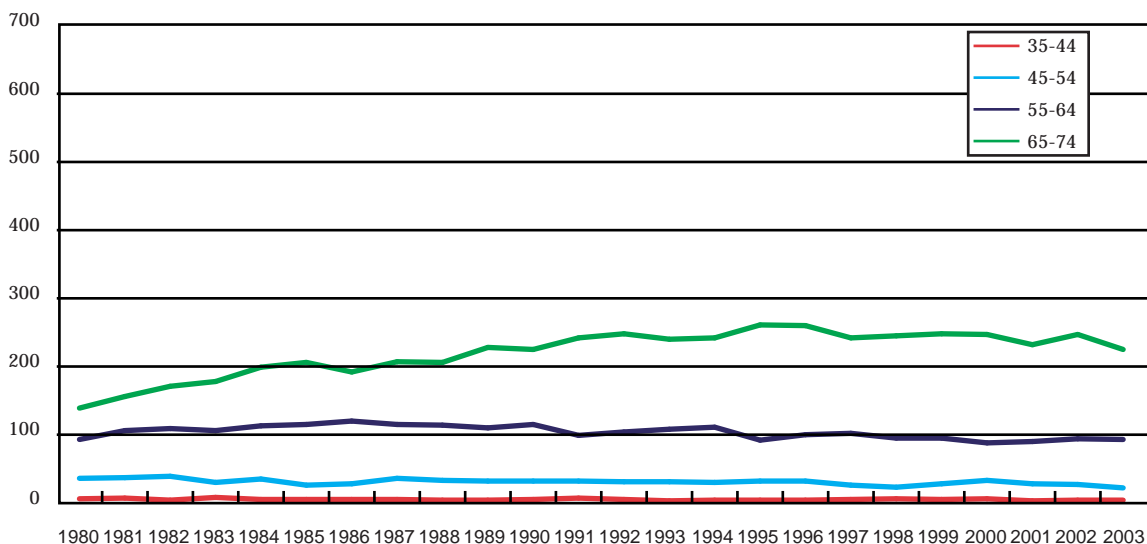


Figure 2.2: Age specific mortality rates per 100,000 population for females dying from cancer of the trachea, bronchus and lung.



The Plan recognises that a reduction in smoking levels in Scotland requires clear priorities and targets backed by action set out in four broad categories:

- **Prevention:** action to accelerate reduction in smoking, including a major review of prevention, education and communication efforts.
- **Provision of services:** action to extend and improve cessation services with new funding (£1m with effect from 2003/04 and a further £4m with effect from 2005/06) from the Scottish Executive to support these.
- **Second-hand smoke:** action to reduce the health risks of second-hand smoke and to reinforce efforts to change attitudes to smoking in Scotland.
- **Protection and controls:** legislative and other action to reduce the attractiveness and availability of cigarettes.

The Plan commits the Scottish Executive to a long-term strategy to support structures which are capable of delivering results, monitoring progress and identifying new and subsequent action, based on evidence of what has been effective in Scotland and elsewhere.

Minimising the risks from second-hand (environmental) tobacco smoke

While all of the action identified within the Plan is important, there is little doubt that the commitment to sponsor a major public debate on actions to minimise second-hand smoke has been the most significant step to action designed to improve the health of the people of Scotland in a generation. The scientific evidence of the health risks of second-hand smoke is clear and irrefutable and was extensively reviewed in the report of the UK Scientific Committee on Tobacco and Health (SCOTH), published in 1998 (2). The report concluded that exposure to second-hand smoke:

- is a cause of lung cancer and, in those with long-term exposure, the increased risk is 20 to 30%
- is a cause of heart disease and represents a substantial public health hazard
- can cause asthma in children and may increase the severity of the condition in children already affected.

SCOTH has now reviewed the evidence to emerge since 1998 into the health risk of exposure to second-hand smoke and its latest report, published in November 2004, reinforces the earlier findings (3). Additionally, research commissioned by the Scottish Executive and NHS Health Scotland in 2004 suggests that second-hand smoke is associated with some 865 deaths per year among life-long non-smokers in Scotland. Taking ex-smokers into account, it is estimated that some 1,500 to 2,000 deaths per year in Scotland are related to environmental tobacco smoke exposure (4). Further modelling by the University of Aberdeen (5) has suggested that, of the 865 deaths, 120 are attributable to non-domestic exposure.

Health Summit – Smoking Cessation

A health summit focusing on smoking in the workplace was held in Ayrshire on No Smoking Day, 10 March 2004. The aim was to raise awareness within the business community of the positive aspects of a smoke-free workplace. The summit coincided with the run-up to the consultation on the proposed ban on smoking in public places, giving the perfect opportunity to inform employers on the evidence base and to encourage discussion on issues related to environmental tobacco smoke. An interactive CD-ROM of the day, containing web links, was distributed to the local business community to assist them in construction and implementation of their no-smoking policies.

The need to take action to extend smoke-free provision in Scotland is clear. Following a consultation in 2004 (which elicited nearly 54,000 responses) and wider evidence-gathering on possible approaches to minimise the impact of second-hand smoke, the Scottish Executive announced its intention to protect public health through the introduction of a comprehensive ban on smoking in public places. This significant decision offers the potential to transform the health of people in Scotland, giving individuals the opportunity to cut down or stop and giving children and young people the chance to grow up with less pressure to smoke and less likelihood of dying early.

As well as directly reducing the risk from environmental tobacco smoke (passive smoking) to non-smokers and those who cannot choose, such as children and the unborn, a ban will increase the number of smokers who quit and reduce the likelihood of the young starting, by removing the perception that smoking is normal. Legislation to implement the decision was introduced to the Scottish Parliament on 16 December 2004 and the proposed date for full implementation is spring 2006.

Problem Drinking

Alcohol has always played a part in Scottish social life. Although the majority of people in Scotland enjoy alcohol without causing harm to themselves or to others, binge drinking and drinking in order to get drunk have become increasingly common and are often associated with high levels of violence and anti-social behaviour. Most of the hospital admissions and deaths due to alcohol occur in middle-aged people and follow years of heavy drinking (Figures 2.3. and 2.4). These issues have been commented upon in previous reports.

Plan for Action on Alcohol Problems (6) which was published by the Scottish Executive in January 2002, heralded a new, integrated approach to reducing alcohol-related harm in Scotland. The Plan set out to tackle the harmful effects of problem drinking by outlining a long-term programme of culture change, covering prevention and education, the delivery of effective support and treatment services and a range of protection and controls.

The Scottish Executive and partner organisations have embarked on a significant programme of change since this Plan was published. A national communications strategy to tackle binge drinking was launched, a support and treatment services framework to assist local service planners was published and the Scottish Executive allocated funding of £8m over two years for treatment, support and prevention activities. Local Alcohol and Drug Action Teams have identified and implemented actions to help address local priorities and the evidence base of what works in treating and supporting people with alcohol problems has been strengthened.

Figure 2.3: Alcohol-related deaths: males and females.

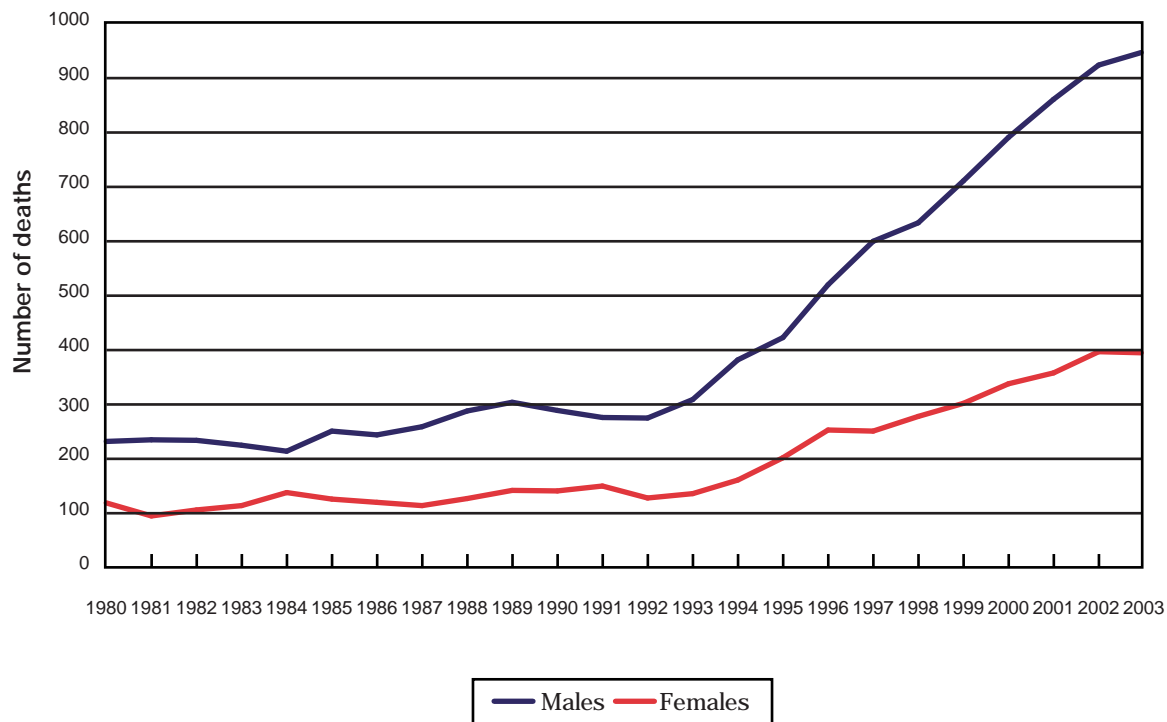
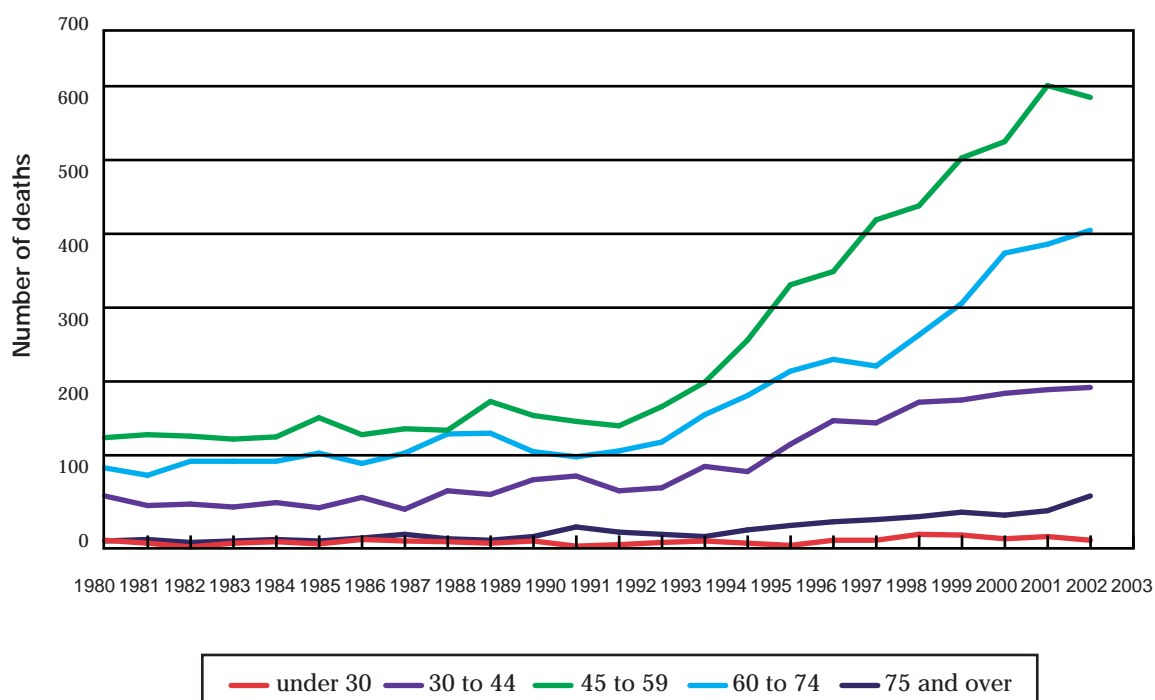


Figure 2.4: Alcohol-related deaths by age group.



These actions will, in time, have a positive effect. Meanwhile, alcohol continues to have a negative impact on the lives of many people in Scotland and to place a heavy burden on society. The estimated cost to Scotland is £1.13 billion per annum in terms of lost productivity and in healthcare and criminal justice costs (7). Alcohol-related hospital admissions and deaths continue to increase for both men and women. Since 1990 there has been a 60% increase in reported drinking by 15 year olds and more than a 100% rise in drinking by 13 year olds. Many more children are living with parents who have alcohol problems and there is justifiable concern about alcohol-fuelled violence and other forms of antisocial behaviour.

Alcohol-related deaths

- There were 1,980 alcohol-related deaths in Scotland in 2003.
- They account for one in 30 of all deaths in Scotland.
- Numbers have risen by 240% since 1980 (from 580 to 1,980).

Alcohol and liver disease

- There were 5,255 admissions to general hospitals with alcoholic liver disease in 2003/04.
- Sixty-nine percent of admissions were male and 31% female.
- There was a 47% increase in admissions for alcohol-related liver disease between 1997/98 and 2003/04 (Figure 2.5).

Alcohol and fires

- Alcohol has been a major factor in fatal fires in recent years.
- In 2002/03, of the 84 people who died in Scotland as a result of fire, misuse of alcohol contributed directly in 32 (54%) fatal fires and indirectly in a further five (8%).

[Source: *HMCI of Fire Services for Scotland, Annual Report 2002/2003, TSO, Edinburgh*]

Alcohol and violence

- Of respondents who could tell, 72% of the violent incidents were thought to be carried out under the influence of alcohol.
- Male offenders were more likely to be under the influence of alcohol (69%) than female (30%).

[Source: *Scottish Crime Survey 2000*]

Alcohol and road accidents

- One in six deaths on Scotland's roads are caused by drink driving.
- In 2002, 304 people died in road accidents in Scotland with an estimated 50 of these the result of drink driving.
- In 2002, an estimated 820 accidents with 1,270 casualties in Scotland resulted from drink driving.
- The figures for 2002 (Figure 2.6) are the highest estimated number of drink drive accidents and casualties since 1993.

[Source: *Road Accidents Scotland 2003*]

Figure 2.5: Admissions due to alcohol-related liver disease 1997-2004.

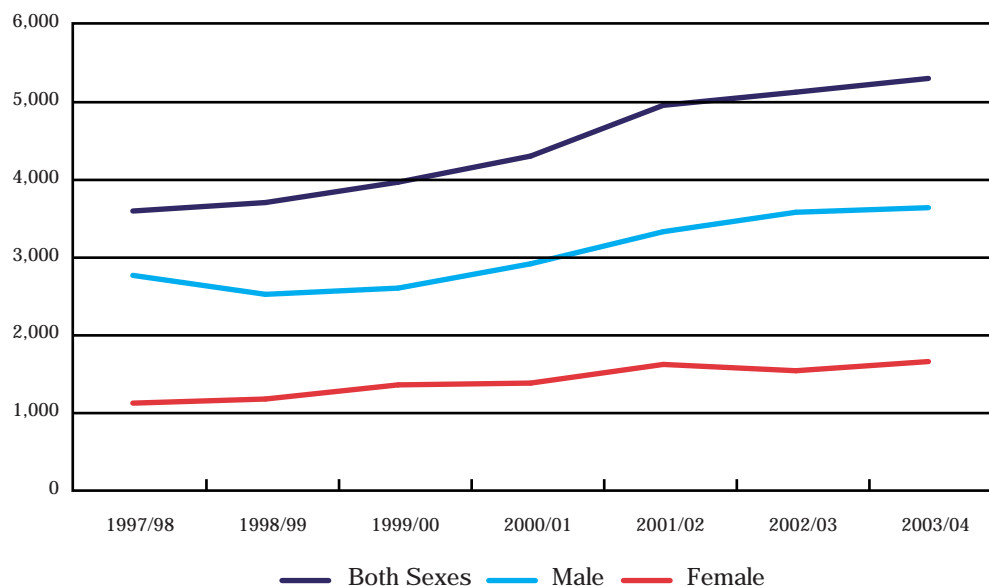
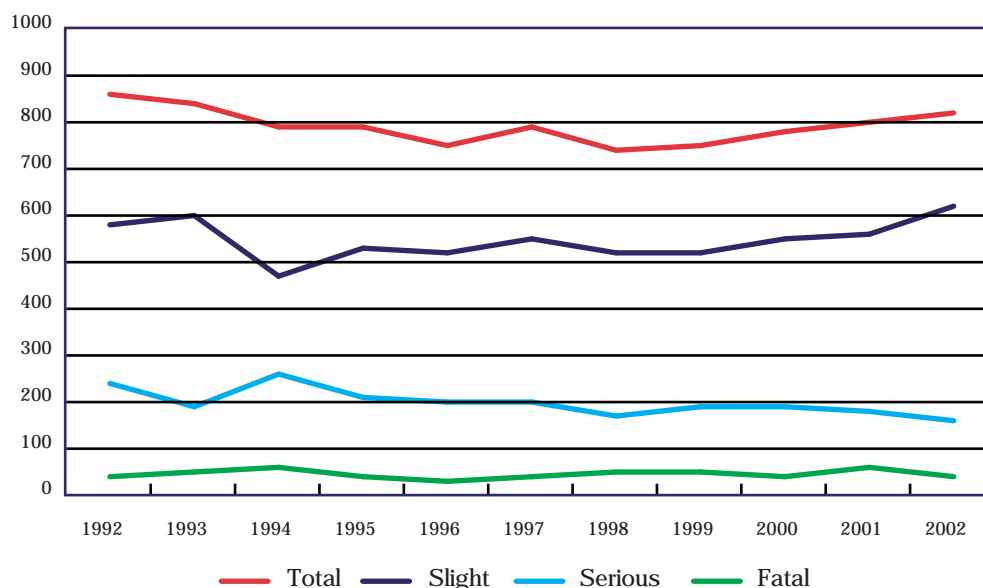


Figure 2.6: Accidents involving motor vehicle drivers or riders with illegal alcohol levels, by severity of accident.



Alcohol problems cut across all social backgrounds and circumstances but there are clear associations with inequality and deprivation. In Greater Glasgow, for example, people from the most deprived areas are six times more likely to be admitted to hospital with an alcohol-related diagnosis than those from the most affluent areas. Men living in the most deprived areas are seven times more likely to die an alcohol-related death than those in the least deprived areas.

In 2004, the Scottish Executive, in consultation with partners, reviewed the action within the Plan and it is proposed to publish an updated Plan early in 2005. Retaining the broad structure of the original Plan, it will build on a series of Partnership Agreement commitments and offer a comprehensive range of actions aimed at improving Scotland's health by changing drinking cultures and reducing alcohol-related harm.

Healthy Eating

The recent Health Education Population Survey showed that there are some encouraging signs of improvement in the eating habits of the people of Scotland. Since 1996 there has been a 40% increase in awareness of recommended fruit and vegetable consumption (five servings a day) and 61% of the population mentioned that they have tried or would like to eat more healthily.

The Scottish Executive Food and Health Action Plan 2004/05, published in *Eating for Health: Meeting the Challenge* in 2004, maps out areas for action, including:

- developing a stronger interface with the food industry
- the introduction of a Scottish Food and Health Council to focus on formulating and delivering an annual plan of action
- the introduction of a **Healthyliving** Food and Health Alliance to ensure strong and effective engagement with all relevant sectors
- the delivery of a clear and sustained message on healthy eating to the public through the **Healthyliving** campaign.

Advertising this year has been aimed at parents in their role as food providers for families, men catering or buying food for themselves, women choosing their own food and adults contemplating taking action to tackle being overweight. The advertisements are supported by a website and a telephone line that provide practical advice on how to eat more healthily.

Since the 1980s, Scotland has participated in the WHO collaborative study Health Behaviour in School-aged Children (HBSC) which considers young people's health in its broadest sense. The sixth and most recent survey took place in 2001/02 and involved 1,500 Scottish schoolchildren from each of three age groups. (www.hbsc.org).

HBSC is a school-based survey with data being collected in the classroom through self-completion questionnaires which contain a core set of questions looking at:

- **Background factors:** demographics and maturation, family structure and socio-economic status
- **Individual and social resources:** body image, family support, peers and school environment
- **Health behaviours:** physical activity, eating and dieting, smoking, alcohol use, cannabis use, sexual behaviour, violence, bullying and injuries
- **Health outcomes:** symptoms, life satisfaction, self-reported health, Body Mass Index.

Some of the findings of the 2001/02 survey in the 13-year-olds group are shown in **Figures 2.7 to 2.9**.

Figure 2.7: 13 year olds drinking sugary drinks every day

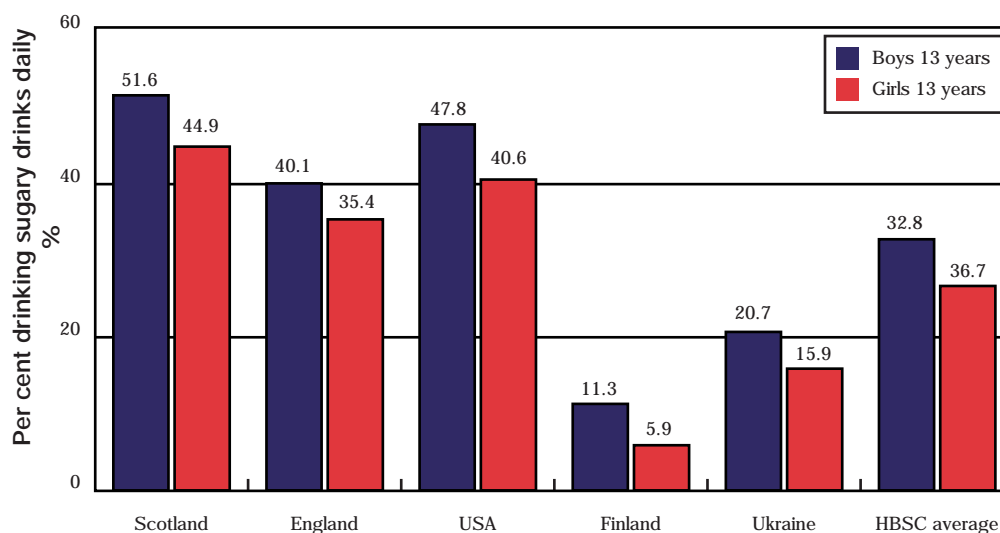
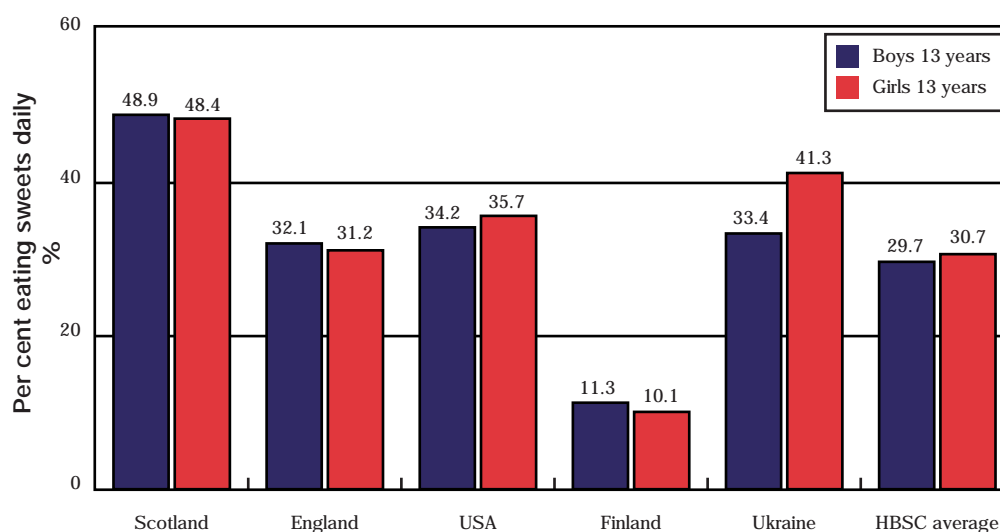


Figure 2.8: 13 year olds eating sweets every day.



Hungry for Success

The Scottish Executive's school meals policy **Hungry for Success** continues to raise standards for food provision in schools. New software and support training materials have been developed and provided to Local Authority caterers to help them meet the nutrient standards and product specifications as laid down by the Food Standards Agency Scotland for school meals. The food industry is responding well to the challenge, with an increasing number of reformulated products meeting the specifications.

Her Majesty's Inspectorate of Education has developed a monitoring scheme and has appointed a specialist Nutrition Associate Assessor to help with inspections, initially in primary and special schools. The target date for implementation of **Hungry for Success** in this sector was December 2004. Secondary schools have until 2006 to implement the changes fully and many Local Authorities are already on track.

Scottish Healthy Choices Award

This is a national healthy eating award scheme, funded by the Scottish Executive, which:

- provides support for the development of local award schemes
- encourages and supports interagency working among Health Boards, Local Authorities, retailers, consumer groups and caterers
- encourages caterers to provide healthy choices
- influences consumer awareness of healthy choices
- stimulates interest in, and demand for, healthy foods.

The award is open to all eating establishments in Scotland and is based on comprehensive criteria for:

- healthy choices
- food safety and hygiene
- provision of non-smoking areas
- support for women who wish to breastfeed on the premises.

In 2004, 191 establishments across Scotland gained the award, which is currently being further developed to include food in the High Street and in the workplace.

Obesity

It is reported that one in five adults in Scotland are classified as obese. This number has tripled in the last 20 years and is set to continue to increase on present trends. Almost two-thirds of the men and over half of the women are either obese or overweight and, among children, nearly one in three are overweight by 12 years of age.

An array of factors can contribute to obesity, such as endocrine and genetic disorders. However, the fundamental cause of obesity is the consumption of excess calories compared to calories expended – in short, physical inactivity and poor diet. The result is excess body fat, which frequently leads to considerable health impairment.

Physical Activity

Physical activity is one of the most influential factors in the promotion and maintenance of weight loss and is very effective in reducing body fat in moderate obesity. People in Scotland are currently well below the recommended levels for physical activity.

Regular physical activity can produce many health benefits:

- Improves cardio-respiratory function
- Reduces risk of Coronary Heart Disease
- Reduces risk of overweight and obesity
- Enhances bone density
- Improves feelings of well-being
- Improves fitness, muscular strength and flexibility
- Better performance of work, recreational and sport activities.

Physical activity continues to be one of the major determinants of health in Scotland. The recent Health Education Population Survey shows that only 43% of adults aged 16 to 74 are meeting the minimum recommended levels of physical activity (an accumulation of 30 minutes of activity per day). However, 77% believe that taking regular exercise is very important in reducing the risk of Coronary Heart Disease and 62% would like to or have tried to increase activity levels.

The Scottish Executive is continuing to build on this increased awareness of the important role physical activity plays in Scotland's health. This year's phase of the **healthyliving** campaign incorporated physical activity for the first time. Advertisements aimed at specific groups – older adults and families with young children – demonstrate that simple steps can be taken to increase levels of activity, including active travel, play, climbing stairs and swimming. The advertisements are supported by a website and telephone line that provides practical advice on how to get active.

Walking

Walking is an ideal way to be active. Among those who meet the minimum levels of physical activity (30% of Scottish population), walking is the most common activity. Even among those who fall short of the minimum target, walking is also the most common activity – but they just do not do enough to benefit health. The Scottish Executive has been promoting walking in several ways:

Great Scottish Walk

The Scottish Executive has sponsored the **Healthyliving** Golden Mile event as part of the Great Scottish Walk. The **Healthyliving** Golden Mile is aimed at people, of all ages and abilities, who would like to become more active but feel they are unable to manage either of the full 6 or 12 mile walks. In 2004, 196 participants took part in the event in Edinburgh. Similar support is being provided for the event in 2005, along with additional support for the children's Wee Scottish Walk which will take place in four different Scottish cities (Edinburgh, Glasgow, Dundee and Aberdeen).

Paths To Health

The Scottish Executive is working in partnership with the **Paths To Health** Project to promote walking – aiming particularly at those who are most inactive – by developing and strengthening the walking infrastructure in local areas. This is a flavour of what has been achieved through in the 12 months up to November 2004:

- Funded an additional 14 **Paths to Health Schemes**, bringing the total to 62 schemes (Each scheme can have up to 30 individual walking groups within it).
- Ran 33 courses training an additional 451 volunteer walk leaders, bringing the total number of volunteer walk leaders to 933.
- Developed a new 'Next Steps' training course for volunteers to take people from beginner groups to more adventurous off-road walks.
- Delivered monitoring and evaluation training to 13 local schemes to gather improved information about their activity.
- From a sample of five walking groups, a total of 1,600 'new' walkers were identified.

Further work will be undertaken in 2005 to support the development and promotion of walking and cycling for both recreation and as a travel mode, involving a variety of partners such as Local Authorities, the NHS and the voluntary sector.

Play@Home

There is increasing evidence that family involvement in physical activity increases participation for children and also that active children become active adults. Play@Home (P@H) is a physical activity programme for children from birth to five years. It provides parents with guidance on safe and beneficial ways of handling an infant to improve family emotional ties, stimulate motor and sensory development and promote a nurturing environment within the home. P@H is a partnership programme between Fife Council Education Service and NHS Fife but has also been used by the Health Demonstration Projects in Glasgow and Paisley. The Scottish Executive is continuing to provide funding to the P@H resource as part of increasing activity within the home environment and to support the development of P@H across Scotland.

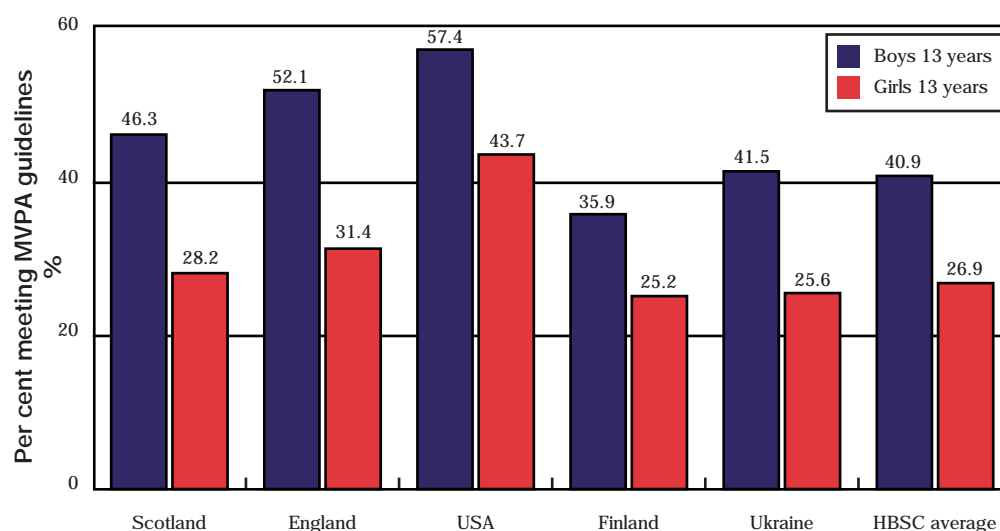
Girls on the Move

Girls on the Move is an exciting new initiative being developed in partnership with the Scottish Executive and The Robertson Trust to increase the physical activity levels of girls and young women. The programme will provide them with opportunities for both participation and training as coaches and leaders. By involving more young women as leaders in promoting physical activities for girls, this may allow them to contribute to the participation of others (particularly younger children) in physical activity within their own communities. At the same time, they will also develop their own self-esteem and competencies that will assist them in their personal development.

YDance

Dance encourages young people to get active and is particularly popular with girls, especially teenage girls who are one of the most inactive groups. The Scottish Executive is working closely with YDance to provide additional capacity within schools to encourage and support the development and delivery of dance for children and young people in Scotland. Initial circulation of CD-ROMs and teaching manuals to schools has taken place and a major programme of dance workshops across Scotland are planned for early in 2005. Further work will then be undertaken to extend the proposed programme to all 32 Local Authority areas over the period from August 2005 to March 2008.

Figure 2.9:
13 year olds meeting the guidelines for moderate to vigorous physical activity (MVPA).



The MVPA guidelines are to take part in at least one hour of moderate to vigorous physical activity on at least five days a week.

Motivation to Move is a community-based project introduced in Tayside to reduce the negative effects of lack of activity. It offers a range of physical activity programmes including chair-based exercise, tailored exercise classes, organised walks and improved access to gyms and swimming pools.

Mental Well-Being

Mental health is a priority area for the Scottish Executive. While improving mental health services is important, achieving mental well-being is also a vital element of better health in Scotland. The focus is on developing a better understanding of what people can do for themselves and for others to enhance their mental health and well-being. Work is being taken forward through the Scottish Executive's **National Programme for Improving Mental Health and Well-being**. (www.wellontheweb.net)

Over the next three years, the Programme will concentrate on building public awareness and knowledge about positive mental health – how to get it and keep it, and what people can do for themselves and others when they may be experiencing mental health difficulties. NHS Health Scotland will be leading much of this public awareness-raising. This Programme aims to improve mental health and emotional literacy, with the goal of increasing the public's knowledge and understanding about mental well-being and mental illness. International research demonstrates how important mental health and emotional literacy are to improving mental and physical health and well-being. This is a vital part of the public health challenge in Scotland.

Early Years

The Scottish Executive is committed to giving every child the best possible start in life. Improvements in child health can also have beneficial effects lasting into adult life. The early years of life are therefore a focus for the health improvement challenge and already a considerable amount of work has been done.

Children in poorer areas carry an excess ill health burden

The 2004 NHS QIS report on clinical outcome indicators demonstrated the effect of life prospects on the next generation:

- Stillbirths and neonatal deaths were 60% greater in the poorest areas than in the most affluent.
- Child hospital admissions for asthma were 25% greater.
- Children living in the poorest areas had the highest rates of admission following unintentional injuries.
- Obesity rates continue to rise in children from all social backgrounds.
- Emergency admission rates for teenagers with diabetes, higher in deprived areas, rose by 20% over the 10 years to 2003.
- Pregnancy rates for girls aged 13 to 15 fell by 12% in the eight years to 2003, but the pregnancy rates in poorest areas were three times higher than those in affluent areas.

Integrated Early Years Strategy

Starting Together focuses on better integrated working across all agencies to deliver support services in the early years (pre-birth to six years). The aims are improving children's health, improving children's cognitive, social and emotional development, strengthening the families and communities in which children grow up and reducing levels of child poverty.

Growing up in Scotland is a survey designed to support the monitoring and evaluation of the Scottish Executive's **Early Years** policies and will collect data about children and their families throughout Scotland in a large-scale longitudinal social survey. It will track a number of cohorts of children and monitor the influence of policy on their experiences, circumstances and views, focusing on the characteristics and behaviour of children in their home setting from birth to adolescence.

Integrated Planning Guidance asks agencies to draw together their separate plans for school education, children's social work, child health and youth justice into integrated Children's Services Plans from April 2005. This will be the first time that all child health services, from acute to primary care, have been included. These integrated plans should help agencies to rationalise existing planning activity and to agree consistent improvement objectives and delivery strategies across universal and focused services for children and young people.

Maternity Services

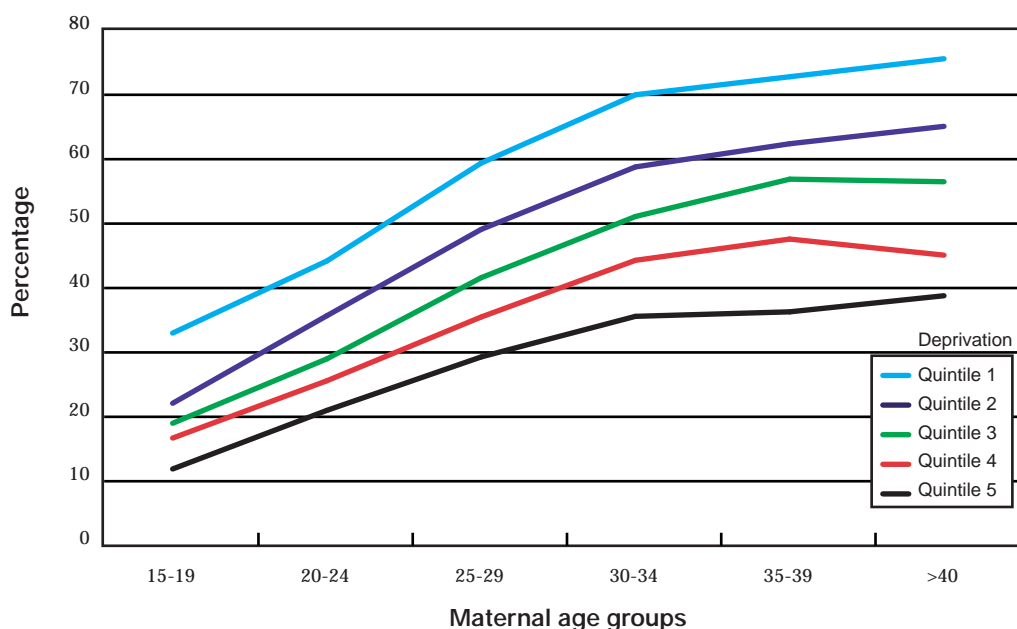
The health of women in pregnancy and childbirth are both important determinants of future child health. Following on from *The Framework for Maternity Services* and *The Report of the Expert Group on Acute Maternity Services*, the National Maternity Services Workforce Planning Group met for the first time in 2004 and is due to report in 2005. Its aim is to ensure the future sustainability of maternity services and to ensure the best possible levels of care for this vital early stage in a child's life.

Breastfeeding

The health benefits of breastfeeding are well recognised and breastfeeding may also alter the relationship of childhood socio-economic disadvantage to poor adult health. **Figure 2.5** shows the relationships of breastfeeding to maternal age and to deprivation quintile, with Quintile 1 being the most affluent and Quintile 5 the most deprived. In 2004, The Breastfeeding etc (Scotland) Bill, which offers additional protections to mothers breastfeeding in public, was passed by the Scottish Parliament. To ensure the future support and promotion of breastfeeding, a **National Strategy for Infant Feeding** is being developed in conjunction with the Scottish Breastfeeding Group, with a draft for consultation being planned for May 2005. It will look at working across boundaries to support this health-promoting behaviour.

Figure 2.10

Breastfeeding recorded at first visit, showing relationships to maternal age and deprivation.



Starting Well

Phase one (2000/03) of the National Child Health Demonstration Project, **Starting Well**, aimed to demonstrate that child health can be improved by a programme of activities which supports families and provides them with access to enhanced community-based resources. During its Transition Phase (2003/04), **Starting Well** has considered the independent and internal evaluation findings to plan Phase Two. The Early Years Learning Network (www.phis.org.uk/projects/default.asp?p=FAH) held a series of road shows across Scotland, to share the learning from Starting Well and from local Early Years developments. Details of Phase Two are due to be announced early in 2005.

Health for All Children

This recent report from the Royal College of Paediatrics and Child Health, on child health screening and surveillance programmes in the UK, reflects a change from highly medicalised screening to health promotion, primary prevention and active intervention for children at risk. It emphasises the need to concentrate on activities for which there is good evidence of clinical benefit, on enhanced health promotion work to educate and inform parents and on the need for an integrated approach to delivery. The Scottish Executive has consulted on guidance, due to be published in early 2005, to ensure consistent implementation of the recommendations across Scotland.

Parenting Across Scotland

Parenting Across Scotland (PAS) is a multi-agency partnership project led by CHILDREN 1st and funded by the Scottish Executive until March 2005. **PAS** aims to research the concerns and issues affecting parents and the support available by bringing together organisations and knowledge to share good practice and to represent the views of parents in policy.

Cool2talk

Young people may experience difficulty in finding out about local services and raising health-related questions. NHS Tayside has introduced **Cool2talk**, an interactive website developed in partnership with young people, to answer their health questions within 24 hours. Feedback from the young people and from health professionals has been encouraging.

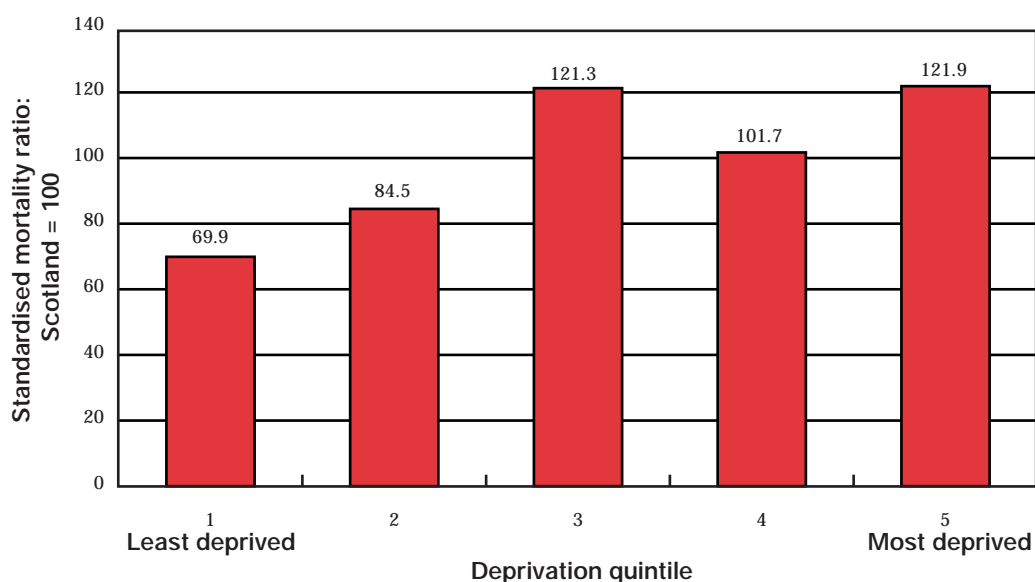
Unintentional Injury in Children

Health in Scotland 2002 highlighted the importance of unintentional injury as a major cause of death and disability. In children, it accounted for approximately one in 13 deaths in 2003 and is the most common cause (approximately 20%) of emergency hospital admissions (8). Around 40-50% of these deaths are caused by road traffic accidents and about 25% by injuries in the home. On average 842 children (under 16) were killed or seriously injured on Scottish roads each year in the period 1994/98. By 2002, this figure had fallen to 525 (9), largely due to a fall in pedestrian deaths.

In the last two decades, overall childhood deaths fell steeply until the mid 1990s, with a slight increase since then. Admissions to hospital for injuries to children rose until the mid 1990s, when they began to decline. The reason for this pattern is as yet unknown (10).

Death rates from injury are twice as high for children from the most deprived areas compared to more affluent areas – 21.9% above Scottish average in most deprived and 30% below average in least deprived (Figure 2.11).

Figure 2.11 Mortality from unintentional injury in children



Source: (GROS), 2001 population census

The gap is similar for emergency admissions, with boys more likely to be affected than girls in all age groups. Most unintentional injuries, however, are treated by the family doctor, at Accident and Emergency units without admission or by the child's parent or carer and so the total picture for the burden of illness from injury is much higher than the readily available statistics show. *Health in Scotland 2002* called for better co-ordination and a sharper focus on prevention, with a more effective framework for action.

In 2003 a consensus seminar on injury prevention was held to agree the strategic direction and priorities. This recommended a concentration on children and young people initially. Subsequently, NHS Health Scotland commissioned a research briefing paper on *Injury in Children* (www.hebs.com/researchcentre/pdf/childinjuryReport.pdf). The Report analyses the available information on injury frequency, comparing Scotland with the UK, Europe and elsewhere. It also examines the worldwide, European and national policy context and recommends priorities for future action in prevention. This work will prove invaluable to local, regional and national agencies in their efforts to address this issue. The Report was launched at a seminar in December 2004, attended by a wide range of stakeholders from both statutory and voluntary agencies (including health, fire, police, local government and road safety).

The UK is a signatory to the WHO-led **Children's Environmental Health Plan for Europe (CEHAPE)** which lists the substantial reduction of health consequences of accidents and injuries amongst its four 'Regional Priority Goals'. Scotland participates in a UK-wide steering group established to implement **CEHAPE** and its goals.

Injury in Children recommendations:

To prevent falls at or near home:

- Home safety checks.

To prevent injuries on the road:

- Better speed management in inner city areas, including use of safety cameras at accident sites and 20 mph speed limits in areas of higher pedestrian activity.
- Local child pedestrian training schemes and safe travel plans.
- Increase use of rear seat belts.

To prevent dwelling fires

- Installation and maintenance of smoke alarms.
- Home risk assessments, safety checks and escape plans.
- Focus on deprived groups, particularly children in privately rented and temporary accommodation, and households in which people smoke.

To promote safe play and recreation

- Increase number of children undertaking cycle training and wearing cycle helmets.
- Produce guidelines for safety in children's sports.
- Strengthen risk and safety education in schools.

Much is already being done in Scotland by Local Authorities, RoSPA, the Fire Service, Police, Road Safety, the NHS and others. The challenge is now to capture these efforts, identify gaps and develop a framework for tackling this significant health problem in children.

Men's Health

Ten **Well Man** pilot schemes have been announced in 2004. These aim to make a difference in closing the health gap in areas of highest socio-economic deprivation and will provide an opportunity to develop and share best practice across Scotland. The pilot schemes are being developed with three main elements:

- a comprehensive well-being and lifestyle assessment
- appropriate and effective support for those men identified with specific problems
- effective engagement with men in a variety of settings from community to workplace.

These schemes are taking different forms in rural areas and urban areas and different approaches to engage, support and maintain interest in men's health. Independent evaluation is underway to assess the overall impact of the **Well Man** pilot schemes and their effectiveness in contributing to health improvement policy objectives.

Unst Project

Shetland is the second smallest NHS Board area in Scotland, with a population of around 22,000 on 15 inhabited islands. Information from national statistics shows men in Shetland to be generally healthier than in the rest of Scotland (11), but there is no room for complacency. In Shetland, 56% of men are overweight or obese and 38% of men drink more than the recommended weekly limit of alcohol. Many premature deaths are preventable, for instance 16 deaths a year in Shetland through smoking-related strokes, heart disease and lung cancer.

A range of initiatives has been introduced to tackle the problems and to help men improve their health and well-being. Three years ago, the community nurses based in Unst, the most northerly practice in the UK, conducted a local needs assessment and identified a particularly needy group – the middle-aged, heavy-smoking, heavy-drinking, unemployed, unmarried men. Recognising that this is a particularly difficult group to engage, they decided to start with a health promotion project for women in 2002 and for teenagers in 2003.

By 2004, men were asking when it was their turn and the popularity of this year's scheme took the local health professionals by surprise. Nearly 80% of the target population attended for health screenings, which detected previously undiagnosed diabetes, hypertension, and microscopic haematuria (blood in the urine). The programme included a successful smoking cessation group and support for a number of heavy drinkers to reduce their alcohol intake. As a result of the success of the Unst project, a programme to tackle men's health is being extended across all the practices in Shetland, supported by national funding.

Workplace Health and Health of Working-age People

The Scottish Executive's strategy set out in *Improving Health in Scotland – the Challenge* identifies the workplace as one of four pillars which support health improvement and reduce health inequalities. NHS Health Scotland reports that the top three causes of absence from work due to illness are:

- mental illness, with a focus on work-related stress
- musculoskeletal disorders
- respiratory disorders.

The Scottish Labour Force Survey, which is carried out by the Office for National Statistics, provides estimates of the number of people aged between 50 and 65 who have retired early in the previous five years but it does not collect information on the reasons why. **Table 2.2** shows the figures for the period 1999-2003 and **Table 2.3** breaks the figures down by Local Authority area for the year 2003.

Table 2.2 People aged 50 to 65 retiring early, Scotland, 1999-2003.

Year	Male	Female	All
1999	29,000	15,000	44,000
2000	29,000	13,000	42,000
2001	33,000	13,000	46,000
2002	33,000	13,000	46,000
2003	31,000	12,000	43,000

Source: *Labour Force Survey 1999/2003*

Table 2.3: People aged 50 to 65 retiring early, by Local Authority area, in 2003.

Local Authority Area	2003	Local Authority Area	2003
Scotland	43,000		
Aberdeen City	*	Highland	2,000
Aberdeenshire	*	Inverclyde	*
Angus	1,000	Midlothian	1,000
Argyll and Bute	1,000	Moray	1,000
Clackmannanshire	1,000	North Ayrshire	1,000
Dumfries and Galloway	*	North Lanarkshire	*
Dundee City	*	Orkney Islands	*
East Ayrshire	1,000	Perth and Kinross	2,000
East Dunbartonshire	2,000	Renfrewshire	*
East Lothian	1,000	Scottish Borders	1,000
East Renfrewshire	1,000	Shetland Islands	*
Edinburgh, City of	*	South Ayrshire	1,000
Eilean Siar (Western Isles)	*	South Lanarkshire	4,000
Falkirk	*	Stirling	1,000
Fife	*	West Dunbartonshire	1,000
Glasgow City	*	West Lothian	*

Source: *Annual Scottish Labour Force Survey 2003/04*

* Estimate is below reliability threshold as defined by the Office for National Statistics.

Healthy Working Lives is the policy being developed to establish the workplace pillar of the **Challenge**, with the aim of promoting ways of life which 'continuously provide working-age people with the opportunity, ability, support and encouragement to work in ways and in an environment which allows them to sustain and improve their health and well-being'.

In the past, health interventions in the workplace, usually delivered by health and safety at work, occupational health or health promotion, have made significant advances in safety, public health and health improvement. **Healthy Working Lives** aims to take a more holistic approach to improving the health of working-age people and will consider the range of health, social justice and lifelong learning issues that can support a healthy working life. It will also consider ways of securing employment opportunities and promoting job retention for people with mental or physical health difficulties or other disadvantages in the labour market, as part of the Scottish Executive's developing employability framework.

These objectives will be taken forward by the (provisionally named) Scottish Centre for Healthy Working Lives. The Centre, which is due to be launched in April 2005, will initially incorporate the work currently undertaken by Scotland's Health at Work (SHAW), Safe and Healthy Working and the Workplace Team from NHS Health Scotland. The Centre will offer a free and confidential information and advice service via a national telephone helpline, a website and a team of field advisers. Individual (or organisational) needs will be assessed and arrangements made by the Centre to ensure that employers, employees or potential employees have easy access to the appropriate services.

Examples of the range of services accessible to employers through the new organisation include:

- advice on staff development and work/life balance issues
- delivery of workplace health promotion programmes
- promotion of employability, job retention and self-employment for disadvantaged groups
- recognition for ensuring a safe and healthy workplace through an awards scheme.

Examples of the range of services accessible to employees and potential employees include:

- occupational health and safety risk assessments and advice services
- careers advice and assistance with basic skills or vocational training opportunities
- advice for those currently, or about to become, unemployed or economically inactive
- services aimed at improving functional capacity such as physiotherapy and occupational therapy
- community-based outreach centres promoting health and employment information to ethnic minorities and diverse communities
- education and training support to access lifelong learning opportunities.

Active Workplaces

A package of support is being developed to support businesses to promote physical activity within the workplace:

Paths to Health will promote walking through a grants scheme, training and a pedometer support package that will encourage the development of 'step' leagues within workplaces. The development and implementation of this workplace pedometer challenge will be carried out in close collaboration with Sustrans Active Travel Project and should be available in summer 2005.

Jogscotland continue to develop health activity programmes in the workplace which aim to widen opportunities for more companies to provide flexible physical activity opportunities for their staff and enhance the health of Scotland's workforce. They have created a jogscotland network and support a series of corporate challenge fun runs and races.

Healthy Communities

Improving Health in Scotland: the Challenge recognised that communities can have a considerable influence on health and on the inequalities that exist between the health of the worst off and the better off. Table 2.4 shows the best and the worst constituency profiles for several indicators.

Table 2.4: Constituency profiles.

Indicator	Measure (best)	Constituency	Measure (worst)	Constituency
Male Life Expectancy	77.6 years	North East Fife	63.9 years	Glasgow Shettleston
Female Life Expectancy	82.3 Years	North East Fife	74.8 years	Glasgow Springburn
Smoking	24.3%	West Aberdeenshire and Kincardine	50.4%	Glasgow Shettleston
Teenage admissions to hospital attributable to alcohol	0.4 per 100	Eastwood Falkirk East Strathkelvin and Bearsden	1.6 per 100	Argyll and Bute
Unable to work through incapacity or ill health	3.7%	West Aberdeenshire and Kincardine	27.6%	Glasgow Shettleston
School leavers into higher education	52.1%	Eastwood	11.6%	Glasgow Springburn
Average household income	£32,862	Eastwood	£17,170	Glasgow Springburn

The Community pillar set out an approach that would build on existing work to:

- encourage, support and enable individuals and communities to take shared responsibility for their health and to work together to bring about improvements
- support action to address poverty, lack of physical activity and leisure facilities, poor housing and other factors that contribute to inequality.

It identified a number of priorities and actions for the Scottish Executive and its partners, including COSLA, NHSScotland, NHS Health Scotland, voluntary and community sectors, in relation to:

- continuing action to improve life circumstances of communities by tackling low income and poverty
- maximising the health-improving potential of community plans and community-based organisations and initiatives
- supporting the development of capacity and ways to promote community involvement and empowerment to deliver health improvement
- establishing shared, accessible and relevant information systems in order to identify and respond to community health and wider well-being needs
- developing the capacity of the current workforce (including public health, health promotion, NHS, local government and voluntary sector).

Progress has been made in several areas, including:

- continued action, co-ordinated by a **Closing the Opportunity Gap** delivery group, to improve life circumstances of communities
- continued support to maximise the health improving potential of community planning, including the development and implementation of Joint Health Improvement Plans
- legislation for the establishment of Community Health Partnerships (CHPs)
- work by Communities Scotland with COSLA to build capacity in communities, specifically to develop standards for community development
- considerable improvement in the collection and interpretation of community health data.

The Joint Ministerial Steering Group for Health Improvement has established a Task Group to drive forward work in this area, building on other relevant policies and programmes.

Building Public Health Capacity

A great deal has been achieved over the last year in supporting the development of the Public Health Workforce in Scotland. COSLA, NHS Education for Scotland (NES) and NHS Health Scotland have a vital role in supporting and developing the public health workforce and this is reflected in their work programmes.

The UK Voluntary Register for Specialists in Public Health has been established and publicised at a number of seminars and workshops in Scotland. The Scottish Committee for Specialist Education and Training in Public Health, within NES, has been responsible for developing and co-ordinating the current Scottish Specialist Registrar Training programme for Public Health.

SEHD provides funding to enable current Faculty-approved trainers to attend additional training to help support potential applicants to the Voluntary Register. Thirty-six people currently working within the public health field have accessed this additional support, with a view to completion of registration by portfolio assessment.

NES has sponsored the development of a new Masters programme for Public Health which has a strong practical element within the study programme. Two partnership groups have registered the first intake of students in the current academic year. These are at Queen Margaret University College and Glasgow Caledonian University. Lothian NHS Board has been developing, in conjunction with Napier University, a Masters programme which is primarily aimed at Lothian staff. This programme has received its validation and has started.

The Skills for Health *National Occupational Standards for the Practice of Public Health Guide* was published in March 2004. It has been used as part of the development work funded by the Scottish Executive in the establishment of Community Health Partnerships. During the development of these guidelines two parallel and complementary pieces of work were undertaken.

COSLA, NHS Health Scotland (initially as the Public Health Institute for Scotland (PHIS)) and the Scottish Executive worked with Skills for Health to explore public health practice in a range of Local Authority, NHS and partnership settings using the draft guidelines as a tool. *Occupational Standards/Competencies for Public Health Practice* was published in May 2004 as the joint report on the Scottish Partnership Project.

Following analysis of the role in Health Promotion undertaken by PHIS, one recommendation was to establish a working group to consider competencies relating to health promotion. The group utilised the draft standards being developed by Skills for Health and have completed the review of competencies and amended them against the final published standards from Skills for Health. It is anticipated that this document will be published shortly.

CHAPTER 3

HEALTH PROTECTION

Health Protection Scotland

In April 2004, a new Scottish health protection organisation began to take shape. The project to establish Health Protection Scotland (HPS) was managed by the Scottish Centre for Infection and Environmental Health (SCIEH), which now forms the major part of this new organisation, but other functions from National Services Scotland will also be added. SCIEH became known as Health Protection Scotland with effect from 8 November 2004.

The remit given by the Scottish Executive to Health Protection Scotland is to work, in partnership with others, to protect the Scottish public from being exposed to hazards which damage their health and to limit any impact on health when such exposures cannot be avoided.

It will seek to achieve this by:

- ensuring a consistent, efficient and effective approach in the delivery of health protection services by NHSScotland and related agencies
- co-ordinating the efforts of public health agencies in Scotland in health protection, especially when a rapid response is required to a major threat
- helping increase the public understanding of and attitudes to public health hazards and facilitating their level of involvement in the measures needed to protect them
- being the source in Scotland of expert advice and support to government, NHS, other organisations and the public on health protection issues
- helping develop a competent health protection workforce
- improving the knowledge-base for health protection through research and development.

The focus will be on the deployment of evidence-based advice and on co-ordination and action in response to ongoing or acute challenges to health from a communicable or environmental hazard. It will be the operational arm of the national health protection response. HPS will work with NHS Boards to ensure an effective health protection response and will advise the Scottish Executive on appropriate actions.

The functions of Health Protection Scotland are:

- monitoring the hazards and exposures affecting the people of Scotland and the impact they have on health
- co-ordinating national health protection activity
- facilitating the effective response to outbreaks and incidents
- research and development into health protection priorities
- providing expert advice on health protection
- lending operational support to local health protection organisations
- monitoring the quality and effectiveness of health protection services
- supporting the development of good professional practice in health protection
- promoting the development of a competent and confident workforce in health protection
- commissioning national reference laboratories services.

Within the Scottish Executive, the focus will be on policy development, policy implementation and evaluation, and liaison with the rest of the UK and with Europe. Health Protection Scotland, with other sources, will contribute to and offer advice on policy development.

Environment and Health

In line with the priorities agreed for Health Protection Scotland, surveillance activities within the Environmental Health team have focussed primarily on ensuring that the data collected are made readily available for use by practitioners. The three complementary systems, the Scottish Environmental Incident Screening System (SEISS), the Environmental Health Surveillance System for Scotland (EHS3) and the Scottish Food Surveillance System (SFSS), address a breadth of environmental agents, sources and pathways by which the population may be exposed to environmental hazards via air, land, water and food. Efforts this year have concentrated on using these systems, developed in partnership with a range of stakeholders, to inform and support operational activity. Thus the systems can be seen to support them in their statutory role in food safety, in assessing the health impact from environmental quality and in responding to public health incidents involving hazardous substances.

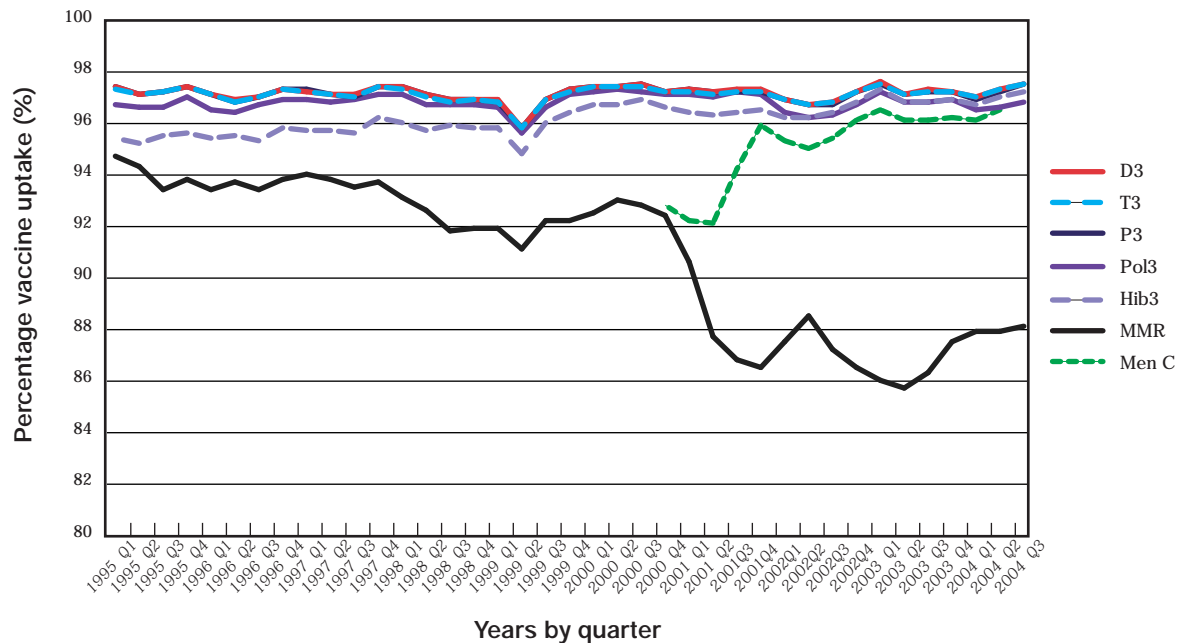
Development of an electronic version of SEISS has enabled instant access to the data system by contributors, allowing NHS Boards, Local Authorities and others to view incident reports and to interrogate the system via a password-protected interface. Data on environmental exposures collected via EHS3 have also been made available to the public via a collaborative initiative with Scottish Neighbourhood Statistics, ensuring wide access to information on the quality of local environments within Scotland. Development continues on SFSS on behalf of the sponsoring agency, the Food Standards Agency (FSA) Scotland, and it is now utilised by Scotland's Local Authorities, with proposals underway to introduce a complementary module to record data on animal feedstuffs.

Immunisation and Vaccine-preventable Diseases of Childhood

Changes to the childhood immunisation programme in 2004

All children in Scotland continue to be offered protection against diphtheria, tetanus, pertussis, polio, *Haemophilus influenzae* type b (Hib), meningococcal serogroup C (MenC), measles, mumps and rubella. In 2004, this programme was improved by the introduction of three new combination vaccines – DTaP-IPV-Hib for children at two, three and four months, dTaP-IPV or DTaP-IPV for pre-school children and dT-IPV for teenagers. These vaccines offer protection against the same diseases at the same ages as previously, but with improved safety and efficacy. Vaccine uptake rates for children at age two years are shown in **Figure 3.1**.

Figure 3.1: Vaccine uptake, at age 24 months, Scotland, 1995-2004 (Q3).



Disease epidemiology, including measles, mumps and rubella

The number of notifications and laboratory reports for vaccine preventable diseases in 2004 is shown in Table 3.1. Of particular note has been an increase in the number of mumps infections across Scotland in 2004. These cases have almost all been in teenagers and young adults (ages 13-25 years) and are due to their not having had the opportunity to receive two routine doses of MMR in childhood, as is now the case. Outbreaks of mumps in this vulnerable unimmunised population began to appear over the last three years in England and Northern Ireland, followed by one in Dumfries and Galloway in 2002.

Table 3.1. Vaccine-preventable diseases: notifications and laboratory reports, Scotland, 2003 and 2004.

	Notifications		Laboratory reports	
	2004 (provisional)	2003 (provisional)	2004 (provisional)	2003
Measles	249	200	2	15
Mumps	3592	182	1810	57
Rubella	226	159	2	1
Hib	na	na	22	27
Diphtheria	0	0	0	0
Tetanus	1	1	1	0
Pertussis	95	71	58	51
Poliomyelitis	0	0	0	0

This outbreak, mainly concentrated in the West of Scotland, began in November 2003. It was recognised from the start that there was, on epidemiological grounds and international evidence, no cost-effective intervention which would completely control this situation. This was because:

- two doses of MMR are required for effective prevention of mumps
- vaccine uptake of up to 85% is required in this age group in order to prevent mumps circulating in the population. Previous experience showed that it would be very difficult to achieve these overall levels. For example, with the MenC campaign (when meningitis was leading to a significant number of deaths in adolescence), final uptake was only 24% in 20 to 24 year olds in Scotland. Stopping mumps transmission by offering vaccination to this age group did not therefore appear to be a realistic option
- evidence from the US demonstrated that even compulsory immunisation of military recruits was not cost-effective. The benefit/cost ratio was 0.2, as the cost of universal immunisation considerably outweighed the savings from avoiding admission to hospital. This is because a large proportion of this age group is already immune. The researchers concluded that a programme to immunise susceptible individuals alone would be likely to show a benefit.

What was required in Scotland were steps to contain as far as possible the mumps outbreak. Expert advice recommended a risk-reduction strategy: protection was offered to all individuals in the risk age groups who wished protection and to people in high-risk settings, such as schools, universities and colleges, where appropriate. HPS assessed the overall level of susceptibility among 13-25 year olds to be around 30%, with a peak of approximately 55% in 17 year olds.

SEHD therefore encouraged health professionals to offer MMR vaccination to all 13 to 25 year olds and, especially 17 to 20 year olds, in high-risk settings such as educational institutions. The Department of Health in England, in response to the situation, issued a reminder to all GPs to offer immunisation to teenagers and young people. SEHD took the further step of asking NHSScotland Boards to conduct individual risk assessments on specific educational institutions. This has resulted in a number of joint local initiatives between Boards and university authorities, for example in Forth Valley and Lothian.

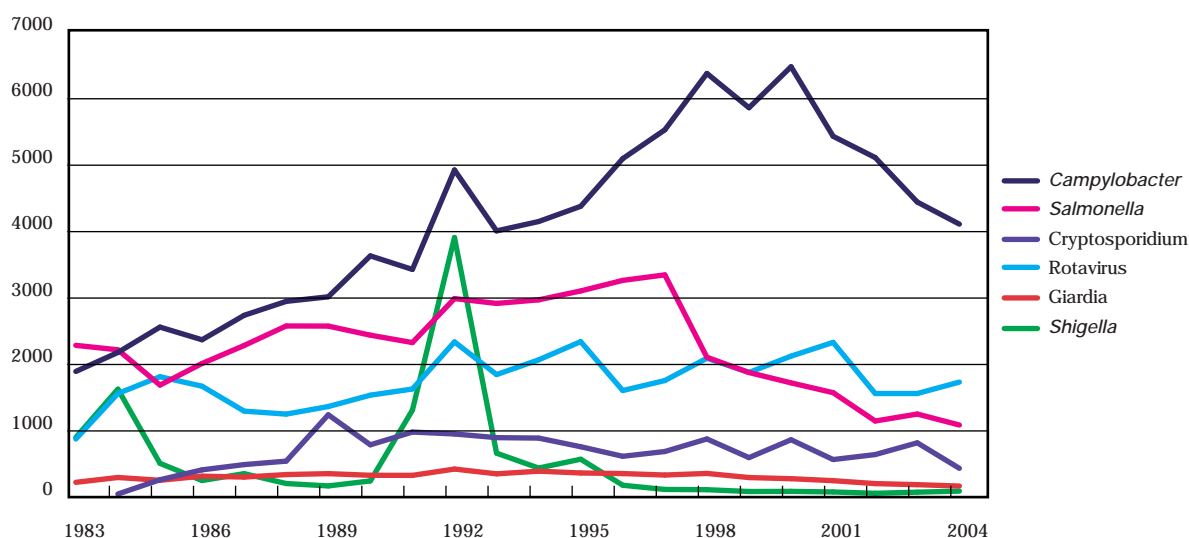
For younger children, routine figures for uptake of MMR vaccine at age 24 months have remained at 85-90% in recent years (Figure 3.1). The future risk of measles, mumps and rubella transmission in Scotland therefore continues to be carefully evaluated, in a project by HPS and the University of Strathclyde. Lower levels of MMR uptake mean that there could be a gradually increasing risk of measles in the future. Options to ensure as complete protection as possible, particularly by primary school, are therefore being considered.

Communicable Diseases

Gastro-intestinal infections

Figure 3.2 shows the number of laboratory reports for gastro-intestinal infections in Scotland from 1983 to 2004.

Figure 3.2. Gastro-intestinal infections: laboratory reports 1983-2004.



Campylobacter

Campylobacter is recognised as the most common bacterial cause of infectious intestinal disease in the industrialised world. In 2004, 4,365 isolates of *Campylobacter* had been reported to HPS, a decrease of 80 isolates (2%) on the same period in 2003. This continues the downward trend observed since the peak of *Campylobacter* infection in Scotland in 2000, when a total of 6,482 isolates were reported. No general outbreaks of *Campylobacter* infection have been reported to HPS in 2004.

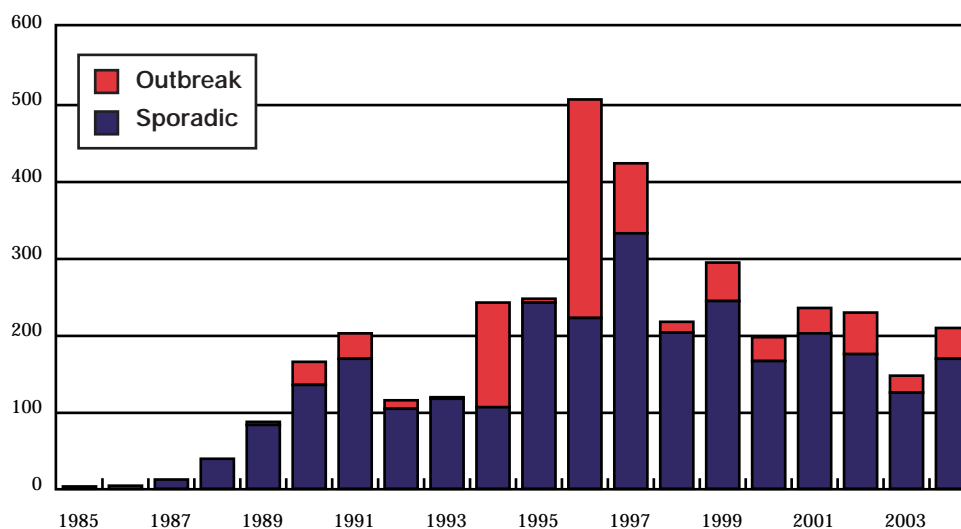
Escherichia coli

Escherichia coli O157 (*E. coli* O157) case numbers rose by 41% in 2004, with 209 cases reported compared to 148 in 2003. Gradual reductions in numbers over time may reflect the recommendations of Scotland's *E. coli* O157 Task Force,(1) but the extent of the decrease in 2003 was probably unusual (Figure 3.3).

Scotland is one of few countries worldwide conducting national follow-up of *E. coli* O157 patients. Person-to-person spread accounted for 13% of patients, emphasising that hygiene is as important in isolated and family cases as it is in outbreaks. Thirty-nine per cent of patients required admission to hospital, with 10% admitted for two weeks or longer.

In 2004, 90 isolates of non-O157 *E. coli* were reported, of which 8% possessed verotoxin genes, compared with 21% of the 39 non-O157 isolates reported in 2003.

Figure 3.3: *E. coli* O157: Outbreak and sporadic cases Laboratory isolates Scotland 1985-2004.



Enhanced Surveillance of Haemolytic Uraemic Syndrome and other Thrombotic Microangiopathies (ENSHURE)

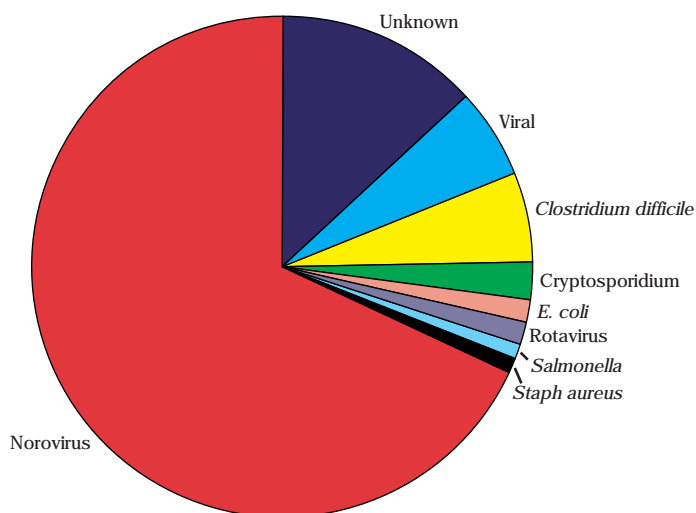
In Scotland, enhanced surveillance of Haemolytic Uraemic Syndrome (HUS) and other thrombotic microangiopathies (ENSHURE) began in 2003, following a recommendation by the Scottish Executive/FSA Joint Task Force on *E. coli* O157 (1). Up to December 2004, there were 22 reports of HUS and nine reports of thrombocytopenic purpura (TTP).

All reports of HUS were associated with verotoxin-producing *E. coli*, with the O157 serotype responsible for 21 of 22 reports and a non-O157 responsible for the remaining case. All patients who developed HUS recovered initially. However, of those who developed TTP, none recovered completely, one third were dialysis-dependent and there was one fatality.

Outbreaks of infectious intestinal disease

In 2004, 207 general outbreaks of infectious intestinal disease were reported to HPS (Figure 3.4) compared to 295 outbreaks for 2003. Five outbreaks of *Salmonella* were reported in 2004 including one associated with a cruise ship and one of *S. Newport* which was part of a larger UK-wide outbreak. Ten outbreaks of *E. coli* O157, one of *E. coli* O86 and one of *E. coli* O55 have been reported, compared with eight outbreaks of *E. coli* O157 during the whole of 2003. Norovirus has continued to be the most frequently reported cause of outbreaks, accounting for 69% of all outbreaks in 2004. Hospitals and residential institutions are the two principal locations and account for 37% and 47% respectively of such outbreaks.

Figure 3.4: General outbreaks of Infectious Intestinal Disease reported to HPS in 2004.



Salmonella

During 2004, 1143 cases of *Salmonella* were reported to HPS, a decrease of 9% on the number reported in 2003. Much of this decrease was due to a decline in reports of *S. Enteritidis* (607 compared to 692). As seen in 2003, Phage Type 1 remains the most frequently reported phage type of *S. Enteritidis*. There have been no outbreaks of non-PT4 *Enteritidis* associated with Spanish eggs, as seen in England and Wales.

Respiratory Infections

Influenza

2004 demonstrated the difficulty that accompanies influenza ('flu') vaccine production each year. It also providing a warning about the pandemic potential of highly pathogenic avian influenza (HPAI) emerging from human contact with affected poultry and the potential role of wild migratory fowl in country to country spread.

Flu vaccine supply

The rapid production, distribution and administration of flu vaccine following the composition being set by the WHO each spring is a feat of international co-operation. Each year this process is subject to a number of challenges before the population can be offered vaccination prior to the arrival of the winter flu season. One such problem was the withdrawal in September 2004 of the flu vaccine Fluvirin (Chiron) from the vaccine supply chain. This affected Scotland disproportionately because more than 50% of the vaccine order was with this company (compared with 10% for England). Scotland faced a significant challenge in arranging for the rapid re-supply from other manufacturers. It was overcome by partnership working among the Department of Health, SEHD, the vaccine producers, vaccine wholesalers, Scottish community pharmacists and General Practitioners in a re-supply process co-ordinated by HPS.

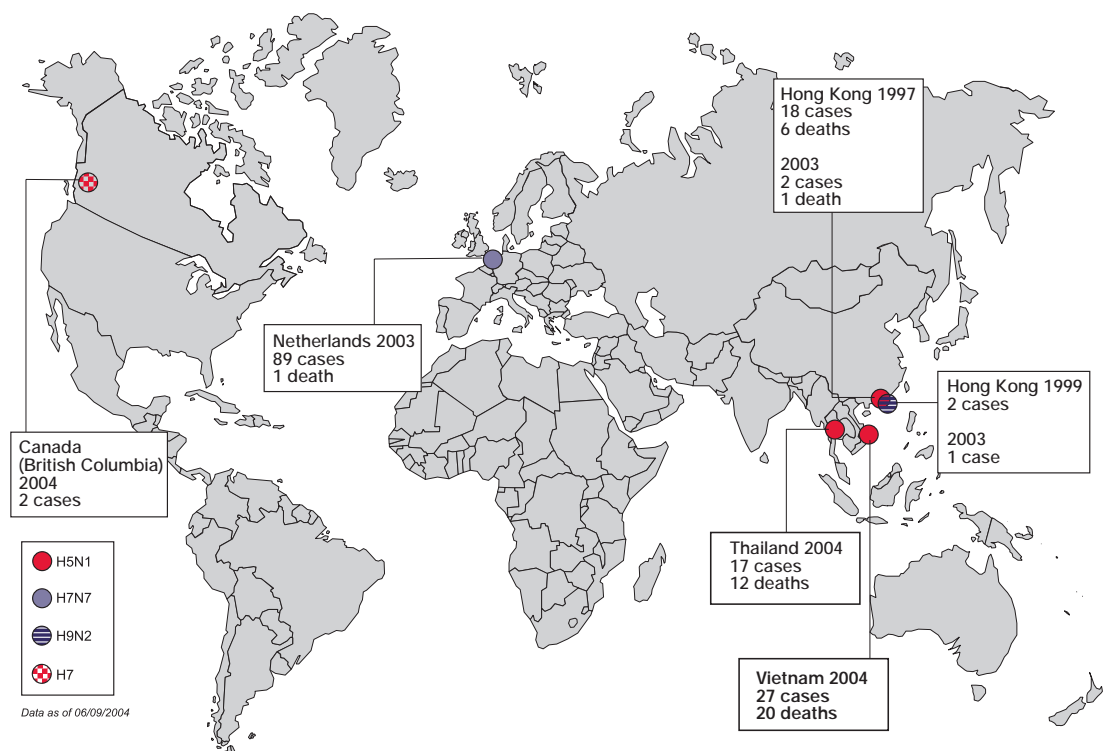
Thanks to this rapid re-supply of vaccine to affected General Practices and much additional effort by healthcare workers, there has been little demonstrable adverse affect on vaccine uptake. Interim analysis suggests that Scotland will approach the 70% target for vaccine uptake among the over 65s. Lessons learned from the problems encountered are being reviewed to inform future flu vaccine procurement and distribution programmes.

Flu activity as reported from influenza-like illness (ILI) presentations to the GP Flu Spotter Scheme has remained within baseline activity and laboratory samples submitted from the Scottish Enhanced Respiratory Virus Infection Surveillance (SERVIS) scheme and from routine laboratory returns have demonstrated a good match between the flu vaccine and circulating strains of flu virus in the community.

Avian influenza

2004 saw the re-emergence of highly pathogenic avian influenza H5N1 in many countries within South-East Asia. Rapid spread was attributed to asymptomatic carriage and excretion of H5N1 by wild migratory waterfowl and their subsequent contact with poultry. Control measures introduced to deal with the problem resulted in the culling of millions of chickens and other affected poultry flocks in order to reduce the risk to humans. People becoming infected with both human flu and HPAI at the same time could result in the evolution of a novel strain retaining the pathogenicity of avian form and the communicability of the human form.

Figure 3.5: World distribution of confirmed human cases of avian flu.



By the end of January 2005, there had been 52 confirmed human cases of whom 39 had died in Vietnam and Thailand in two waves of infection (Figure 3.5). Evidence suggests that isolated incidents of limited human to human transmission can be expected from avian flu in humans. The H5N1 HPAI has not yet fulfilled the requirement for a flu virus of true pandemic potential. However, SEHD and HPS keep this situation under close scrutiny and will refine the pandemic plans to take account of new information becoming available on human and avian influenzas.

Invasive pneumococcal disease

Following the success of influenza vaccination campaigns aimed at the over 64s, SEHD recommended that the same age group should be eligible to receive immunisation in winter 2003/04 against invasive pneumococcal disease (IPD). IPD is well known to account for significant morbidity and excess mortality during the winter months, particularly in older age groups. The 23-Valent pneumococcal polysaccharide vaccine (23 PSV) confers protection against over 90% of IPD infections.

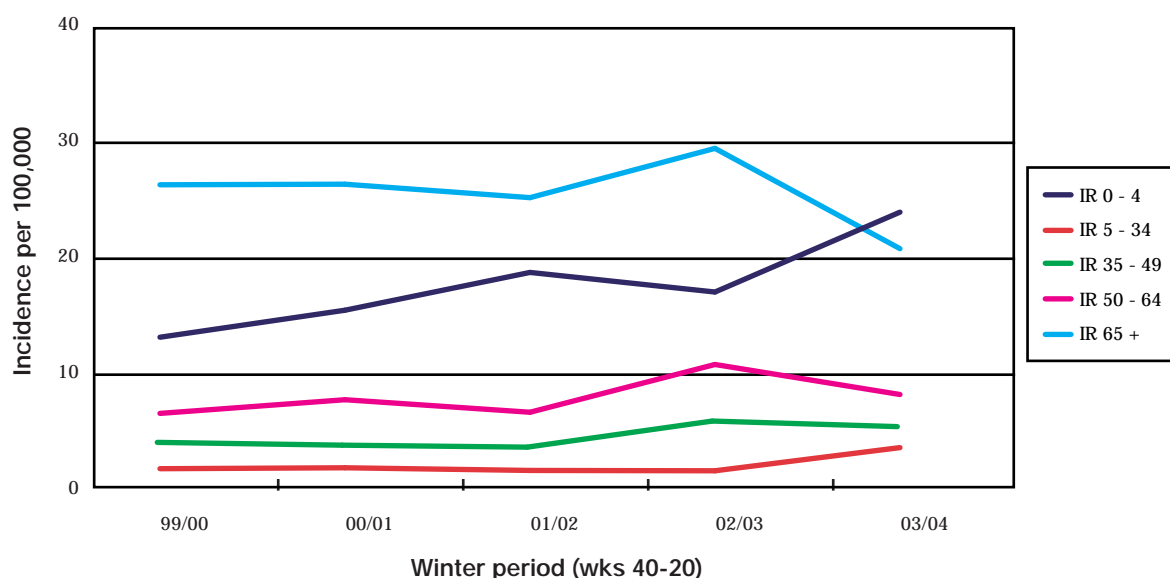
Early indications on the outcome of the vaccination programme for the over 65s (on an estimated uptake of 66%) include a reduction in the overall incidence of disease in this age group of over 20% compared with the four previous winters (Table 3.2). Additionally, taking account of recent trends over time (Figure 3.6), reductions in expected incidence were highly significant for both 50-64 and over 65 age groups.

Work to determine the effectiveness of the pneumococcal polysaccharide vaccine in these cases of IPD is nearing completion and will allow the success of the vaccine programme to be evaluated.

Table 3.2. Invasive Pneumococcal Disease Incidence by winter season and age-band.

Age-band	Mean Incidence Rate (IR) over four previous winters	IR 2003/04	% Change
0-4	16.19	24.02	+48.4%
5-34	1.83	3.71	+103.2 %
35-49	4.46	5.43	+21.9 %
50-64	8.04	8.18	+1.8%
65+	26.90	20.62	-23.3%

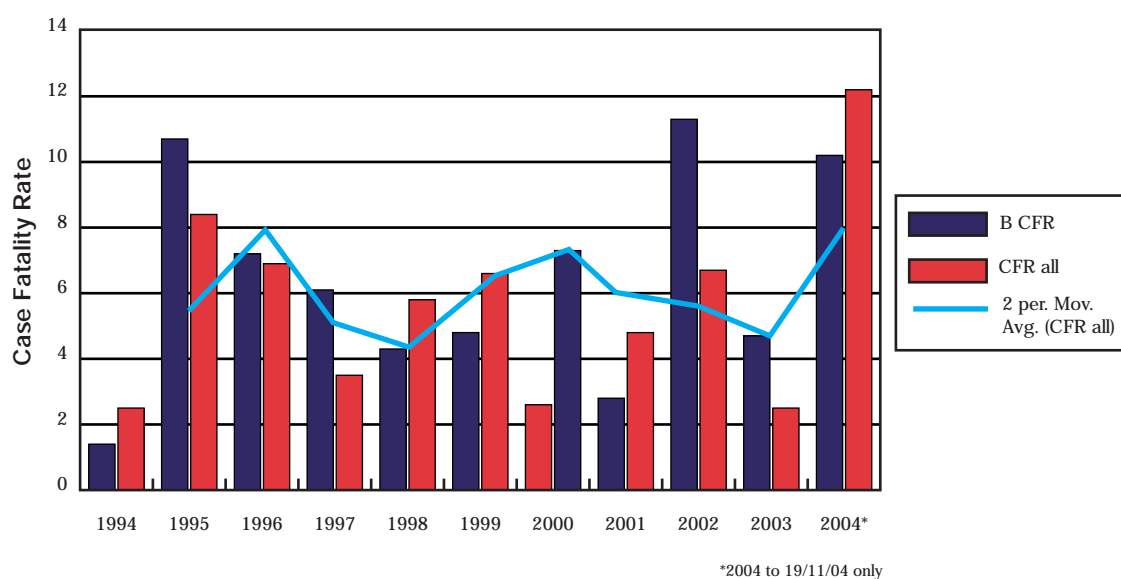
Figure 3.6: Invasive Pneumococcal Disease Incidence by winter season 1999/2000 to 2003/04.



Meningococcal disease case fatality

While the year 2003 demonstrated the lowest case fatality rate (CFR) of 2.5% for the past 10 years (four deaths), 16 deaths were recorded in 2004, giving a case fatality of 12.3%. It is always difficult to comment on single year comparisons with rare diseases such as meningococcal infection and the very low number of deaths in 2003 means that the pattern of deaths will be considered over a two year rolling average. Overall CFR remains under 8% (Figure 3.7).

Figure 3.7: Meningococcal disease case fatality rates (CFR): Group B and All cases 1994-2004.*



Blood-Borne Viruses

Hepatitis and HIV among injecting drug users

In 2004, an estimated 1,800 people in Scotland were newly diagnosed with Hepatitis C Virus (HCV) infection. This figure is similar to those for each of the previous five years and brings the total number of diagnoses to around 20,000. With an estimated 50,000 individuals in Scotland having been infected with HCV, this means that around 30,000 remain undiagnosed. Approximately 90% of infections have been acquired by injecting drug users (IDUs) and data from a variety of sources in 2004 indicate that the incidence of HCV among this population remains high at 10-30% per year.

The Lord Advocate's welcome decision to raise the limit of the number of needles and syringes available to injectors at needle/syringe exchanges will in time reduce injectors' need to share injecting equipment and thus reduce their likelihood of acquiring HCV. A study undertaken in 2004 is evaluating the impact of this initiative. Interventions such as methadone maintenance, aimed at reducing the prevalence of injecting drug use, may be having a considerable impact, as indicated by preliminary findings from studies evaluating its effects and estimating the prevalence of injecting drug use in Scotland.

In addition to the prevention of HCV among injectors, Scotland's other principal HCV-related public health challenge is the identification and treatment of those who would benefit most from therapy. The Royal College of Physicians of Edinburgh's Consensus Conference on HCV, held in April 2004, recommended aiming HCV testing at former injectors, particularly those over 40 years of age because, if infected, they are likely to have moderate or severe but potentially treatable

HCV disease. This case-finding and other prevention and awareness activities will be emphasised in a proposed **Action Plan for HCV in Scotland**, currently being prepared by SEHD.

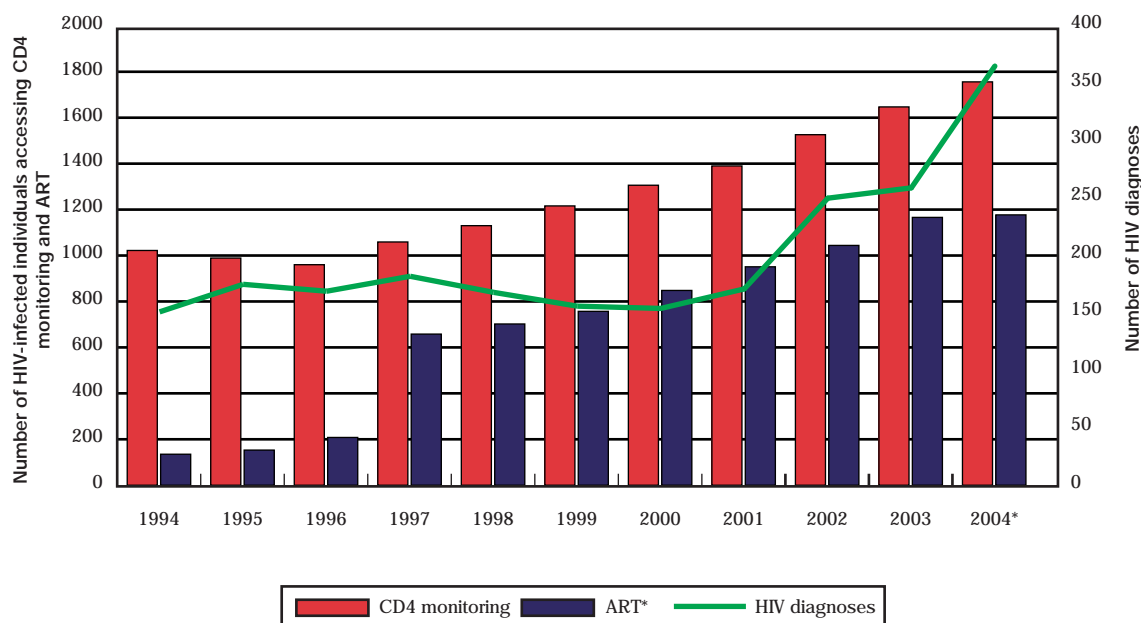
HIV transmission among injectors is still uncommon and there is evidence to indicate that the spread of Hepatitis B among this group is in decline. This trend is contemporaneous with a sharp increase in the uptake of Hepatitis B vaccination among injectors as a result of the Scottish Prison Service policy to offer vaccine to all inmates.

Human Immunodeficiency Virus (HIV) and other Sexually Transmitted Infections

In 2004, 365 diagnoses of Human Immunodeficiency Virus (HIV) were reported to Health Protection Scotland. This figure compares with annual totals of 258 and 250 in 2003 and 2002, respectively, and an annual average of between 150 and 180 during the 1990s (Figure 3.8). The 2004 total exceeds the previous highest annual number of diagnoses on record (348 in 1986) and more Men who have Sex with Men (MSM) (124) and heterosexuals (175) were diagnosed in 2004 than in any previous year.

The principal reason for the increase in diagnoses among MSM is the dramatic rise in the numbers of persons undergoing attributable HIV testing. This is particularly pronounced in the Genito-urinary Medicine (GUM) clinic setting and reflects clinicians' and health advisers' increasing tendency to recommend an HIV test to all clinic attendees (not known to be HIV infected) who present with symptoms suggestive of a new sexually transmitted infection. This approach was recommended in the consultation document, published in 2003, on **Scotland's Sexual Health and Relationship Strategy**.

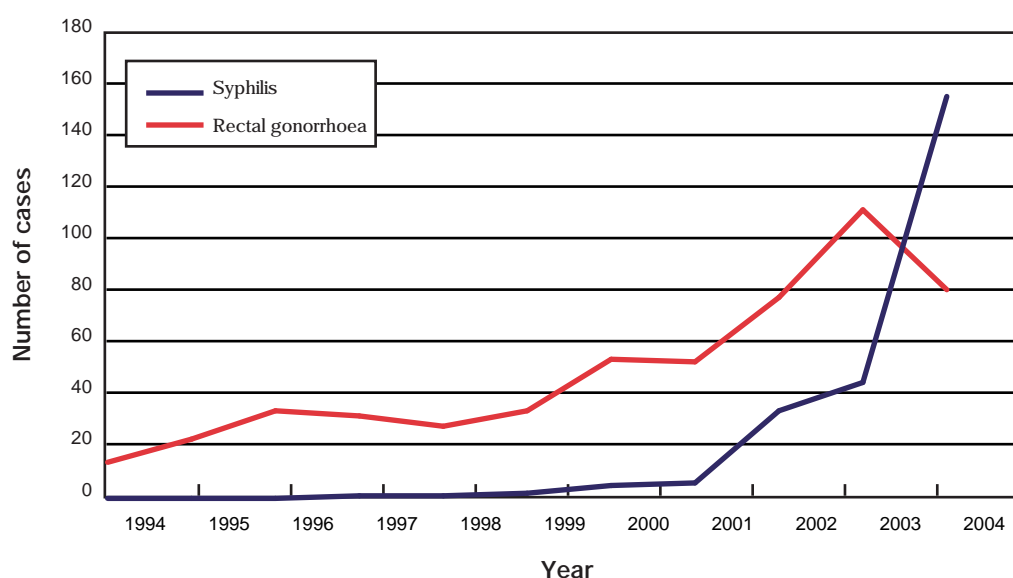
Figure 3.8: Annual number of new HIV diagnoses, number of infected patients accessing CD4 monitoring and ART by year in Scotland 1994-2004.



* ART (anti-retroviral therapy) defined here as dual therapy or more

Although prevalence data to December 2003 do not indicate any appreciable increase in the incidence of HIV among MSM, the rise in cases of infectious syphilis from six in 2001 to 45 in 2003 and 156 in 2004 among this population points to increasing levels of high-risk behaviour (Figure 3.9). This increase, almost exclusively confined to attenders of GUM clinics in Glasgow and Edinburgh, has occurred despite the local NHS Boards' campaigns to increase awareness. Further efforts, including the availability of rapid (20 minute) syphilis testing facilities in Greater Glasgow, are being made to alert MSM to the risks of engaging in unprotected anal and oral sexual intercourse.

Figure 3.9: Infectious syphilis in MSM and rectal gonorrhoea* in all males: Scotland 1994-2004



*Source: Scottish *Neisseria Gonorrhoea* Reference Laboratory

As was the case last year, the increase in the number of heterosexual male and female diagnoses of HIV is mainly due to increasing numbers of persons from high HIV prevalence countries in sub-Saharan Africa (e.g. Zimbabwe) coming to Scotland, coupled with increased testing of this population. Of the 114 (this number is likely to increase as some cases are still under epidemiological investigation) Africans diagnosed in Scotland during 2004, two-thirds are female. As yet, there is little evidence to indicate that there is any appreciable onward spread of HIV from this group into Scotland's indigenous heterosexual population. For example, prevalence among heterosexuals with a UK nationality who attend GUM clinics remains steady at one in 1000. Nevertheless, other indicators of unprotected sexual intercourse among heterosexual men and women indicate that the potential for HIV transmission remains high: in 2004, for example, genital herpes simplex and genital chlamydia diagnoses increased by 3% and 11% respectively.

Despite the increase in new HIV diagnoses, HIV-related deaths remained low and stable at 40 to 50 per year during 1999/2003 (the 2004 total of 14 is low as a consequence of delayed reporting). The number of HIV-infected individuals in specialist care (as indicated by the numbers of persons having a CD4 count test to establish how well their immune system is functioning) and receiving Anti-Retroviral Therapy (ART) has increased in recent years. The number in specialist care rose by 35% from 1,302 in 2000 to 1,756 in 2004 and the number of people taking ART increased by 37% from 860 in 2000 to 1,176 in 2004 (Figure 3.8). There is no evidence to indicate that access to care and treatment in Scotland is restricted by exposure category or country of origin. This is reassuring in the context of approximately one-third of diagnoses in recent years

originating from sub-Saharan African countries. With an even greater annual increase in numbers of persons in specialist care and on therapy in 2004, Scotland's most pressing HIV challenge is to ensure that all infected persons who need treatment and care receive it.

Healthcare Associated Infection (HAI)

The prevention and control of HAI is important in terms of the safety and well-being of patients and of the resources consumed by potentially avoidable infections. HAI includes infections acquired in hospital (apparent before and after discharge), those contracted in healthcare facilities by staff and those picked up while receiving healthcare outwith hospitals.

The launch of the **Ministerial Action Plan for Preventing HAI** led to the establishment of the HAI Task Force in January 2003, with the remit to co-ordinate implementation of the **Action Plan**, to monitor progress, to monitor levels of HAI and to report on progress to the Minister. Over the past two years, the Task Force has issued guidance including the *Code of Practice for the Management of HAI and Hygiene*, the *National Cleaning Services Specification*, a framework for mandatory induction training for all NHS staff, guidance for those involved in dealing with the media during incidents and national standards for infection control. A risk management guide on how to assess, prioritise and focus on the HAI risk is currently out for consultation.

The Chief Nursing Officer has accepted the position of vice-chair of the HAI Task Force and his commitment to his nurse leadership role will increase patient safety and staff workplace safety, by promoting action to reduce the levels of HAI and increase cleanliness in healthcare premises.

Public involvement and effective communications are at the heart of the working philosophy for the HAI Task Force. Earlier this year, the role that the public can play in combating HAI was set out by publishing advice for visitors to hospitals:

Five top tips on the role of the public in preventing HAIs:

- Think about keeping patients safe before you visit. If you or someone at home has a cold or are feeling unwell – especially if it's diarrhoea – stay away until you're better.
- Think about what you take in to patients. Food treats are best saved until they get home. Don't sit on the bed and keep the number of visitors to a minimum at any one time.
- The most important thing you can do is to wash and dry your hands before visiting the ward, particularly after going to the toilet. If there is alcohol hand gel provided at the ward door or at the bedside, use it.
- Never touch dressings, drips or other equipment around the bed.
- Don't be afraid to raise concerns with members of staff in your hospital. People can sometimes forget simple things like cleaning their hands before touching a patient. No NHS worker should take offence at a gentle and polite reminder.

Staff training is one of the basics of tackling HAI. Educated staff contribute to a safe healthcare environment for service users, staff and visitors. The expansion of the **Cleanliness Champions** training programme across a range of staff groups and the general interest shown from the non-NHS healthcare sector as well as the NHS across the UK are all welcome developments.

The second review of compliance with national standards for control of HAI was undertaken in 2004 by NHS QIS, who reported on progress in meeting standards and in delivering improvements that had been identified. They found that although HAI is considered a high priority in all Board

areas, further work is needed in specific areas. This report will provide an incentive to NHS Boards to attain and maintain high standards when dealing with HAI, including effective reporting and accountability systems, infection control programmes and close monitoring.

The Task Force met almost all the recommendations set out in the *National Audit Office Report into HAI Control in England* published in July 2004, but is aware that there is no room for complacency.

A Primary Care Strategy Group has been established to advise the Glennie Group on how to progress the decontamination agenda in primary care. Following the publication of a detailed review of decontamination in primary care dental practice, a letter (CMO(2004)21) was issued on 25 November 2004 to all those involved in local decontamination of medical devices in the community. This letter detailed 10 priorities that all practices should address urgently.

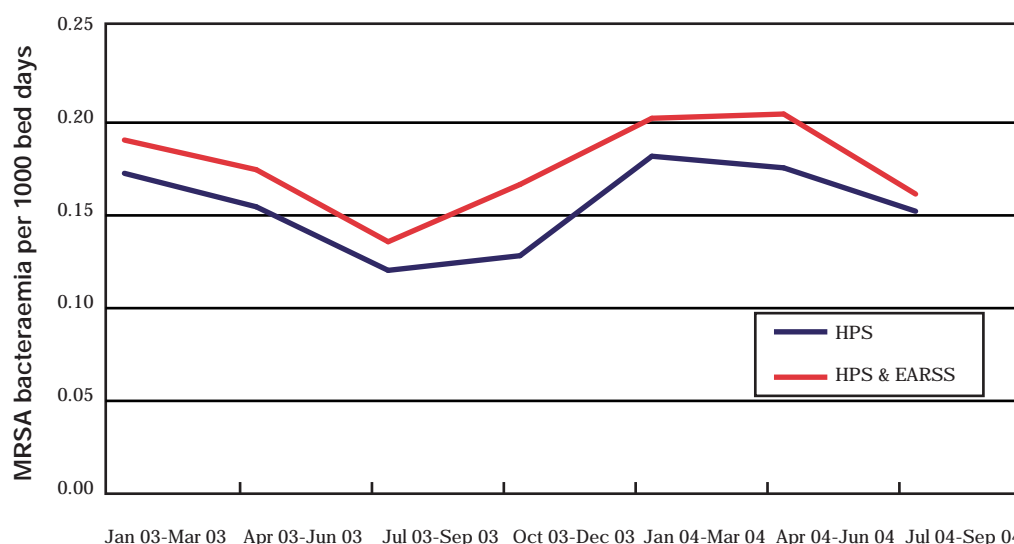
Further details of a phased approach to compliance with the Glennie Technical Requirements (NHSScotland: Sterile Services Provision Review Group: 1st Report – The Glennie Framework, HDL(2001)66) were addressed in HDL(2005)1. Guidance on requirements for Local Decontamination Units has been published as a consultation draft and a web-based software program to assist primary care practices with the development of a decontamination procedure manual is in preparation.

Surveillance of Healthcare Associated Infections

National surveillance of HAI is co-ordinated by Health Protection Scotland. Its Healthcare Associated Infection and Infection Control Section contributes support to the Ministerial HAI Taskforce. The Section's first priority is the facilitation of infection control strategies, activities and measures at local level and its four teams work together to provide a comprehensive approach to infection prevention, control and management, and health protection.

The Scottish Surveillance of HAI Programme (SSHAIP) is developing further surveillance systems which support the HAI Action Plan and is monitoring progress in implementation. Since April 2001, quarterly reports on rates of methicillin resistant *Staphylococcus aureus* (MRSA) blood infections in Scotland have allowed Operating Divisions to examine their own trends in relation to Scottish rates and to take appropriate local steps to contain the spread of MRSA. Quarterly rates have been broadly stable over 2003 (Figure 3.10), in contrast to the continuing increase in incidence of MRSA seen in many other countries.

Figure 3.10: Scottish quarterly rates of MRSA bacteraemia rates per 1,000 occupied bed days 2003/04.



Surveillance of surgical site infections (SSI) has been implemented in all acute Operating Divisions in Scotland and a second SSI report was published in November 2004. Although numbers are still too small for detailed analysis, this early information shows infection rates which are broadly consistent with English and US data (Table 3.3) (4,5).

Table 3.3: A comparison of SSI in-patient rates by procedure with US, England and Scotland data.

Surgical procedure	US (2002)	ENGLAND (1999) [^]	SCOTLAND (2003)
Breast surgery	1.9%	*	1.9%
Abdominal hysterectomy	1.4%	2.5%	1.5%
Caesarean Section	2.8%	*	2.2%
Operations for fractured neck of femur	1.8%	3.4%	2.1%
Hip replacements	0.9%	2.9%	1.7%
Knee replacements	0.8%	2.1%	0.9%

[^] The English programme used an adapted version of the US definition of infection, thus comparisons of rates of infection should be given careful consideration.

* Procedure not included in the English surveillance programme.

The infection rates resulting from collection of these preliminary data indicate that the rates of in-patient infection in these programmes in Scotland are broadly similar to those published by NNIS in the USA. As the programme of surveillance continues in Scotland and larger denomination data are attained, these types of comparative data will become more meaningful.

Other HAI surveillance projects include:

- a National Scottish Prevalence survey of HAI, the pilot due to start in spring 2005
- catheter-associated urinary tract infections
- HAIs in intensive care units
- HAI outbreaks.

This wide-ranging, multi-disciplinary approach is laying firm foundations for the prevention and control of HAI in Scotland. The goal is cultural change, nothing less, but that will not happen without an acceptance that infection control is everyone's responsibility.

variant Creutzfeldt-Jakob Disease (vCJD)

In 2004 the CJD Incidents Panel recommended specific public health precautions for some recipients of UK sourced plasma products, who may have been exposed to potential vCJD infectivity. These precautions aimed to minimise the risk of any possible onward transmission of vCJD.

HPS co-ordinated a notification exercise in Scotland, together with the Health Protection Agency (HPA) England and patient and professional representatives. Input from the Scottish National

Blood Transfusion Service was central to this exercise. Patients considered to be 'at-risk' of vCJD for public health purposes are being contacted by their doctors and informed of the precautions they will need to take, including those in healthcare settings.

In addition to the standard infection control measures used in all healthcare settings, specific precautions are needed when persons considered 'at-risk' for vCJD undergo medical care involving surgical procedures.

Following the plasma products exercise, HPS responded to requests for advice on the additional measures required for the newly identified 'at-risk' patients. Enquiries generally related to the vCJD transmission risk for specific procedures, many relating to flexible endoscopes, both in respect of past and proposed surgical interventions. Advice given commonly related to the indications for single-use instrumentation, the requirements for decontamination of re-usable instruments and the quarantining of instruments where necessary.

Travel Medicine

Health Protection Scotland provides travellers and their advisers with detailed information on health risks. This is continually updated and is used both by the public (www.fitfortravel.nhs.uk) and health professionals (www.travax.nhs.uk). The information allows an assessment of the potential health risks for different countries and how to prevent these. It also links to many other useful sites including the Foreign and Commonwealth Office which advises on safety issues. HPS works closely with the National Advisory Travel Health Network and Centre for England and Wales, the Joint Committee on Vaccination and Immunisation (JCVI) and the Advisory Committee for Malaria Prevention (ACMP).

Travel Medicine surveillance work focuses upon early recognition of outbreaks of infection which may have implications for travellers or which raise the possibility of transmission of serious infections in Scotland after travellers return home. It therefore relates closely to the work of colleagues in Public Health. Collaboration with the Scottish National Resource Centre for Ethnic Minority Health helps to provide guidelines on clinical management for those caring for patients, including refugees, who may have contracted health problems overseas.

CHAPTER 4 HEALTH SERVICES

Coronary Heart Disease and Stroke

Premature mortality for Coronary Heart Disease (CHD) and stroke continues to fall (Figures 4.1 to 4.4). The success achieved to date in reducing mortality for CHD has led to the introduction of a more stringent target of 60% reduction in premature death in the under 75s by 2010.

The new structures introduced last year for CHD have been implemented and are working effectively. The National Advisory Committee and its sub-groups have covered a broad range of cardiological issues over the past year. The Committee has recently established two short-life working groups to consider pre-hospital thrombolysis and primary angioplasty, and the organisation and delivery of cardiological services. Both groups aim to report in the spring of 2005.

Managed Clinical Networks (MCNs) have taken the lead in prioritising bids for funding under the **CHD and Stroke Strategy**, which encompass the full spectrum of care. Substantial funding has already been committed to CHD and stroke and includes support for rapid-access chest pain clinics, heart failure and cardiac rehabilitation services and the development of Stroke Units. MCNs are working with Boards on developing primary and secondary prevention strategies which will draw on lessons learned from other projects including **Have a Heart Paisley** and the **National Heart Health Learning Network**.

Quality Assurance Frameworks are being developed in association with NHS Quality Improvement Scotland (NHS QIS). The Stroke Framework has been established and accreditation is currently underway. A quality assurance framework for CHD is under development and is expected to be completed early in 2005. The framework will be piloted prior to the formal launch and accreditation of all CHD MCNs.

Figure 4.1: Age specific mortality rates per 100,000 population: males dying from CHD.

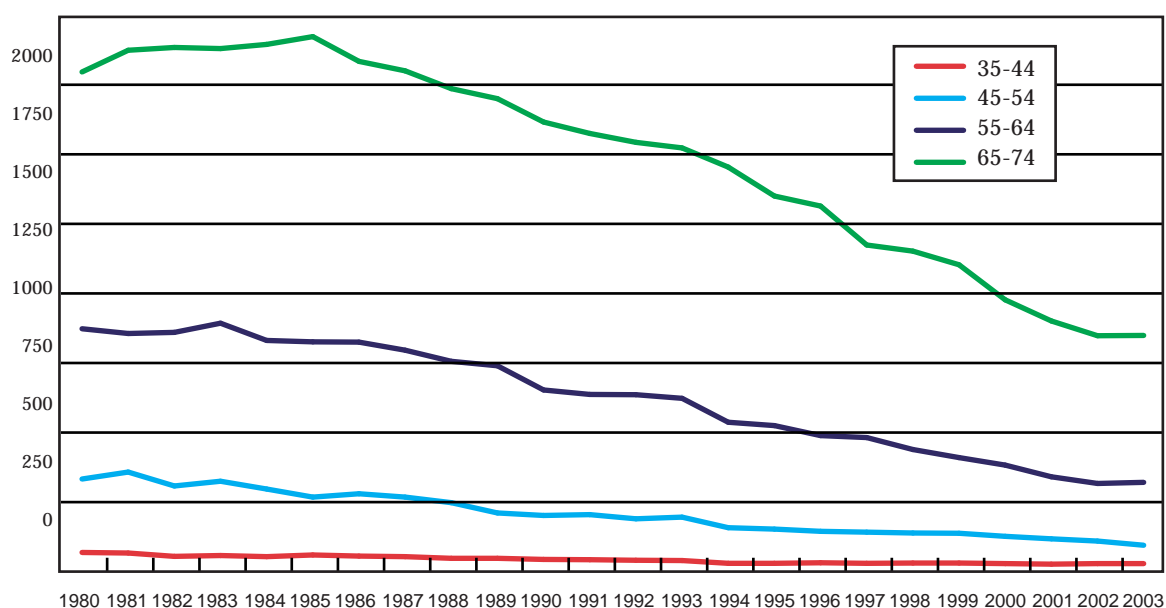


Figure 4.2: Age specific mortality rates per 100,000 population: females dying from CHD.

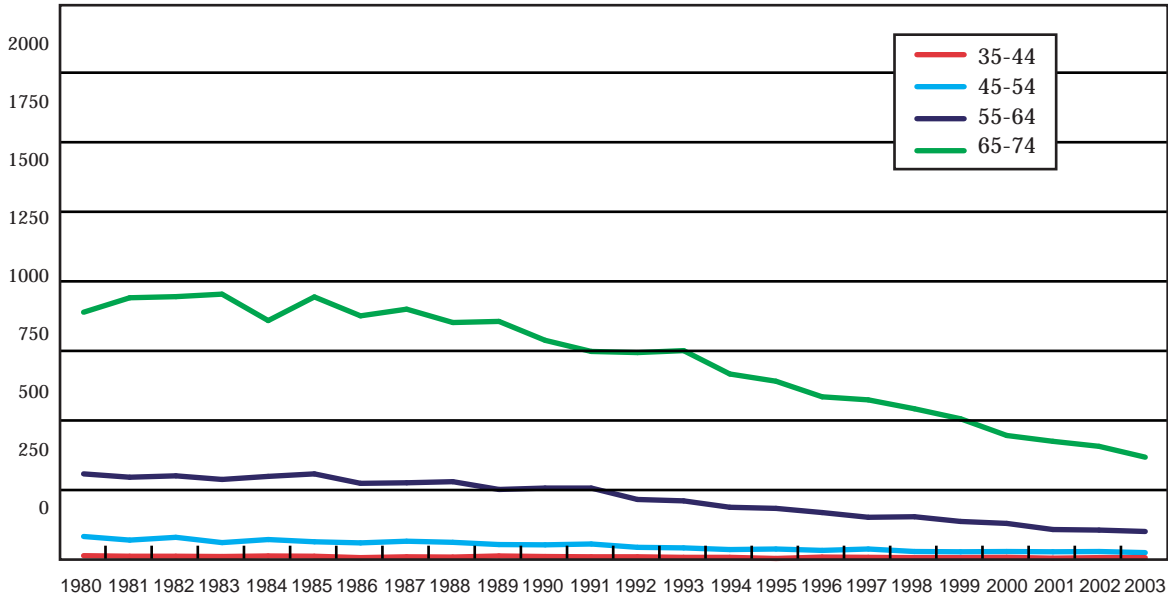


Figure 4.3: Age specific mortality rates per 100,000 population: males dying from stroke.

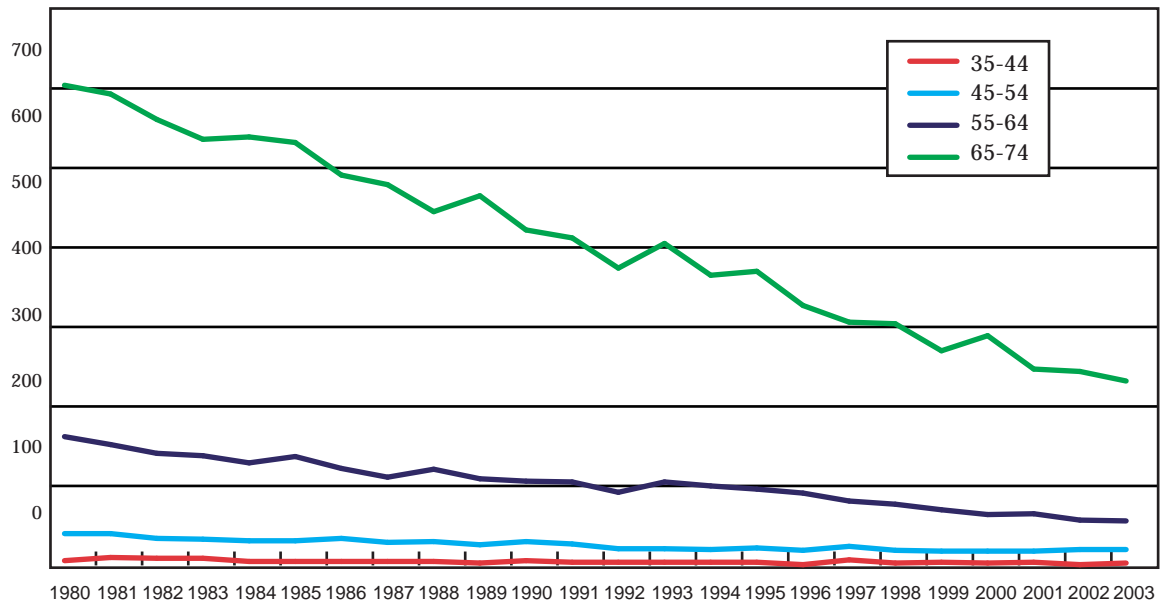
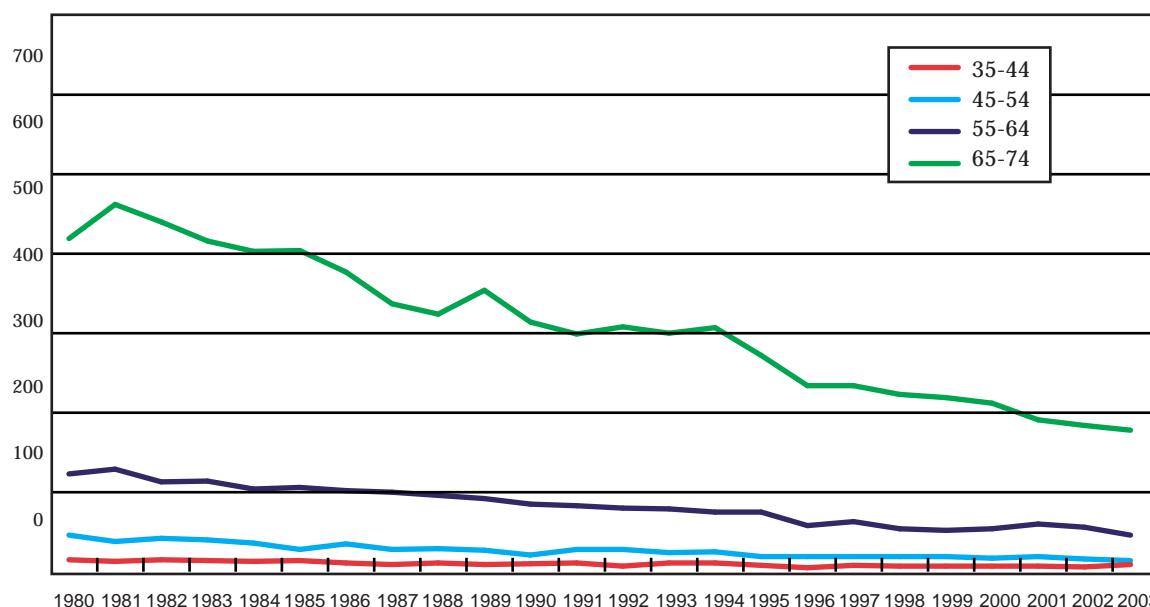


Figure 4.4: Age specific mortality rates per 100,000 population: females dying from stroke.



Data and Information Technology (IT) systems are moving ahead and over the past year the IT sub-group has extended its remit to cover both CHD and stroke. The procurement of a new cardiac surgery system has been finalised and work will start on implementation in 2005. Audit facilitators have been checking the quality and completeness of revascularisation data as part of a broader Quality Assurance programme. One aim of the Strategy was to develop a comprehensive database system which captured data along the patient pathway. Good progress is being made. A minimum data set has been developed and piloted in three NHS Boards and information from the studies will help with the implementation and support for extension of the programme. Developments for stroke will draw on the work for CHD. An audit of all known stroke data systems will be undertaken before work commences on data definitions and the identification of core data items.

Activity levels continue to increase and, to ensure sufficient capacity, the Scottish Executive Health Department commissioned a review of capacity for revascularisation services. The Review reported in April 2004 and identified the need to increase capacity to accommodate the growth in percutaneous coronary interventions (PCI). Additional theatre facilities for coronary artery bypass graft (CABG) surgery were not required but there was a need to increase intensive care unit (ICU) capacity.

The National Advisory Committee on CHD continues to support a number of projects including the establishment of a national centre for the treatment of advanced heart failure, development of an adult congenital heart disease service and the development of a primary care collaborative based on the successful project in England.

Cardiac waiting times

The Health White Paper *Fair to All, Personal to Each*, published in December 2004, contained a number of new waiting time targets for specific conditions, including cardiac disease. The White Paper reinforced the commitment made in autumn 2004 that, from the end of 2007, no patient will wait more than 16 weeks for cardiac intervention. The target covers the period from GP referral through rapid access chest pain clinic, or equivalent, to cardiac intervention. This is the first time that a new target has included the period following GP referral and it will cover more

heart treatments, including heart valve surgery. It is a reduction of 10 weeks on the current target and is significantly shorter than that available elsewhere in the UK.

In recognition of the fact that heart problems can manifest in ways other than chest pain, another target has also been put in place. From the end of 2007, no patient will wait more than 16 weeks for treatment after they have been seen as an outpatient by a heart specialist and the specialist has recommended treatment. This is particularly relevant to patients who may need investigation of heart rhythm problems, requiring electrophysiological techniques.

MCNs for CHD and stroke in Ayrshire

MCNs for CHD and stroke have been developing over the last two years in Ayrshire:

- Three Heart Failure Nurses are now employed in the community to develop heart failure services, together with support in the acute setting from two Cardiac Liaison Sisters who are now taking referrals from Consultant Cardiologists.
- The Cardiac Rehabilitation Programme has been expanded using New Opportunities Fund money. Patients now have better access to physical exercise classes in the community and a new low-intensity class has been initiated within the hospital setting.
- The Acute Stroke Units (ASU) at Ayr and Crosshouse Hospitals have been expanded. The National Stroke Audit Dataset is being collected on both acute sites. The latest audit figures show an improvement in the admission of Stroke patients directly to the ASU from 50% to over 70%, in line with SIGN Guidelines.
- The expansion of the Transient Ischaemic Attack (TIA) Clinics and CT Scanning on Saturday mornings is likely to take place by the beginning of 2005, improving services to patients and meeting the SIGN Guidelines for 48 hour CT Scanning on admission.

Cancer

Survival from cancer

In 1999, the Scottish Executive committed to a 20% reduction in deaths from cancer in the under 75s by 2010. In 2003, there were 144.6 deaths from cancer per 100,000 of population, which is an improvement of 13.6% on the 1995 baseline.

Cancer Open Forum

The annual Cancer Open Forum was held in May at the Edinburgh International Conference Centre to review the first three years of *Cancer in Scotland: Action for Change* and build on its success. There are at least 300 more doctors, nurses, pharmacists and other professionals directly involved in cancer care and diagnosis, and treatment has improved with new and replacement equipment as a result of the additional £25m per annum put in place in 2001. At the May 2004 Conference, the next phase, *Cancer in Scotland: Sustaining Change*, was launched by the Minister for Health and Community Care. It can be found at www.cancerinScotland.scot.nhs.uk.

Screening programmes

The extension of the breast screening programme to include women up to the age of 70, the introduction of liquid based cytology and the new IT system for call-recall for cervical screening continue to be phased in.

In April 2004 the Minister for Health and Community Care launched the *Cancer in Scotland: Bowel Cancer Framework*, which set out a variety of actions to support the co-ordinated development of symptomatic services and planning for a national screening programme. It is expected that the bowel cancer framework group will meet for the first time early in 2005.

Cancer waiting times

There are three national waiting times targets for cancer:

- by October 2001, the maximum wait from urgent referral to treatment for children's cancers and acute leukaemia will be one month
- by October 2001, women who have breast cancer and are referred for urgent treatment will begin that treatment within one month of diagnosis, where clinically appropriate
- by 2005, the maximum wait from urgent referral to treatment for all cancers will be two months.

Cancer in Scotland: Action for Change, confirmed that the children's cancers and leukaemia one month target was already being achieved (2001).

As far as the 2001 breast cancer target is concerned, the latest report (end September 2004) confirms that, where clinically appropriate, 80% of women are treated within the target time.

NHS Boards and regional cancer networks are reassessing their services to identify actions required to meet the 2005 target of a maximum two month wait from urgent referral to treatment for all cancers. To share challenges and solutions, a national workshop was held in November when a common understanding of the issues and actions required was clear. The support provided by the Scottish Executive's Cancer Service Improvement Programme is pivotal to streamlining care pathways.

Radiotherapy equipment planning

This exercise to identify the possible needs for radiotherapy and related equipment over the next 10 years is looking at:

- projected patterns of cancer incidence
- likely utilisation of radiotherapy
- patient access
- technical and clinical developments
- workforce.

The final report is expected to be submitted by February 2005.

Cancer networks development programme

Workshops for colorectal, urological and skin cancers attracted a wide range of staff from primary, secondary and tertiary care. Programmes focus on treatment protocols, audit, redesign, waiting times, patient information and patient involvement. Further workshops are planned for haematological, upper gastrointestinal, head and neck, breast and colorectal cancers.

Workshops were also held focusing on radiotherapy provision, lung chemotherapy modelling, patients' contributions to service improvements and Information Management and Technology (IM&T).

Mental Health

Scotland's mental health continues to be a priority for the Scottish Executive, in terms of improving services for people who are mentally ill and improving the mental health and well-being of individuals, families, communities, schools and workplaces.

The Mental Health (Care and Treatment) (Scotland) Act 2003 sets out some fundamental principles around ensuring access to services and support that help with employment, education, training and participation and access to arts, cultural and sporting activities. The Act is due to be implemented in 2005.

Efforts continue to break down the stigma and discrimination that still exist around mental illness. The anti-stigma campaign **See Me...** continues to help challenge and eliminate stigma all over Scotland. This is important for helping to create aware, informed and accepting communities, where local mental health care services are accepted as part of everyday life.

Progress continues in the establishment of the medium-secure psychiatric services necessary to ensure the provision of the right balance of care for some of the most vulnerable and damaged citizens. Their care, treatment and ultimately their recovery will rest to a large extent on the attitudes and behaviours of society.

Progress is also being made in primary care mental health. More than 30% of primary care consultations are for a mental health issue and over 80% of people's mental healthcare is delivered in primary care. With the introduction of Community Health Partnerships in 2005, there will be more evidence of primary care playing a greater part in mental health including promotion of good health, prevention of ill health, care and treatment.

This will be helped by the increasing emphasis on what communities, families and individuals can do as partners in care and support for people with mental illness. The Centre for Change and Innovation's programme **Doing Well By People With Depression** is an example of what can be done with guided self-help and improving access to a wider range of services and options that exist to complement medication.

The Scottish Executive hosted the first Four Nations debate on Public Mental Health in Edinburgh in October 2004, attended by over 120 of the leading UK experts in the field of public mental health, to discuss and plan for the future. The event underlined the importance of mental health being part of the mainstream work in other major public policy areas, in particular employment, education, community regeneration, housing and health inequalities.

It is important that policy development is informed by reliable, up to date research evidence. In SEHD, programmes of social research currently support the National Programme for Improving Mental Health and Well-Being and mental health law reform. Researchers also provide research advice and support across the broader mental health policy agenda.

Highlights of the past year include:

- the commissioning of a major two-year evaluation of the first phase of **Choose Life**, the national strategy and action plan to prevent suicide in Scotland
- publication of a scoping study for a series of reviews that will co-ordinate the evidence base on suicide-related behaviour. Experts in the field of suicide-related research contributed to the study and recommendations were considered by a wide range of stakeholder groups

- publication of the second national Scottish survey of public attitudes to mental health, mental well-being and mental health problems. Findings indicate positive changes (since the first survey was carried out in 2002) in people's attitudes to those who experience mental health problems, particularly in relation to perceived dangerousness and issues of public protection
- the launch of an annual competition, designed to provide a flexible source of funding for small projects able to demonstrate a contribution to advancing the agenda of the National Programme in any of its main aims
- publication of a report of the analysis of responses to a major consultation process on the planned mental health law research programme.

Diabetes mellitus

The national diabetes strategy, the **Scottish Diabetes Framework**, and the national steering committee, the Scottish Diabetes Group, have helped to maintain the high profile of diabetes in Scotland and to direct and support action nationally and locally. Significant progress has been made during the year particularly in the establishment of Diabetes Managed Clinical Networks in all NHS Board areas, the extension of the SCI-DC clinical management system to almost 50% of the population of Scotland and the delivery of an improved system of screening for diabetic retinopathy.

Systematic review of services

In March 2004 NHS Quality Improvement Scotland published the findings of peer review visits which assessed the performance of diabetes services against the published standards. The NHS QIS National Overview Report concluded that: 'The care of people with diabetes in Scotland is generally of a very high quality'. However, NHS QIS also identified some issues requiring action, such as increasing the use of effective IT to enhance clinical care and to support service delivery and improving the co-ordination of care. Advances have been made in addressing these deficiencies.

Detection of diabetic retinopathy

Since the publication in July 2003 of HDL(2003)33 and the report *Diabetic Retinopathy Screening Services in Scotland: Recommendation for Implementation*, work has continued to provide diabetic retinopathy screening to all people with diabetes by March 2006. Digital images of the retina allow changes inside the back of the eye to be monitored and treated. Clinical standards for diabetic retinopathy screening were published by NHS QIS in March 2004. The retinal photograph in **Figure 4.5** is abnormal and shows diabetic retinopathy encroaching on the macula.

Figure 4.5: Diabetic retinopathy.



Diabetic Retinopathy Screening in NHS Grampian

Established in 2002, Grampian's retinal screening programme provides a mobile digital photography service to 17,000 people with diabetes (3.4% of the population). Visiting over 80 sites throughout the region, the service has three mobile cameras and one static camera. This scheme closely follows the model which will be put in place across Scotland during 2005 and 2006.

Tackling the increase in type 2 diabetes

The most recent Scottish Diabetes Survey, which was undertaken in 2003 and published in 2004, estimated that over 161,000 people had been diagnosed as having diabetes, with over 80% likely to have type 2 diabetes. It has been estimated that at least half the cases of type 2 diabetes could be prevented if weight gain in adults could be avoided. Lifestyle changes, including eating a healthy diet and being physically active, are effective in delaying and, in many cases, preventing the onset of type 2 diabetes and in reducing the risk of developing complications in people with diabetes.

Patient focus

The work of the Patient Focus Implementation Group, led by people with diabetes, is developing information and educational resources for the benefit of people with diabetes across Scotland.

Figure 4.6: Blood glucose monitoring is an integral part of self-care for many patients with diabetes.



Diabetes in ethnic minorities

The three largest minority ethnic communities in Scotland (Pakistani, Indian and Chinese) are at significantly higher risk of developing type 2 diabetes than the majority white population. A report on the epidemiology of diabetes amongst black minority and ethnic groups in Scotland was published in April 2004 by the National Resource Centre for Ethnic Minority Health. A new subgroup has been established by the Scottish Diabetes Group to ensure that the recommendations of this report are put into effect.

Diabetes in Scotland: current challenges and future opportunities

The **Scottish Diabetes Framework** was launched in 2002 as the start of a 10-year programme to improve diabetes services in Scotland. Although significant progress has been made over the last two years, there is still much to do. The review of the **Framework** presents an opportunity to take stock of progress, to clarify future directions and to maintain the momentum. A consultation document to support the review was launched in November 2004.

Nursing, Midwifery and Allied Health Professions

Framework for Nursing in Schools

Work started in 2004 on developing a consistent framework for school health profiling and school health plans. The work, led by NHS Health Scotland in partnership with the Health Promoting Schools Unit, will result in a consistent national approach to gathering and collating information on the health needs of schools. Profiles will be used to inform school health plans, agreed by each school. Colleagues in both education and health are supporting the development, which should ultimately link into the performance improvement mechanisms for both NHS and schools.

Framework for Nursing in General Practice

The Scottish Framework for Nursing in General Practice was launched by the Minister for Health and Community Care in September 2004. The framework seeks to support the development of nursing alongside the implementation of the new General Medical Services contract supporting greater diversity of roles and delegation of duties to other team members. Workshops to be held with each prospective CHP early in 2005 will provide an opportunity to discuss the framework, agree local actions and consider the need for a national practice nursing network to support the ongoing development of the discipline.

Family Health Nurse Project

Scotland continues to lead the work on the WHO Europe Multi-National Family Health Nurse (FHN) project. The project has now been extended to include the testing of the model in the urban setting of NHS Greater Glasgow. Involvement in the study demonstrates commitment to supporting, in particular, countries from Central and Eastern Europe at a policy, education and practice level.

Scottish Multiprofessional Maternity Development Programme

The Scottish Multiprofessional Maternity Development Group (SMMDG) and its programme of educational activity are examples of clinically focused, multiprofessional working and education. The Group, supported by SEHD, takes responsibility for strategic decisions and the quality aspects of the programme and decides on the development of new courses. Courses becoming available across Scotland include Neonatal Resuscitation, Routine Examination of the Newborn and the Generic Instructor Training Course. The Scottish Normal Labour and Birth Course is about to be piloted and is due to begin in 2005. The curriculum for the Scottish Core Obstetric Teaching Training in Emergencies has been developed and the package will be submitted to NES for validation. Information about these courses is available on the dedicated website www.scottishmaternity.org

Facing the Future

Facing the Future continues to address recruitment and retention issues in nursing and midwifery. The second Facing the Future Convention was held in September 2004 focusing on the successes and the need to concentrate on retaining staff. At that convention, *A Framework for New Nursing Roles* was issued for consultation. It provides clear guidelines on how new and existing roles should be developed. This is especially pertinent with all the current service modernisation and redesign work in NHSScotland.

Research and Development in Nursing, Midwifery and Allied Health Professions

In 2004 the Minister for Health and Community Care launched an £8m research capacity and capability scheme for nursing, midwifery and allied health professions. While there is growing recognition of the contribution that nurses, midwives and allied health professionals make to healthcare research, concerns remain about the relative lack of knowledge and experience to lead and implement research relevant to the needs of these professions and their patients. The objective of this funding is to create a new culture which will embed research within practice so that all people in Scotland can be assured that their care is based on high quality research evidence.

Nurse/Midwife Consultants

The development of strategic clinical leadership and the consultant role are not exclusively related to nursing; they apply just as appropriately to allied health professions and other groups. The initiative is about identifying the most appropriate leader from the patient's perspective. Developing nurse/midwife consultant roles presents an opportunity to:

- look afresh at service provision
- challenge traditional practice, attitudes, and culture
- develop new approaches to the delivery of care
- strengthen the clinical nursing and midwifery voice in strategic planning of services
- influence health and healthcare within clinical areas.

Nurse prescribing

There are currently 600 trained, extended, and supplementary nurse prescribers in Scotland. Nurses working in partnership with medical staff and others as independent and supplementary prescribers have enhanced patient care and improved access to treatment, particularly in minor injury and minor ailment services, health promotion activities and palliative care.

Allied Health Professions

Several initiatives have been taken forward under the AHP strategy **Building on Success: Future Directions for the Allied Health Professions in Scotland**, including the establishment of eight specialist practitioner posts in health priority areas. The first AHP Consultant in Scotland, a Consultant Dietician in public health nutrition in NHS Tayside, was appointed in 2004. The development of AHP Consultant posts is intended to provide better outcomes for patients and there is a commitment to the development of more AHP consultant posts across a range of professions and care groups.

The partnership approach adopted in extending research capacity and capability in nursing, midwifery and allied health professions has led to joint working in developing the research base in promoting excellence in healthcare. An **AHP Action Plan for research and development** was launched in May 2004.

The first national consultation on role development of AHPs was carried out in 2004 and a framework for this has been agreed with nursing and midwifery. This piece of work will continue to support the redesign of services and roles within healthcare teams. It will enable patients to have more direct access to services, for example, in NHS Greater Glasgow to physiotherapy and podiatry services, and to benefit from new roles in radiography that support sustainable services.

Quality and Safety

Improving patient safety

Improving patient safety is a priority for NHSScotland. NHS Quality Improvement Scotland is involved in a number of initiatives that are helping to ensure that services provide safe, high quality care.

The main areas of work are to:

- improve the understanding and management of risk
- identify better ways of working
- introduce more standardised and safer systems
- spread good practice throughout NHSScotland.

An action plan makes specific recommendations on how this can be achieved. It is based on the effective use of robust risk management systems to assess and manage potential problems and the promotion of a strong safety culture throughout NHSScotland. This will contribute to continuous improvement across the service that will improve standards of care for patients.

The potential risks for patients are higher in some areas of healthcare than others. Four priority areas that have been identified for attention by NHS QIS are healthcare associated infection (HAI), blood transfusion, the prescription and administration of medications, and surgery. It has produced national standards for the control of HAI and is reviewing the performance of services against these standards. A report has been drawn up on the safe, effective and efficient use of blood products and another group is exploring how better use can be made of existing data on surgical performance. Audit Scotland are currently reviewing arrangements in place for the prescribing and administration of medications and NHS QIS will review their recommendations and consider how to contribute to this important area.

SHOT

The Serious Hazards of Transfusion (SHOT) Scheme collects data on serious sequelae of transfusion of blood components. The information obtained through the participating bodies contributes to:

- improving the safety of the transfusion process
- informing policy within the Transfusion Services
- improving standards of hospital transfusion practice
- aiding production of clinical guidelines for the use of blood components.

Participation in the scheme is voluntary and all NHSScotland hospitals and blood transfusion centres take part.

NHS QIS is closely involved in monitoring healthcare governance standards across Scotland. Healthcare governance is the mechanism for assuring that people receive the highest quality of care possible. Services that fail to achieve high standards may pose a potentially greater risk to patients.

Improving the quality of care

NHS QIS was established in 2003 to work with staff, patients and the public in Scotland to improve the outcomes and experiences of patients. In 2004, NHS QIS produced reports on a wide range of topics including:

- ultrasound screening for pregnant women
- the acute care of older people
- action to improve diabetic care
- a review of specialist palliative care services
- a review of the care of people with schizophrenia
- a follow-up report on healthcare associated infection.

Standards have been finalised on learning disabilities, stroke services, diabetic retinopathy screening and out-of-hours primary medical services. During the year draft standards on healthcare governance (bringing together the components of safe, effective and patient-focused care) were issued for consultation. While these are being finalised, an interim review of clinical governance and risk management is being undertaken.

Improvements are already being made across NHSScotland as a result of the work of NHS QIS. For example, a review of the treatment of patients who had a heart attack found that not all hospitals in Scotland met an important standard about giving thrombolytic ('clot-busting') drugs promptly. Since then, all hospitals have reviewed their services and now meet the target. The national screening programme which is being introduced across Scotland to detect diabetic retinopathy followed a health technology assessment on how such a programme could be organised.

Other examples of how NHS QIS helps to raise standards in NHSScotland are contained its report *Improving Patient Care: A Strategic Framework*, published in April 2004. It sets out the organisation's aims for the next few years and how it intends to achieve them and has been used to guide the development of NHS QIS's first corporate and business plans. NHS QIS aims to ensure that continuous quality improvement is at the heart of the NHS. It wants patients and carers involved in decisions about their own care and NHS staff empowered and enabled to bring about the improvements that are required.

Community Health Partnerships

The NHS Reform (Scotland) Act 2004 came into effect in June 2004. It provided the legislative basis for the establishment of Community Health Partnerships (CHPs) which will be vital for the modernisation and redesign of NHSScotland and of joint services with Local Authorities. Statutory guidance was issued in October 2004 to inform CHP schemes of establishment which must be approved by the Scottish Ministers before being established across Scotland by April 2005.

CHPs provide a unique opportunity for professionals and staff to work in new ways with local people to design primary and community-based services to fit local needs. Working in partnership with statutory bodies and the voluntary sector, they will have a central and enhanced role in strategic service planning, working as part of decentralised but integrated health and social care systems. In particular, CHPs will seek to:

- close the health gap
- reduce health inequalities within and across local communities
- improve the quality of local health and social care services
- deliver specific service improvements, particularly in the management of chronic diseases.

CHPs are being created to improve outcomes for local people – patients, carers and service users – because practitioners and staff will have devolved responsibility and resources to deliver a wide range of services. Working jointly, all professionals (particularly community clinicians and those providing acute or specialist care) and their partners should be in a position to:

- reduce waiting times for assessment, diagnosis, treatment and care in a systematic way across a range of services
- provide a wider range of services in community settings, including appropriate alternatives to hospital admission such as rapid response services and integrated out of hours arrangements
- manage waiting times for inpatient and outpatient services more effectively by using their understanding of local demand to influence and adjust the supply and/or design of services
- decrease the number of inappropriate hospital visits by improving the quality of referrals to consultants and increasing the skills of community practitioners
- increase the number of single points of access for all community-based services
- reduce the number of people admitted to hospital as an emergency by improving the level and quality of chronic disease management and increasing community-based support (e.g. mental health teams)
- reduce the number of delayed discharges from hospital through increased provision of rehabilitation services and rapid response services.

The Scottish Executive will continue to support the development of CHPs during 2005. In particular, NHS Boards will be expected to implement their local Development Plans for CHPs to ensure there is sufficient workforce capacity and capability working in community-based services and that there is leadership and management support for their staff.

Managed Health Network in Ayrshire

Proposals to maximise the health improvement role of Community Health Partnerships in Ayrshire through the effective integration of the health promotion effort include the setting up of a managed health network. There are numerous existing health promotion and public health networks but this network is different by being managed. Staff will be supported to work seamlessly to deliver health promotion, with everyone being able to contribute in their areas of expertise. A Network Manager was appointed in December 2004.

CHAPTER 5

eHEALTH

Introduction

Whatever the focus of the health agenda, from healthcare associated infection to waiting times to assessing quality of care, information technology (IT) plays a critical role. Health is the last of the public sector domains to benefit from the introduction of robust IT and the reasons are many. The lack of standards in medical record keeping, concerns over privacy and confidentiality, meagre and poorly directed investment and the highly publicised failure of public sector IT projects have made some clinicians reluctant to participate. However, this has begun to change and the Electronic Clinical Communications Implementation (ECCI) programme in Scotland has given a new impetus to developing technology that genuinely supports the way clinicians work.

Scotland has a long history of leading work in eHealth. For close to two decades, most Scottish GPs have used a single software package, developed in Scotland, called GPASS. The Scottish Executive invested £5m over three years from 2000 in the Scottish Telemedicine Action Forum. The current Scottish eHealth programme was set up following the commitment given in *Partnership for Care* to establish an eHealth culture, driven by clinical leaders.

The eHealth Programme Board and its subgroups provide co-ordination of the various elements required for a successful IM&T (Information Management and Technology) programme – technology, culture, clinical engagement and consideration of the patients' interests and requirements. Standardisation is at the core of the eHealth Strategy and it is policy to move towards a single electronic health record for each patient in Scotland accessible according to role and legitimate clinical need. This will be managed jointly by patients and clinical staff with in-built security and supported by patient consent.

At the core of Scotland's eHealth Strategy are the SCI (Scottish Care Information) suite of products, especially SCI Store (a clinical data repository) and SCI Gateway (a tool to support secure and standardised communications between clinical domains). Significant gaps in the functionality (the entirety of functions expected of a system) available to NHSScotland have been filled by national procurements. NHS Boards are bound to take the national product unless they can present a robust business case to the contrary. So far this approach has been applied to Accident and Emergency Systems and Picture Archiving and Communication Systems (PACS). The latest such procurement is of the Generic Clinical System toolset designed to be used to create disease/problem specific systems incorporating national information standards.

The eHealth Programme Board, chaired by the Minister for Health and Community Care, has the following sub-groups:

Infrastructure Group

Responsible for the technical aspects of the eHealth agenda including support, communications and technical standards.

National Clinical Information Steering Group

Chaired by the Chief Medical Officer, this group has representation from all of the clinical domains. It has a vital role in quality-assuring work on privacy and confidentiality, such as the access control framework for SCI Store. It is responsible for the National Clinical Dataset Development Programme (below).

Information for Patients Steering Group

The eHealth programme is aimed at improving the experience of patients and the quality of healthcare that they receive. They require quality information. Ultimately, when patients have access to their own records they will need context-specific information so that they can understand what is recorded. This work is led by the Chief Nursing Officer.

eHealth in Practice Steering Group

This is chaired by the Director of the Centre for Change and Innovation (CCI). No amount of strategic thinking and procurement of systems will deliver benefit without solid support for the culture change and planning required. Understanding local issues and skilled project management of specific work such as improving access to and the use of the Community Health Index (CHI) number dramatically increases the likelihood of success. CCI has already made a real impact upon Patient Focused Booking, a project heavily dependent upon IT.

ECCI Programme

More than a third of GP referral letters are now delivered electronically. SCI Gateway ensures that information is structured and can be incorporated into hospital systems. All GPs in Scotland have access to electronic results reporting via SCI Store and a pilot project in Glasgow is publishing all clinical letters to SCI Store. Access to laboratory and radiology reports with clinical letters will prove extremely valuable for the next consultation.

National Clinical Datasets Development Programme (NCDDP)

Currently, medical records are distributed in time, place and media with multiple paper records and electronic records for every patient. Adherence to standards will allow interoperability between geographically separated carers and reliable access by patients. The NCDDP is pivotal to this. Electronic systems cannot share information without certainty that clinical staff all use the same definitions. This ensures precise clinical and technical definitions are applied and agreement is reached on 'bounded code lists' for use in systems. Most importantly, this work in Scotland is being co-ordinated with similar initiatives in the field of social care and datasets are incorporated into the Health and Social Care Data Dictionary.

The NCDDP has been operational for a year and has made considerable progress in the areas shown in Table 5.1.

Table 5.1. Progress by NCDDP in 2004

Domain	Completed work	In progress
Diabetes	Core dataset Primary Care dataset	Paediatric dataset Dietetic dataset Nurse specialist dataset Retinopathy screening dataset
Coronary Heart Disease	Core dataset	
Cancer	Core dataset	Breast cancer Gynaecological cancer Head and neck cancer
Generic dataset	Phase 1 core dataset	Phase 2 core dataset
Child Health		Core dataset
Mental Health		Inpatient/Daycase Discharge dataset
A&E		Core dataset

The Phase 1 Generic Core Dataset is the first piece of interagency work to produce an agreed dataset. The next phase will include agreement on ethnicity, smoking and alcohol intake. The importance of standardisation is percolating through to clinicians, especially those involved in setting up Managed Clinical Networks, thus the work of the NCDDP will expand rapidly. Resources must be matched so that this step is not rate-limiting.

Generic Clinical System

The Generic Clinical System toolset will be used to create systems with a common look and feel tied to the Health and Social Care Data Dictionary so that information standards will be synchronised. The tools will be used in multiple ways from supporting audit to making clinical information available across MCNs. Early implementation will focus on mental health and cancer.

Key clinical elements of eHealth Programme:

Picture Archiving and Communication System (PACS)

PACS systems allow rapid access to radiology images and reports. X-rays contributed to a central server in a standardised way will be shared across Scotland for both diagnosis and care. Within three years all hospitals in Scotland should have a PACS service.

SCI-Diabetes Collaboration

All NHS Boards have adopted the SCI-DC Network product for sharing information between primary and secondary care. This will furnish the new Diabetes Retinopathy Screening Programme with all its demographic information. The annual Scottish Diabetes Survey will run reports against these regional databases to obtain anonymised information about treatment targets. Phase 2 developments will include paediatric, dietetic, diabetes nurse specialist and podiatry modules. The Generic Clinical System tools will ensure cross-speciality compatibility.

SCI-CHD Bronze

Work is progressing to ensure standardised, and therefore comparable, data on Coronary Heart Disease across Scotland. This will also allow cross-border comparisons.

eSCRIPS

The eSCRIPS (electronic Scottish Consultant Review of In-Patient Statistics) data are available via the NHSnet to acute sector consultants. The information comes from routinely collected data on hospital in-patient and day case episodes of care, and is fed back to individual consultants. They can view annual information including the number of episodes of care for which they were responsible and details on individual cases. They can browse by diagnosis or procedure. Other statistics include the proportion of planned and emergency admissions. Consultants can also benchmark themselves against local Board or NHSScotland returns.

eCare

The eCare project will deliver the conduit for most interagency working such as shared assessment and child protection. All NHS Boards and Local Authorities are involved in using the eCare Store for information shared with the patient's/client's consent.

National Programme for Information Technology (NPfIT)

In England a radical reform of the NHS is underway supported by the largest IT project in the world with £6.1 billion being spent over 10 years on software and hardware alone. Implementation costs will be four to five times this amount. All existing systems will be replaced with standard software and all encounters with patients will be reported to the Spine which will accrue a summary record of the patient's health history. This will be available, on a need to know basis, across England. Scotland will not adopt NPfIT in its entirety but will use some of the solutions: the Drug and Medical Devices dictionary and the SNOMED-CT terminology will be implemented throughout NHSScotland. Strenuous efforts will be required to ensure that clinical information can be exchanged across the UK.

Telemedicine

The Scottish Telemedicine Action Forum initiated projects to show that technology could provide better access to specialist advice for those separated from the major centres. These projects are incorporated into the eHealth agenda since they are not about the tools but about providing solutions to clinical problems using appropriate technology. Numerous examples of enhanced care exist, for example Yorkhill Hospital now has links to units around Scotland and is able to provide neonatal surgical and cardiac opinions with live video and ultrasound images.

GP computing

Much of the electronic medical record material in NHSScotland resides in GP computers and 85% of Scottish GPs use the GPASS software. The recent changes in primary care have necessitated major changes in the way GP systems operate. Many improvements have been made and a review will determine the medium term plan for Scottish GP systems. Many practices have moved to a paperlite (the neologism used to describe an almost paperless place) environment by the implementation of scanning software.

The Emergency Care Summary project extracts recent medication and allergy information from GP systems and makes this available to out-of-hours clinical staff. This will develop to include A&E and ambulance staff and the scope will also grow to include significant past medical history. Such initiatives dramatically improve patient safety. All such work is supported by patient involvement and consent.

There is a clear consensus among clinicians that ehealth is not an optional extra for NHSScotland. Electronic information management is the key to improving the quality and safety of patient care as much as a tool for the efficient and effective management of the health system. There is a welcome determination, now backed by significant investment over the next three years, to deliver this vision and to ensure that in doing so NHSScotland has an IM&T system which is fit for purpose and in line with international best practice. Delivering value to patients for this investment will require sustained effort, careful programme management and significant cultural change among the NHSScotland workforce.

Appendix 1 Abbreviations and acronyms

A&E	Accident and Emergency
ACMP	Advisory Committee for Malaria Prevention
AHP	Allied Health Profession(al)
ART	Anti-retroviral therapy
ASU	Acute Stroke Unit
CABG	Coronary Artery Bypass Grafting
CEHAPE	Children's Environmental Health Plan for Europe
CFR	Case Fatality Rate
CJD	Creutzfeldt-Jakob Disease
CHD	Coronary Heart Disease
CHI	Community Health Index
CHP	Community Health Partnership
COSLA	Convention of Scottish Local Authorities
CT	Computerised Tomography
CtOG	Closing the Opportunities Gap
DNA	Deoxyribonucleic acid
EARSS	European Antimicrobial Resistance Surveillance System
ECCI	Electronic Clinical Communications Implementation
EHS3	Environmental Health Surveillance System for Scotland
ENSHURE	Enhanced Surveillance of Haemolytic Uraemic Syndrome
eSCRIPS	electronic Scottish Consultant Review of In-Patient Statistics
FHN	Family Health Nurse
FSA	Food Standards Agency
GP	General Practitioner
GPASS	General Practice Administration System for Scotland
GROS	General Register Office for Scotland
GUM	Genito-urinary medicine
HAI	Healthcare Associated Infection
HBSC	Health Behaviour in School-aged Children
HCV	Hepatitis C virus
HDL	Health Department Letter
HIV	Human Immunovirus
HMCI	Her Majesty's Chief Inspector
HPA	Health Protection Agency

HPAI	Highly pathogenic avian influenza
HPS	Health Protection Scotland
HUS	Haemolytic Uraemic Syndrome
ICU	Intensive Care Unit
IDU	Injecting drug user
ILI	Influenza-like illness
IM&T	Information Management and Technology
IPD	Invasive pneumococcal disease
IQ	Intelligence Quotient
IR	Incidence Rate
ISD	Information and Statistics Division
IT	Information Technology
JCVI	Joint Committee on Vaccination and Immunisation
M	Million
MCN	Managed Clinical Network
MMR	Measles, mumps, rubella
MPH	Miles per hour
MRSA	Methicillin resistant <i>Staphylococcus aureus</i>
MSM	Men who have sex with men
MVPA	Moderate to Vigorous Physical Activity
NCDDP	National Clinical Datasets Development Programme
NES	NHS Education for Scotland
NHS	National Health Service
NHS QIS	NHS Quality Improvement Scotland
NINSS	Nosocomial Infection National Surveillance Scheme
NNIS	National Nosocomial Infection Surveillance
NPfIT	National Programme for Information Technology
P@H	Play at home
PACS	Picture Archiving and Communication Systems
PAS	Parenting across Scotland
PCI	Percutaneous coronary intervention
PHIS	Public Health Institute of Scotland
PHLS	Public Health Laboratory Service
RCP	Royal College of Physicians
SCI	Scottish Care Information
SCI-DC	Scottish Care Information-Diabetes Collaboration
SCIEH	Scottish Centre for Infection and Environmental Health

SCOTH	Scientific Committee on Tobacco and Health
SEHD	Scottish Executive Health Department
SEISS	Scottish Environmental Incident Surveillance System
SERVIS	Scottish Enhanced Respiratory Virus Surveillance
SFSS	Scottish Food Surveillance System
SHAW	Scotland's Health at Work
SHOT	Serious Hazards of Transfusion
SIGN	Scottish Intercollegiate Guidelines Network
SMMDG	Scottish Multiprofessional Maternity Development Programme
SNOMED-CT	Standard Nomenclature for Medical Codes-Clinical Terms
SSHAIP	Scottish Surveillance of HAI Programme
SSI	Surgical site infection
STI	Sexually transmitted infection
TSO	The Stationery Office
TIA	Transient ischaemic attack
TTP	Thrombocytopaenic purpura
UK	United Kingdom
US	United States
vCJD	variant Creutzfeldt-Jakob Disease
WHO	World Health Organization

Appendix 2

References

Chapter 1: The Scottish Effect

1. WHO, *World Health Report* 1997.
2. Scottish Executive *Health in Scotland* 2001, 2002, 2003.
3. Hanlon P, Scots' death wish proves fatal flaw. *Sunday Times*, 9 January 2005.
4. Leon D A, Morton S, Cannegieter S, McKee M. Understanding the Health of the Scottish Population in an International Context. Public Health Institute of Scotland 2003.
www.phis.org.uk/projects/network.asp?p=FF
5. see 4
6. Gruer L, Parkinson J, Haw S, Moore M, Duffy S. *Reducing Smoking and Tobacco-related Harm: a key to transforming Scotland's Health*. NHS Health Scotland, Edinburgh 2004.
7. Barker D J P. *Mothers, Babies and Health in Later Life*. Churchill Livingstone, Edinburgh 1998.
8. see 4
9. Carstairs V, Morris R. Deprivation: explaining differences in mortality between Scotland, England and Wales. *British Medical Journal* 1989; 299:886-889.
10. Hanlon P, Walsh D, Buchanan D, Redpath A *et al*. *Chasing the Scottish Effect*. Public Health Institute of Scotland (now NHS Health Scotland) Glasgow 2001.
11. Gillis CR, Hole DJ, Hawthorne VM, *Cigarette smoking and male lung cancer in an area of very high incidence-II* Report of a general population cohort study in the West of Scotland. *J Epidemiology and Community Health* 1988; 42: 44-48.
12. Whyte B and Walsh D. *Scottish Constituency Profiles* 2004.
www.phis.org.uk/info/sub.asp?p=bbb
13. Krawczyk A. *Monitoring Health Inequalities*. Scottish Executive Health Department Analytical Services Division 2004.
14. Devine T M. *The Scottish Nation 1700-2000*. Penguin, London 1999.
15. see 6.
16. Shaw A, McMunn A, Field J. *The Scottish Health Survey 1998*. Scottish Executive 2000.
www.show.scot.nhs.uk/scottishhealthsurvey
17. Hart C L, Taylor M D, Smith G D, Whalley L J *et al*. Childhood IQ, Social Class, Deprivation, and their relationships with Mortality and Morbidity Risk in Later Life: Prospective Observational Study Linking the Scottish Mental Survey 1932 and the Midspan Studies. *Psychosomatic Medicine* 2003; 65: 877-883.

18. Hart C L, Taylor M D, Smith G D, Whalley L J *et al*. Childhood IQ and cardiovascular disease in adulthood: prospective observational study linking the Scottish Mental Survey 1932 and the Midspan studies. *Social Science and Medicine* 2004; 59: 2131-38.
19. British Medical Association. *Smoking and Reproductive Life: the impact of smoking on sexual, reproductive and child health*. BMA London 2004.
20. Wakschlag L S, Pickett K E, Cook E, Benowitz N L, Leventhal BL. Maternal smoking during pregnancy and severe antisocial behaviour in offspring: a review. *American Journal of Public Health*, 2002; 92: 966-74.
21. Royal College of Physicians. *Alcohol and the Young*, London: RCP, 1995.
22. see 7
23. Cleaver H, Unell I Aldgate, J. *Children's needs – parenting capacity*. London: The Stationery Office, 1999.
24. Marmot MG, Rose G, Shipley M, Hamilton PJ. Employment grade and Coronary Heart Disease in British civil servants. *J Epidemiol Community Health*. 1978 Dec; 32(4): 244-9.
25. Marmot MG (2000) Multi-level approaches to understanding social determinants in Berkman and Kawachi (eds) *Social Epidemiology* New York. Oxford University Press pp 349-367.
26. Everson SA, Goldberg DE, Kaplan GA, Cohen RD, Pukkala E, Tuomilehto J, Salonen JT. Hopelessness and risk of mortality and incidence of myocardial infarction and cancer. *Psychosom Med*. 1996 Mar-Apr; 58(2): 113-21.
27. Jousilahti P, Salomaa V, Rasi V, Vahtera E, Palosuo T. Association of markers of systemic inflammation, C reactive protein, serum amyloid A, and fibrinogen, with socioeconomic status. *J Epidemiol Community Health* 2003 Sept; 57(9): 730-3.
28. Owen N, Poulton T, Hay FC, Mohamed-Ali V, Steptoe A. Socioeconomic status, C-reactive protein, immune factors, and responses to acute mental stress. *Brain Behav Immun* 2003 Aug; 17(4): 286-95.
29. McEwen BS. Sex, stress and the hippocampus: allostasis, allostatic load and the aging process. *Neurobiol Aging*. 2002 Sept-Oct; 23(5): 921-39.
30. Epel ES, Blackburn EH, Lin J, Dhabhar FS, Adler NE, Morrow JD, Cawthon RM. Accelerated telomere shortening in response to life stress. *PNAS* 2004 Dec 7, 101(49): 17312-17315.
31. Volkow N D, Fowler J S, Wang G-J. The addicted human brain: insights from imaging studies. *J Clinical Investigation*. 2003; 111: 1444-1451.

Chapter 2: Improving Scotland's Health

1. Scottish Executive, *A Breath of Fresh Air for Scotland* (2004)
2. Department of Health, *Report of the Scientific Committee on Tobacco and Health* (1998)
3. Department of Health, Scientific Committee on Tobacco and Health *Second-hand Smoke: Review of Evidence since 1998* (2004)
4. Hole D, *Passive Smoking and associated causes of death in adults in Scotland* (2004)
5. Ludbrook, Bird, van Teijlingen, *International Review of Health and Economic Impact of Regulation of Smoking in Public Places* (2004)
6. Scottish Executive, *Plan for Action on Alcohol Problems* (2002)
7. Scottish Executive, *Cost to Society of Alcohol Misuse in Scotland: an update to Alcohol Misuse in Scotland Trends and Costs: Catalyst Report* (2001, 2005)
8. Information Services Division *Scottish Health Statistics* (2004).
9. *Road Accidents in Scotland*, Annual Report 2002
10. NHS Health Scotland, *Injury in Children*, 2004
11. Information and Statistics Division (2004) www.isd.gov.uk

Chapter 3: Health Protection

1. Scottish Executive Health Department/Food Standards Agency (Scotland) *Report of the E. coli O157 Task Force* (2001) www.food.gov.uk/news/newsarchive/2001/oct/ecolitask
2. Kyaw MH, Christie P, Clarke SC, Mooney JD, Ahmed S, Jones IG, *et al*. Invasive pneumococcal disease in Scotland, 1999-2001: use of record linkage to explore associations between patients and disease in relation to future vaccination policy. *Clin. Infect Dis.* 2003;37(10):1283-91.
3. Andrews RM, Counahan ML, Hogg GG, McIntyre PB. Effectiveness of a publicly funded pneumococcal vaccination program against invasive pneumococcal disease among the elderly in Victoria, Australia. *Vaccine* 2004;23(2):132-8.
4. PHLS England, NINSS report: *Surveillance of Surgical Site Infection in English Hospitals 1997-1999*, (1999).
5. NNIS reports Infection rates and summary data (2002)
Available from: <http://www.cdc.gov/ncidod/hip/surveill/NNIS.htm>.



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