

SCOTLAND'S HEALTH – CLIMBING THE EUROPEAN LEAGUE TABLE?*

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INTRODUCTION

The conference was planned around four themes: life expectancy and health outcomes in Scotland in a European context; causes of health and disease in Scotland; health services in Scotland; and suggestions for improvement of Scotland's health. Dr Harry Campbell planned the conference but could not be present. The conference was opened by Dr Niall Flinlayson, President of the College who commented on the College's central role in continuing education concerned with health issues. The conference was unique in being planned in association with the Public Health Institute of Scotland. It was unusual for the College to focus on community and public health issues rather than on the care of individual patients.

SESSION 1

LIFE EXPECTANCY AND HEALTH OUTCOMES IN SCOTLAND SET IN A EUROPEAN CONTEXT

Opening remarks

The first session was chaired by Dr MacArmstrong, Chief Medical Officer (CMO) for Scotland, who introduced Mrs Mary Mulligan, Deputy Health Minister. She congratulated the College and the Public Health Institute of Scotland on the timeliness of their conference, occurring one month after the notification of a radical, health-orientated budget that provides substantial new funds to improve health. The Scottish Executive are being challenged to use the new funds most effectively to address the issues of health inequalities, health promotion and health services to improve health in Scotland.

Health has improved in Scotland in recent decades but at a slower rate than in some other countries. It has been particularly slow to improve among the most disadvantaged people of Scotland and the gap between rich and poor has become greater. The Scottish Executive is determined to reduce this gap and the White Paper *Towards a Healthier Scotland*¹ set targets for 2010 aimed at reducing inequalities in health. Since 1997, and particularly since devolution in 1999, a mixture of relevant reforms and financial investment has accompanied all new policy aims. The Arbuthnott Review,² focusing on social justice investment, made clear that more resources for health are required for those with the greatest health needs. In November 2001 at the Healthy Scotland

Convention Mr Malcolm Chisholm, Health Minister, pointed to the importance of increasing action on the prevention of ill health, with targeted investments in the early years of childhood, the teenage transition, in improving health at work and in community-led health improvement.

The recent budget promised the substantial additional investment of £3.2 billion in the next five years with the target of healthy, longer lives. Additionally, the Scottish Executive is being advised by an expert group that will provide health inequality indicators within a social justice framework. Mrs Mulligan encouraged this conference to discuss issues that would help develop more and better health services, and would also contribute to the founding of the right policies to improve health. She hoped that the conference would reach decisions and conclusions which would advise as to how to ensure that any action implemented could achieve maximum effectiveness for the target group for which they are intended.

Scotland's health as a 'Report Card'

Professor Phil Hanlon, with his colleagues David Walsh and Bruce Whyte, provided a range of perspectives in this lecture;^{3,4} a summary of the main points is shown in Table 1. Following the presentation, an increased proportion of the audience expressed disappointment in Scotland's performance by keypad voting and the 'Overall Remarks' on the 'Report Card' formed the consensus of the conference.

Scotland's health in a European context

Professor David Leon's lecture was based on his work (and that of his colleagues, Suzanne Cannegeiter and Susan Morton) for the Public Health Institute of Scotland. When Scotland's health was looked at on a long timescale it should be realised that it was not always adverse; for example, in the latter part of the nineteenth century infant mortality in Scotland had been substantially better than in England and Wales. However, in the last 50 years Scotland's health, in relation to its European neighbours has become very unfavourable. Data from Scotland were compared with those from 18 Western European countries. Regarding all-cause mortality, Scotland had been in the poorly performing sub-group of countries from 1950 to 1980, but from 1980 onwards it had usually been the worst in males and was invariably the worst in

*Scotland's Health – Climbing the European League Table? was a symposium held at the Royal College of Physicians of Edinburgh on 23rd May 2002.

TABLE 1
Report card on health.
Scotland (pupil): some European countries (class).

Key examples	Rank in Europe
General population health	
+Life expectancy at birth (1998)	16 from 21
+Low birth weight % of live births (1998)	18 from 24
Illness and disease	
+Road accident deaths (1999)	1 from 15
+Infant mortality % of live births (1999)	9 from 19
+Ischaemic heart disease mortality (1997)	18 from 22
+Malignant neoplasms mortality (1997)	20 from 22
Health damaging behaviours	
+32% smokers in females over 15 (2001)	22 from 22
-22% obesity in females over 15 (2001)	18 from 22
-Suicide/self inflicted injury (1997)	9 from 22
=Self perceived health in adults (2001)	9 from 21
Social and economic factors	
=20% living in low income families (1997)	12 from 14
+3.6% unemployment (1999)	14 from 23
+23% victim of a crime in a year (1999)	8 from 13
REPORT COMMENTS	
Trends:	
+ trends improving; - trends worsening; = no trend.	
Additional:	
Social capital and community wellbeing factors are perceived as being better in rural than urban areas of Scotland.	
Overall remarks:	
Improving, but could do so faster. The excellent rating for Road Accident Deaths requires to be emulated in other areas.	

females. However, mortality in children and young adults, up to the age of 35 in females and 40 in males, was average or better than that in Europe. In the older age ranges, up to 79 years, the mortality outcomes were much worse, particularly in females.

In the last 50 years, Scotland had the worst mortality from lung cancer in Western Europe. The trends in men were similar to those in England and Wales, with the highest mortality being in the 1980s. In women living in Scotland these mortality rates were continuing to climb. The smoking epidemic in Scotland was worse than in England and Wales, and is likely to be associated with the poorer patterns of smoking cessation. Cigarette smoking increases lung cancer rates tenfold, but only after a latent period of approximately 30 years of smoking. Reductions in increased lung cancer risk after smoking cessation occurred in a shorter timescale – the excess reduced to two-thirds in the first ten-year period, then down to 0.44 after 10–19 years, falling to 0.20 during the next ten years of cessation and finally to the level of never-smokers.

Stomach cancer mortality in Scotland shows a decline similar to all developed countries and was average for Western European countries. This cancer is associated with the epidemiology of *H. pylori* and a range of socio-economic factors and hygiene in early childhood.

Coronary heart disease is of multifactorial aetiology; among its list of causes are adverse diet and lifestyles, and it may have 'incubation periods' of ten years or more. The increased risk of heart disease from smoking is threefold but following smoking cessation there is rapid reduction in risk to the never-smoking rate within three years.

A cause-specific approach gives a better understanding of the disease aetiologies that make up Scotland's mortality. This approach highlights the impact of some interventions, such as cessation of cigarette smoking, which should reduce mortality rates quickly.

SESSION 2

CAUSES OF HEALTH AND DISEASE IN SCOTLAND

John Hamilton Brown Bequest Lecture – Politics of health: social structure and psychosocial pathways

The President of the College took the Chair and invited Professor Richard Wilkinson to deliver the John Hamilton Brown Bequest Lecture. Consistent data show that psychosocial risk factors are among the most important determinants of health in the developed world.⁵ Particular dimensions of the social environment which are crucial include low social status (including the lack of a personal locus of control (i.e. subordination vs autonomy)); weak social affiliations; and stress in early life. These factors affect physical health and death rates by precipitating sustained periods of physiological arousal – chronic stress.

An understanding of the role of the quality of social relations at the individual level led to an understanding of how this, and social capital issues, are impacted by macro-social determinants. Both levels (individual and macro-social) suggest that the primary issue is the contrast between friendship and relations based on social dominance or social status. From an evolutionary perspective, friendship and social dominance are two contrasting strategies for dealing with conflict over access to scarce resources – hence our attentiveness and sensitivity to both. In dominance hierarchies, access to scarce resources is determined by rankings of power, regardless of the needs of subordinate others. In contrast, friendship and social alliances involve degrees of reciprocity, mutuality and recognition of the needs of each other.

At an individual level some important factors are friendships (these increase personal confidence and are a key behaviour of social beings), insecurity in early

childhood, conformity or obedience to authority and the vulnerability associated with low social status. At a macro-social level, issues such as the extent of unemployment or the hierarchical/egalitarian structure of an economy are important determinants. At the level of the individual, friendship and dominance relations are the opposite of each other. At the macro level greater income inequality (as a crude measure of the extent of social status differentiation) is related to a number of indicators of poor quality of social relations in societies, e.g. increased violence, decreased measures of trust and decreased health outcomes. Where income differences are larger, the quality of social relations deteriorates as people shift from social strategies based on equity and inclusion, towards strategies appropriate to dominance hierarchies where the drive is the pursuit of position and status.

Professor Wilkinson's analysis was that common causes of negative wellbeing (dis-ease) are associated with damaging levels of chronic anxiety (for instance, depression, fear, insecurity, lack of a sense of control, shame, embarrassment, feelings of inferiority, hopelessness, social isolation, hostility, negative social relations etc.) and poor health outcomes. For the individual initiatives should aim to reduce stress during pregnancy, improve the 'family process', provide pre-school facilities, reduce social isolation (particularly for mothers and small children) and tackle material deprivation relating to low income and poor housing. At the macro level actions should be taken to increase social cohesion, particularly by reducing income differentials and relative poverty, by improving the social environment, e.g. in schools – reduce bullying and truancy; at work – foster management styles which make people feel valued and treated as equals rather than being exploited; and in the community – facilitate social contact within neighbourhoods.

Patterns and trends in health inequalities and their determinants in Scotland

Professor Raj Bhopal took the chair and invited Professor Ken Judge to give his presentation. Professor Judge showed the strong correlation in Scotland between poverty scores and all-cause standardised mortality. This is mirrored by high rates (threefold) of coronary heart disease mortality across the Morris/Carstairs (deprivation index) population quintiles and in higher rates (fivefold) of smokers in social class V compared with social class I. Health inequalities had grown in Scotland over a 20-year period but the policy response in 1997 explicitly recognised their importance and decided to promote a social justice agenda with national targets. Half the indicators chosen to measure progress had a bearing on health, being better correlated with health determinants than health outcomes. Both the Scottish Office Annual Report⁶ about this social justice policy and his own independent analysis⁷ show that some progress is being made on areas such as breast feeding and teenage pregnancies and the associated social inequalities of both

of these. A number of indicators showed that crime was reducing; the percentage of children living in workless families had also reduced from 19% (1997) to 15% (2001). However, while unemployment was falling in general, the gap was increasing between the national average unemployment level and the unemployment level in the worst geographic areas. This was an example of the issue identified by Professor Sally Macintyre where generally improving trends could mask growing inequalities because improvements occur first among the more privileged sectors of the community. The trend in suicides was increasing, as was the social inequality risk. National trends for smoking in pregnancy, low birthweight babies, dental caries and coronary heart disease were all improving – but with social inequality perpetuated.

It was proposed that Scotland needed not only targets for inequalities but also appropriate indicators to monitor progress in reducing inequalities. Professor Judge identified the type of indicator required for this aspect of life expectancy, infant mortality, teenage pregnancies, accidents, and smoking prevalence. He illustrated the use of a range of indicators including the absolute rate gap between the highest and lowest social class quintiles, the relative risk ratio, the coefficient of variation and the index of dis-similarity. He also showed how trends in changes of inequalities could be masked unless one took account of the alterations in the distribution of population across social class categories; for example, the increasing proportion of the population in social classes I and II (particularly II which increased by 50% in 20 years) with corresponding reductions in percentages in social classes III, IV and V. Linking smoking cessation strategies to deprivation indicators made it possible to assess accurately when the strategies were being most effective in reaching the target population, i.e. social classes IV and V where the highest proportion of smokers occur. The effectiveness of a smoking cessation outreach strategy required using not only population social class quintiles, but also smokers' quintiles and attendance quintiles at smoking cessation facilities.

In the future, priority strategies should have a basket of appropriate indicators that show key trends. These indicators should be incorporated into the implementation of new services to allow better assessment and monitoring of interventions for health inequalities.

What of healing and health?

Dr David Reilly explored the art of engagement with individual patients with regard to the lessons there may be for societal initiatives to learn from individual contact contexts. For example, doctors may learn about therapeutics from patients' observations of their practice: views of being trapped by NHS practice structures. Scotland's general practitioners (GPs) were recently surveyed about the role of holistic care: two-thirds of GPs agreed that holistic factors were important in the

causation and reversal of organic disease and 90% thought they were influential in the course of the disease and that they were factors that doctors should attempt to influence. The majority of GPs felt that consultations were unduly rushed and only 20% felt that they were currently delivering holistic care. Two-thirds of GPs accepted that, because of constraints on their holistic approach, they generated extra levels of healthcare activity and cost through increased prescribing or referrals to secondary care.

Complementary or alternative medicine is a major growth industry: currently 40% of the population seek help from it annually. Homeopathic training has been sought by 20% of Scotland's GPs and this training appears to have increased their holistic approach to medicine. Conventional medicine tends to have an 'anti-' approach to disease, e.g. anti-inflammatory, anti-arrhythmics etc. An alternative concept of improving health is a 'pro-' approach. Such an approach can be seen in Chinese attitudes to maintaining and fostering health. There are even similarities between the Chinese symbols for life and gardening. There is the analogy with a caring approach that promotes self-repair and growth. Individuals have a desire, and capacity, to heal and there is scope to facilitate these processes. Recent scientific and reductionist approaches have provided complex instruments for dealing with the mechanisms of biology. However, there has been less study of human inputs into caring and effects on health outcomes – the positive effects of our empathy, attention, kindness and compassion which can influence beneficially the quality of therapeutic intervention.

An individual knows instantly whether the person with whom they are talking is interested in what they say and this dimension is heightened in critical encounters such as healthcare consultations. Colours, views, and sound have all been shown, in controlled studies, to have effects on therapeutic outcomes. In randomised trials, placebo effects have to be controlled. There is, therefore, substantial scope for using contextual inputs for therapeutic advantage.⁸ Good therapeutic practice for a clinical guideline might include: engage the patient in a trusting relationship; reduce fear; and select an appropriate drug. The comparatively recent topic of psycho-neuroimmunology was leading to reinterpretation of views about the brain and consciousness and their interaction with the body in crucial ways, e.g. patients with the highest scores for despair had a mortality four times higher than the average for myocardial infarction. In several contexts a weak medicine (less likely to produce adverse side-effects) combined with good care might be at least equivalent to a strong medicine combined with poor care. In a recent study^{9, 10} at the Glasgow Homoeopathic Hospital the extent of the empathy, which the patient identified during the consultation, was the most important factor in the enablement the patient

experienced, and this remained significantly correlated with health outcome a year later. These outcomes had positive effects on conventional healthcare with more than one-third of patients reporting fewer GP consultations, decrease in use of conventional drugs, fewer out-patient/ambulatory care appointments and fewer admissions to hospitals.

There was scope for using the complex creative personal qualities of healthcare professionals more constructively in patient care, by focusing them therapeutically on the needs of the patient. It was probable that there were analogous parallels for interactions at community and societal level.

SESSION 3

HEALTH SERVICES IN SCOTLAND

Scotland's health services – how do they rank in Europe?

Dr Eric Bajjal chaired this session, and invited Mr Geoffrey Robson to deliver the first lecture. Within World Health Organisation (WHO) rankings, Scotland is not identified separately but the UK in 2000 was ranked 18th for health provision and, in a more limited report in 2001, was ranked 24th on the ratio of healthy life expectancy at birth in relation to healthcare expenditure, although on that same measure Scotland would rank more poorly.

The inverse care law applies in Scotland and poorer people have worse health outcomes and more limited life expectations. However, in an international context Scotland does not have such an extreme range of inverse care law issues as the US. Although the French healthcare system is well regarded, within larger cities (particularly Paris) there is increasing difficulty in accessing primary care; many patients have access only to the lowest of a three-tiered primary care system as urban GPs opt out of higher provision, leaving out-patient and accident departments to fill this primary care gap. Countries that impose non-recoverable charges, e.g. New Zealand and Sweden, find that they inhibit access to primary care services. While the NHS does have charges for prescriptions, 70% of these are free. On the perspective of financial fairness, the WHO ranks the UK as eighth equal, with Japan, Sweden and Norway, and the UK is even better on healthcare equality, where it is ranked second. The NHS is best at repairing ill health and keeping people alive; it is not good at keeping people healthy, and is poor at responding to patients' needs.

Outdated working practices and historic problems due to chronic under-funding over many years probably exacerbate inverse care law issues for some areas of care. However, there are separate cultural factors which are contributory, e.g. males in Scotland are poor at taking up relevant health services in a timely manner, and this is particularly true in social contexts where there are low

levels of income. Where charges do occur, as in dental services, the steps in charging structures can be seen to inhibit the uptake of services.

Expenditure and activity on health are increasing, although these have to be considered as new inputs and it is too early to assess outcomes. Three new major hospitals have been built within the central belt of Scotland within the last year. Major NHS investment in primary care premises is leading to joint working with other agencies. Following the recent budget, health spending in Scotland is increasing by 8.9% (6.2% in real terms) per annum from 2003 to 2008, thus the present budget will have doubled to give a total annual figure of £10 billion. Care of the elderly is increasing markedly, with free personal care being funded from 1 July 2002. Work to develop a single assessment instrument for elderly people is nearly completed. An initiative is evolving to help maintain elderly people in their own homes, or treat them when ill and return them rapidly to their own homes with after-care support. The CMO is leading a group reviewing services for the elderly. A further priority target is improved services for children and young people: the focus is to increase efforts on the early years of life and in the transitional teenage years, changing services to make them more responsive to key needs, more accessible and more flexible. The NHS 24 answering service is running in Grampian and will develop in other parts of Scotland. Since 1999 one-stop clinics have increased threefold (current total: 300). Local Health Care Cooperatives are increasing the range of services that they provide in primary care. Primary Medical Services contracts are being used to facilitate provision of care in deprived and rural areas. An increasing range of healthcare services may be provided by pharmacists or from pharmacies. A guarantee is in place that should permit patients to see a member of their primary care team within 48 hours. Health services are being developed in culturally sensitive ways to be more responsive to issues of sex, race, age etc. The Waiting Times Unit has succeeded in reducing the period before patients are seen in hospital. Work on a new GP contract is progressing and the focus will be on the GP practice rather than on individual GPs; this should give scope for rewarding quality and increasing the range of services, especially services for chronic disease and minor mental health problems. Such initiatives are coordinated with the planning of future medical workforce requirements.

National Health Service initiatives are considered within the social justice agenda for Scotland. Other components of that broader strategy have bearings on health issues, e.g. the range of functions for community schools. There are differences with the way in which the NHS is evolving in Scotland compared with England and Wales: there is no new major structural change; time is not being taken up with blame-culture issues (Shipman, Alderhey, Bristol Royal Infirmary); and only a minor role is envisaged for

the private sector. The NHS in Scotland will continue to be founded on the values of public service but will evolve greater effectiveness and flexibility. National standards of best practice will improve the quality of services and new money will facilitate this. While the Unified Health Boards will need to meet directives and priorities from the Scottish Executive, they will have some freedom to vary services to meet local needs. There will be continued enhancement of work across the interface between acute hospital services and primary care services, which is possibly a greater barrier than the interface between primary care services and social services. The strategy of Managed Clinical Networks is a useful operational structure for some crucially important diseases. Planners concerned with community issues, particularly those relating to social and local authority services, are seeking to make better interfaces with the NHS. The CMO is chairing a group about NHS provision in rural areas, as a range of increasingly urgent issues has been identified. The Nuffield Foundation is funding a study to compare some of these issues in Scotland with structures and strategies in England and Wales.

The Scottish Executive would monitor the NHS, partly on the basis of epidemiological data and routine statistics relating to health outcomes and partly on the basis of standards set by advisory bodies, such as the Clinical Standards Board for Scotland; the Scottish Hospitals Advisory Service (due to merge into the Quality Standards Board) and the Mental Welfare Commission (to continue under a new Mental Health Bill). There will be continuing input from a range of non-threatening professional groups such as the Scottish Intercollegiate Guidelines Network (and their clinical guidelines). A formal performance assessment framework being piloted to monitor the effectiveness of Unified Health Boards will aim to focus on key priorities.

Mr Robson concluded there is no complacency about ineffective past policies or current health problems. New policies are seen as likely to move forward in more effective ways and new money should increase the speed of favourable changes.

Cancer, cancer services and cancer outcomes in Scotland

Dr Harry Burns said that, for a variety of reasons, Scotland has a moderately high incidence of cancers and correspondingly a moderately high mortality from cancer. However, data about cancer survival in Scotland was not as bad as the media often claimed because most countries did not collect cancer registration data on the same comprehensive basis used in Scotland. Comparisons of survival based on international data were, therefore, totally invalid. For example, German data came only from the 1.7% of the population based in Saarland; in Switzerland only two cancer registries – 12% of the population – contributed data. In these countries highest survival from

cancer might occur in Turkish immigrant workers who, after diagnosis, would be unable to afford treatment and return to die in Turkey, but in the cancer registration data they apparently live forever. France also registers data from a small part of its population and patients can be lost following moves within the country. A crucial problem with most foreign registries is that after they register cancer diagnosis they have to search actively all deaths each year to see if patients have died; there is substantial scope for missing cancer deaths and therefore overestimating cancer survival. Scotland, England and Wales, Finland and Denmark all have passive cancer registration systems. In Scotland each year the Registrar General's Office sends computer files of deaths to the Cancer Registry where automatic linkage occurs. Indeed, with this passive system there is the possibility of underestimating survival as a patient might die from an unrelated stroke, but without a definitive diagnosis the GP might decide that the death event could have been a cerebral metastasis. On international average, cancer registries that use an active system of seeking deaths have approximately 15% apparent better survival rates than cancer registries that use a passive system and have comprehensive data about deaths provided to them.

Cancer care in the US is sometimes regarded as excellent but this view is based on selective data. For example, ten per cent of the population, 23 million, have no access to cancer care services; New York public hospitals provide free access to mammography but as there are no follow-up services for uninsured women, many who have abnormalities just disappear from the system without definitive diagnoses, treatment or survival data. Access to palliative care is very limited because of the payment methods used by insurance companies. Cancer survival data from the US come from a small group of highly selected patients and should not be compared with the comprehensive total population data collected in Scotland. The patchy cancer services provided in the US do not accord with the equity of access principles of the NHS. Scotland has a comprehensive Cancer Plan; to prevent where possible, to detect early, to treat effectively, to provide rehabilitation and palliation and to underpin these activities with efficient information and management support.

In the area of prevention, smoking-related disease is the most relevant target. From cancer mortality data for Scotland during 1911–15, lung cancer was the tenth most common cancer (2.1 per 100,000), and a monograph of the time noted the rarity of primary lung tumours.¹¹ Eighty years later data for leading causes of death in men in the European Union during 1990–4 showed rates for lung cancer 25 times greater (50.9 per 100,000 – a total more than the next three most common causes of death from cancer). The stimulus was the immense rise in smoking fuelled by the provision of free cigarettes to troops in World War I. Smoking is also positively associated with

a wide range of other cancers, cardiovascular and cerebrovascular disease and lung diseases. It would be important to prohibit advertising of tobacco and of smoking associated brands of consumer products. Further, it would be very important if smoking in public places was increasingly stigmatised and prohibited. Scotland was the first country to have deaths from lung cancer in females exceed those from breast cancer; several other countries have now reached this unfortunate position.

When appropriate techniques and services are provided, screening can be an effective method of reducing cancer mortality. It was now clear that breast cancer mortality was falling in age groups where screening had been undertaken. There seemed scope for some other cancers to have mortality reduced by effective screening methods. Scotland has a poor record in the early diagnosis of cancers, e.g. for bowel cancer only approximately ten per cent were diagnosed at stage I, while in a number of European countries this could be as high as 20–30%. Notwithstanding the later stage of diagnosis, Scottish patients' five-year survival from bowel cancer was almost as good as in countries where early stage diagnoses was more prevalent. There is clearly scope to reduce the delay in diagnosis so that more early cancers can be detected and treated quickly and effectively. Local initiatives in Glasgow have been successful in reducing the delay in treating potential lung cancer patients from six months to one month by adopting different cooperative clinical working methods. Managed Clinical Networks for cancer services was a radical agenda that was proving useful; it involved clinicians taking the lead, and, with patients and other healthcare workers, setting the strategy for the services and identifying appropriate standards. National Health Service managers facilitated these objectives being achieved within ring-fenced funding. It was conceivable that management through objective oriented networks might prove more effective than management through institutions. The Scottish Clinical Information (SCI) system has data from all parts of cancer services. It allows clinicians to monitor patients being managed through the cancer care system, identify bottlenecks if they occur and take remedial action.

Mr Malcolm Chisholm recently announced targeted investments for cancer services, which should prove very effective; additional money would provide new linear accelerators and investigational equipment with their support staff, additional clinicians, nurse specialists, radiologists, pathologists and pharmacy developments, in order to meet deficiencies in current services. Parts of the new funding initiative would give increased clinical time with patients, which might not necessarily improve cancer survival but would increase satisfaction and quality of life of patients who live with cancer. Further funding was being provided for an infrastructure to facilitate patient entry into clinical trials.

Deprivation was an important factor influencing cancer mortality: not only were more tumours detected at later stages, but also more cancers were of undifferentiated cell type. As there were biological differences in the cancers this seemed to indicate psychosocial inputs into carcinogenesis that required economic and social actions. Deprivation certainly appears to be a separate risk factor that is associated with cancer outcomes: an example is that individuals in a deprived area in the West of Scotland who smoked 20 cigarettes daily would be three-and-a-half times more likely to die from lung cancer than doctors in England and Wales, as reported in 1976.¹²

Ischaemic heart disease – burden of disease and future trends

Professor Hugh Tunstall-Pedoe assessed the trends of coronary heart disease in Scotland in an international context, with a view to considering future local likely trends and actions needed to improve them. Analyses by the Cardiovascular Epidemiology Unit from a number of sources – WHO population data, the MONItoring CARdiovascular disease (MONICA) study, and Scottish Heart Health Study (SHHS) – and follow-up studies were shown. From WHO data, average annual coronary mortality in the decade 1970–9 was worst in Scotland and Northern Ireland in both men and women. In the subsequent two decades UK coronary mortality rates declined in both men and women, maintaining a constant ratio between Scotland with England and Wales; the consequence is that the absolute difference in mortality rates has been reducing in Scotland. On an international basis, coronary mortality rates in the US and Australia were among the earliest to fall and declined fastest. In all countries with data, the falls in cardiovascular mortality have been in coronary heart disease, and to a lesser extent stroke, while non-coronary heart disease mortality has not changed during the last three decades. Coronary heart disease mortality rates have fallen in all age groups at similar rates.

Follow-up data from the SHHS showed that classical risk factors had a fairly strong association with coronary heart disease events, although the use of newer drug treatments for the disease had an even stronger association. Of the newer risk factors, fibrinogen was the most significant. From the MONICA study it could be shown that north Glasgow had the worst risk factor profiles in both males and females in 37 population centres worldwide. Both studies showed declines in these risk factors were associated with falling coronary event rates and this association was stronger if a four to five year delay was introduced. The falls in coronary mortality appeared to be two-thirds explained by reductions in event rate and one-third explained by the reduction in case fatality. The declines in coronary mortality in most MONICA centres were strongly associated with the increase in the use of evidence-based therapies but, while in the US centre this was most strongly associated with rates for coronary artery

bypass grafts, these changed little in Glasgow during the MONICA study period. Nor were there changes in the rates of the use of β -blockers, which had increased in Glasgow prior to the study. In Glasgow the decline in coronary mortality had strongest associations with the increased therapeutic use of aspirin, fibrinolysis and ACE inhibitors but, as case fatality had only improved slightly, the association was likely to be one of time association rather than of causation. Of the MONICA centres, Glasgow was rated second in females and fifth in males for the introduction of appropriate new medical therapies. From data of the risk factor surveys of the MONICA study and the SHHS, and its follow-up survey, the classical risk factors of smoking, cholesterol and blood pressure had improved moderately as had the dietary factors of intake of fruit, green vegetables and skimmed milk. However, body mass index (BMI) had become worse, particularly in women and especially in the least affluent sector of the population. The most substantial fall in coronary mortality had occurred in Scotland after the conclusion of the MONICA study in the mid-90s so there remained speculation about the likely most important causal factors.

Professor Tunstall-Pedoe's main conclusions were that, apart from BMI, overall there were beneficial trends in all risk and dietary factors. There was a significant adverse deprivation gradient, present in both sexes but bigger for females, for levels of smoking and consumption of fruit and vegetables; additionally, in females only, there was a significant adverse gradient for the BMI, HDL-cholesterol and skimmed milk intake. Apart from the crucial issue of levels of smoking, there was no consistent evidence that the socioeconomic gap was widening for risk factors but, where it existed, it was being maintained. Overall, trends for coronary events and risk factors are improving.

SESSION 4

HOW DO WE IMPROVE SCOTLAND'S HEALTH?

The final session was chaired by Dr Peter Donnelly and led by a discussion panel of Dr Mac Armstrong, Dr Vikki Entwistle, Mr Martin Evans, Professor Phil Hanlon, Councillor Ronnie McCall, Dr David Steel and Professor Richard Wilkinson. The audience raised questions about the theme 'Is current policy and action sufficient to improve Scotland's relative health status within Europe – or what further priority actions need to be taken?'

Asked 'How should Scotland be encouraged to seek for better health?', the panel made the following points: action was required to give the public a broader vision of health than the avoidance of illness; there was a need to focus action on the younger school-age group, to encourage better diet, levels of exercise and non-smoking; and there was a need for multi-strand strategies, such as those successful in reducing road accident deaths.

The panel's views were sought about effective ways to tackle the growing, very important, problem of increasing levels of obesity in the population. The suggestions were made that it would be constructive to: reduce fat in the food chain either by restrictions on imports or constraints on food manufacturers; create an attractive healthy diet for children and involve parents in the discussions about this; and take measures to encourage physical exercise. Messages about good health should emphasise that good health is fun and gives enhanced life opportunities.

In Scotland, there are potential problems from reduction in fertility rate in more affluent sections of the population. However, it was noted that many economists said there would be worldwide falls in population. Population decline may be positive in broad social environmental terms, but in the short-term there could be difficult issues of age balance and adverse social structure. The association of fewer babies and longer lives involved multifactorial issues and was very complex, but it has been postulated that immigration could be a mainstay ensuring social cohesion.

The panel were asked for comments about effective ways to help disadvantaged sections of the community, who were vulnerable to misuse of drugs and alcohol, had poor diet and increasing levels of obesity. One response was that the issue of more equal income distribution was of overwhelming importance. If the Scottish Parliament raised income tax by the permitted three per cent and used the funds for income redistribution there might be beneficial changes, such as reduced infant mortality, reduced single-parent pregnancy, reduced violence and increased health for older people. Reacting to separate health problems was an expensive and ineffective type of response, e.g. it is not very effective to try reducing violence by having more police and more prisons; more effective was the type of strategy taken in Japan when they were concerned about high suicide rates in children. There, authorities changed the methods of progress through the educational system resulting in lower expectations and reduced stress – this was a one-off low-cost effective change. Others thought it important to involve people from the target group in helping to identify relevant effective strategies, e.g. the diet of school children was improved by installing vending machines that contained healthy foods.

None of the panel thought the Kaiser Permanente health maintenance organisation model¹³ attractive, but some thought that the NHS could learn from some operational aspects, e.g. the better integration of primary and acute care and the speed with which people move through the total healthcare system. The panel thought there was benefit in some public health actions being coercive if they have public support, e.g. the success of seatbelt law and the effectiveness of laws penalising drunk driving were backed by opinion that not conforming was socially

unacceptable. Regulatory measures to reduce smoking in public places and the imposition of smoking bans in workplaces would be important.

The panel did not feel that reducing toxins in food and the environment was important in Scotland. Only a few studies have shown substantial adverse effects in humans and there are more crucial social issues affecting health, e.g. the Whitehall study of civil servants showed a threefold difference in mortality within that social hierarchy work structure. Illegal drugs were the toxic chemicals of highest priority because of the major problems caused, particularly in deprived sections of the community.

Thoughts about priorities for the use of new resources were: they should be used primarily for the young and young families; in the social environment, e.g. in schools to facilitate socially responsive pupil interaction; in the workplace to encourage management styles that increase the extent to which people feel valued rather than exploited; patients should help to identify appropriate and effective strategies; the increasing number of children born into poverty was an important target. A concluding thought was that increasing resources should be devoted to communications with patients, which made them feel better.

The CMO closed the meeting with some overarching keypoints (Table 2) that arose from the conference and thanked the speakers and other participants.

TABLE 2
Keypoints of the symposium.

- current health outcomes were poor
- however, there is a great deal to be proud of in Scotland:
 - a strong base of effective health service activity;
 - a very good coherent policies for future strategies; and
 - a range of individuals committed to work together to improve health outcomes.

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ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

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All symposia are held at the Royal College of Physicians of Edinburgh unless otherwise stated. Further symposia may be added at a later date. Full details of speakers and topics to be covered in upcoming symposia will be available on the College website: www.rcpe.ac.uk.

2003

- Gastroenterology 7 February
- Aberdeen Symposium:
Contemporary issues in infectious diseases 12 March
- Future perspectives in Cardiology 10 April
- Drug Treatment: maximising benefit and minimising risk
(in association with *International Society for Pharmacoepidemiology and International Society for Pharmacoeconomics and Outcomes Research*) 14 April
- Hypertension 8 May
- Geriatric Medicine 28 May
- Paediatrics
(joint symposium with *Royal College of Paediatrics and Child Health*) 19 June
- Rheumatology 19 September
- What can the NHS learn from Industry?
(joint symposium with *British Association of Medical managers*) 23 October
- Symposium organised by the Collegiate Members' Committee 17 October
- Respiratory Medicine 5 November
- 43rd St Andrew's Day Festival Symposium:
Diabetes and Endocrinology 4/5 December