

Annual Report

of the Director of Public Health 2005/2006





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Section One

Introduction

The Annual Report of the Director of Public Health (DPH) provides an independent assessment of the health of the people of Grampian and identifies areas where action is required to maintain or improve health. It is a statutory requirement and mirrors the reports done in past times by the medical officers of health for the local councils.

The format of this year's Annual Report has changed from recent years, and whilst an overview of health and key issues is provided here, most of the supporting detail is now provided on line at <http://www.hi-netgrampian.org/hinet/1400.html>

The DPH Annual Report is intended to drive and shape policy and public health activity. It should be an integral part of the planning process, an 'annual plan' as well as an annual report, and should be a central influence in the formulation of Joint Health Improvement Plans and Community Plans. In turn, it should influence and be influenced by assessments of the needs of the three Grampian Community Health

Partnership (CHP) populations, as one of the key roles of CHPs is the assessment of local needs.

This report starts with a summary of the demography and vital health statistics of the Grampian population. It then focuses on three areas of great public health concern.

These are:

- Obesity
- Alcohol misuse
- Diabetes.

These topics are priorities across the NHS in Scotland and are agreed priorities for NHS Grampian. This is because of the number of premature deaths, the extent of illness and disability, and the wider social harms

they cause. Obesity, alcohol misuse and diabetes are all becoming more common in the Scottish and Grampian populations. They place a huge health burden on the individual, their families, the Health Service and society at large.

However, each of these conditions is to a greater or lesser extent preventable.

While individuals can and should take responsibility for their own health, action is required by a number of agencies to support this. The causes of these conditions are found at both individual and wider social levels. The health service alone can only do so much in contributing to the prevention and treatment of

conditions. Other agencies both at local and national level must play their part in reducing the burden of illness and disability on the Grampian population.

My report highlights what the health service and its partners are currently doing to address these issues. It also highlights the areas and actions that still need to be addressed.

Public health is everyone's business. It is only through our combined efforts that improvements in the health of the population in Grampian can be brought about and maintained.

Dr Lesley Wilkie
Director of Public Health





Section Two

Grampian's population, its health and illness

Grampian is located in the north east corner of Scotland and has a mixed urban and rural population. It is made up of the Local Authority areas of Aberdeen City, Aberdeenshire and Moray. In 2005 the population of Grampian was reported as 525,930 representing 10.3% of the population of Scotland (General Register Office for Scotland).

Major industries include oil and gas production, with traditional fishing and farming industries sitting alongside newer high-tech businesses. Aberdeen has been ranked as the UK's most competitive city after London and among the top three UK cities in terms of knowledge-based businesses.

There are more than 400 internationally owned companies operating in Aberdeen City and more than 800 technology-based companies throughout the region. North-East Scotland produces a third of Scotland's agricultural output, with more than 300 companies producing in excess of £1bn per year (Scottish Enterprise Grampian).

NHS services for the half-million people who live in Grampian are provided by NHS Grampian, and are overseen by one single NHS Board. NHS Grampian consists of acute services, corporate services and three Community Health Partnerships (CHPs) and works closely with the Local Authorities. NHS Grampian is also very closely linked with both the University of Aberdeen and The Robert Gordon University, especially in the fields of research, workforce planning and training.

The single Grampian NHS Board is responsible for improving the health of the Grampian population, and for delivering the health care required. The Board must contribute to the progress of Scotland's national health

agenda, tailored to the needs of the Grampian population, which is spread over 3,000 square miles of city, town, village and rural communities.

Scotland's Health White Paper Partnership for Care (2003) set out the context for the development of Community Health Partnerships (CHPs). The CHP Regulations came into force on 1st October 2004.

CHPs provide a focus for the integration between primary care and specialist services (provided by the NHS) and with social care (provided by the Local Authorities) and ensure that local population health improvement is placed at the heart of service planning and

delivery. There are three CHPs in Grampian: Aberdeen City CHP, Aberdeenshire CHP and the Moray Health and Social Care Partnership. CHPs cover approximately the same population as the three Grampian Local Authorities.

POPULATION

Population size

Table 1 shows the 2005 mid-year estimates of the sizes of the populations in Scotland, Grampian and the three Local Authority areas.

All population figures refer to estimates at 30 June 2005. The estimated population of an area includes all those usually resident there whatever their nationality. Students are treated as being resident at their term-time address. Members of UK and armed forces stationed in Scotland are included; UK forces stationed outside Scotland are excluded. Short-term international migrants are excluded.

Grampian has approximately 10% of the Scottish population. At national and local levels there are slightly more women than men. Within Grampian, Aberdeen City has 38% of the population, Aberdeenshire has 45% and Moray has 17%.

Population projections

In 2005 the Registrar General for Scotland calculated population projections for the Local Authority and NHS Board areas of Scotland, based on the mid-2004 population and projected up to the year 2024.

Table 2 shows the results of this exercise for Scotland, Grampian and the three Local Authority areas.

At the Scottish level the population is projected to rise over the next 15 years before declining slowly. However, there are differences in this pattern across Scotland with some areas projected to increase in size and others to decrease.

The Grampian population is projected to decline by just over 5 per cent. Among the other NHS Board areas, Borders (+15 per cent) and Lothian (+11 per cent) show the greatest projected increases in population between 2004 and 2024. The largest decreases are projected in Western Isles (-15 per cent) and Shetland (-11 per cent).

Within Grampian there are striking differences, as there are within Scotland. Large urban areas like

	Persons	Males	Females
Scotland	5,094,800	2,456,109	2,638,691
Grampian	525,930	260,182	265,748
Aberdeen City	202,370	99,671	102,699
Aberdeenshire	235,440	116,480	118,960
Moray	88,120	44,031	44,089

Source: General Register Office for Scotland

	2004	2024	% change
Scotland	5,078,400	5,188,926	+ 0.8%
Grampian	524,020	497,484	- 5.1%
Aberdeen City	203,450	155,242	- 23.7%
Aberdeenshire	232,850	251,300	+ 7.9%
Moray	87,720	90,942	+ 3.7%

Source: General Register Office for Scotland

Aberdeen City, Glasgow City and Dundee City (but not Edinburgh City) are projected to decline. Aberdeen City has the largest projected decrease at -24 per cent.

Aberdeenshire and Moray are projected to increase by around 8 per cent and 3.7 per cent respectively.

The size of a population is influenced by two main factors:

- Natural growth, which is the number of births minus the number of deaths.
- Migration (both in and out of the area).

A decline in natural growth is projected in all three Grampian Local Authority areas. However, there are differences in projected migration figures. Migration out of Aberdeen City accounts for 82% of the City's population decline. Increases in Aberdeenshire and Moray are accounted for by inward migration.

- **Ageing population**

Scotland's population is projected to age between 2004 and 2024 and this is true for most Local Authority areas to a greater or lesser extent. This means that a greater proportion of the population will be aged over 75 years.

- **Child population**

Among Local Authority areas the number of children aged 0-15 is projected to decrease in all areas apart from three (none of which are in Grampian). Aberdeen City has the largest projected decline at -43 per cent.

- **Working age population**

By 2024, the population of working age is projected to increase in 14 Council areas and decrease in 18, decreasing the most in Aberdeen City (-28 per cent).

- **Pensionable age population**

The population of pensionable age is projected to increase by 2024 in all apart from two non-Grampian Local Authority areas.

Similar projected changes in age structure can also be seen across NHS Board areas.

Population projections have limitations. A projection is a calculation showing what happens if particular assumptions are made, for example, people moving in and out of the area. Many social and economic factors influence population change including policies adopted by both central and local

government. The relationships between the various factors are complex and largely unknown. It is also important to note that projections become more uncertain the further ahead they go, especially for smaller areas.

One area of concern is that the population of Grampian as taken from the General Register Office for Scotland differs from that of the Community Health Index, which is a record of people registered with general practices (GPs) in Scotland. The Health Intelligence and Information department at NHS Grampian is currently undertaking a review of this discrepancy, in conjunction with the Scottish Executive. This work has significance because the funding allocation to NHS Boards is primarily influenced by the count of the population in the area. For more information on population go to <http://www.hinetgrampian.org/hinet/1400.html>

The needs of populations migrating into Grampian.

We know that the numbers of overseas nationals seeking to work in the UK, from within and outside the

European Union since the mid-1990s, has increased significantly. Recent studies, in both Highland and Tayside, have confirmed an overall rise in numbers.

To ensure that service providers in the North-East have a more informed basis from which to plan services, NHS Grampian, together with other stakeholders, has invested in research, commissioned by Communities Scotland, to explore the issue locally. This will provide us with a greater understanding of the numbers and nature of the migrant community.

From a health perspective, we need to get a more detailed understanding of the health of this community, to enable us to provide effective, responsive health services. The research will examine health status, access to services, and perception of health and well being and will involve interviews within the migrant community and with service providers.

The research will be published in January 2007 and I will discuss the findings in next year's annual report.

HEALTH

Births and Infant deaths

Table 3 gives the birth rates for Scotland, Grampian and the three Local Authority areas for the year 2005. Overall Grampian's birth rate is the same as the Scottish rate, but there are differences between the three Local Authority areas.

Aberdeen City's birth rate was less than the Grampian rate. Aberdeenshire and Moray both had higher birth rates than the overall Grampian rate. These rates are standardised, that is they take into account the age and sex structure of the population, so the birth rate in an elderly population is not compared with that of a younger population.

Death rates in infants are a useful indicator of the health of the overall population and the quality of health services. Across Grampian the rate of stillbirths is lower than the Scottish rate. For perinatal, neonatal and infant death rates, the overall Grampian rates are lower than the Scottish rate. Within Grampian there are variations. Aberdeen City has

higher rates for each of these three causes of death. Caution must be used when interpreting these figures. These rates are based on very small numbers of deaths and will vary year on year as a result of small changes in the absolute number of deaths.

Deaths

The Grampian death rate is lower than the Scottish rate (Table 4). Within Grampian there are variations with Aberdeen City and Moray having a higher rate than the Grampian rate and Aberdeenshire having a lower rate. However, all three Local Authority areas have a lower death rate than the Scottish figure.

The commonest causes of death in Grampian reflect the national picture. Of the 5,112 deaths in Grampian in 2005:

- 1147 (22.4%) were due to cancer.
- 1131 (22.1%) were due to heart disease.
- 567 (11.1%) were due to diseases of the respiratory system.
- 533 (10.4%) were due to cerebrovascular diseases (mainly strokes).
- 263 (5.1%) were due to mental and behavioural disorders.

- 229 (4.5%) were due to diseases of the digestive system.
- 229 (4.5%) were due to 'external' causes, including accidents, falls, poisoning, intentional self harm and assault.

Across Scotland, the top four causes were the same as in Grampian, but the fifth commonest cause of death was diseases of the digestive system, with mental and behavioural disorders coming sixth and external causes coming seventh.

Of the 5,112 deaths in 2005, 1949 were in people under 75 years old (38%). This is known as premature death. The three main causes of these 1949 premature deaths were cancers (747 or 38.3%), ischaemic heart disease (292 or 15%) and diseases of the respiratory system (137 or 7.0%).

In women of all ages in 2005 there were 397 deaths from ischaemic heart disease and 95 from breast cancer.

While it is reassuring to note that Grampian fares better than Scotland overall for many of these death rates, it is salutary to look at Scotland's place within Western Europe. Male

Scottish life expectancy is amongst the lowest in Western Europe as seen in Figure 1. We clearly have a long way to go to ensure the population of Scotland and Grampian enjoys the best level of health possible.

Differences in health status

Despite our relatively healthy position when compared to the rest of Scotland, variation in health status and experience exists across Grampian. Local profiles highlight differences across the three CHP populations. More information on comparative health is available on <http://www.scotpho.org.uk>

Within communities deprivation plays a major role in the health status of individuals.

Deprived populations have considerably higher levels of deaths from coronary heart disease (CHD). The Standardised Mortality Ratio is the ratio of actual deaths to expected deaths based on indirect standardisation. Expected deaths are the number of deaths that would be expected in each deprivation category given the age/sex distribution of the underlying

Table 3: Births, stillbirths, perinatal, neonatal and infant mortality, 2005 for Scotland, Grampian and the three Local Authority areas.

	Live Births				Stillbirths ¹	Perinatal Deaths ¹	Neonatal Deaths ²	Infant Deaths ²
	Both sexes							
	Number	Standardised Rate	Males	Females	Rate	Rate	Rate	Rate
Scotland	54,386	10.7	28,083	26,303	5.3	7.7	3.5	5.2
Grampian	5,404	10.7	2,768	2,636	4.4	6.6	2.8	3.9
Aberdeen City	2,061	9.3	1,041	1,020	4.3	8.2	4.4	5.3
Aberdeenshire	2,465	12.0	1,282	1,183	4.4	5.7	1.2	2.4
Moray	878	11.5	445	433	4.5	5.7	3.4	4.6

Source: General Register Office for Scotland.

¹ Rate per thousand live and stillbirths.

Stillbirths

Section 56(1) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965 defined a stillbirth as a child which had issued forth from its mother after the 28th week of pregnancy and which did not breathe or show any other sign of life.

The Stillbirth (Definition) Act 1992, which came into effect on 1 October 1992, amended Section 56(1) of the 1965 Act (and other relevant UK legislation), replacing the reference to the 28th week with a reference to the 24th week.

Perinatal deaths refer to stillbirths and deaths in the first week of life.

² Rate per thousand live births.

Neonatal deaths refer to deaths in the first four weeks of life.

Early neonatal deaths refer to deaths in the first week of life.

Late neonatal deaths refer to deaths in weeks two to four of life.

Postneonatal deaths refer to deaths after the first four weeks but before the end of the first year.

Infant deaths refer to all deaths in the first year of life.

populations and the Scottish average death rates. The Standardised Mortality Ratio (SMR) in the most deprived tenth of the population is almost five times higher than that in the least deprived tenth. There is a strong positive relationship between deprivation and CHD mortality rates. This relationship is evident for all ages but is strongest in the 0-64 age group. Death, particularly premature death, from coronary heart disease is more common in areas of multiple deprivation (Source:ISD).

Within the Grampian population a gradient is seen in premature deaths from cancer and ischaemic heart disease, in suicide rates and in lifestyle choices (including smoking and teenage pregnancy). This means that these conditions occur least frequently in the most affluent sections of the population and most frequently in the most deprived sections of the community.

Local work looking at inequalities in Grampian from 2000-2004 has shown that;

- In the most deprived areas of Grampian, the Standardised Mortality Ratio (SMR) for cancer in people under 75 years is 138 compared to 85 in the most

affluent areas. **Put more simply, premature deaths from cancer are 38% above the Scottish average in deprived areas and 15% below in affluent areas.**

- SMRs from ischaemic heart disease in people under 75 years was 69 in the most affluent and 195 in the most deprived populations. **Premature deaths from ischaemic heart disease (“heart attacks”) are almost double the Scottish average in deprived areas and 30% below the average in affluent areas.**

Across the north of Scotland, there is a sense that the national approach to measuring inequality using extremes of deprivation, may not be sensitive enough to meet our needs in remote and rural areas. An alternative approach is being tested across the north of Scotland Health Boards to help understand inequalities across the whole population. I will report on the outcomes of this project in next year’s annual report.

Last year we described the use of Traffic Lights as a means of presenting data to highlight differences in health communities, initially in Aberdeen City. This approach has been well

Table 4: Deaths in 2005 for Scotland, Grampian and the three Local Authority areas.				
	Both sexes		Males	Females
	Number	Standardised Rate		
Scotland	55,747	10.9	26,522	29,225
Grampian	5,112	9.8	2,461	2,651
Aberdeen City	2,121	10.6	1,023	1,098
Aberdeenshire	2,048	8.9	972	1,076
Moray	943	10.3	466	477

Source: General Register Office for Scotland

received by Community Planning Groups and consequently has now been extended to all localities in Grampian. It has been praised by the Health Minister, who is keen to see the tool used to provoke action and to demonstrate progress.

Progress towards national inequality indicators is available on: <http://www.hi-netgrampian.org/hinet/1400.html>

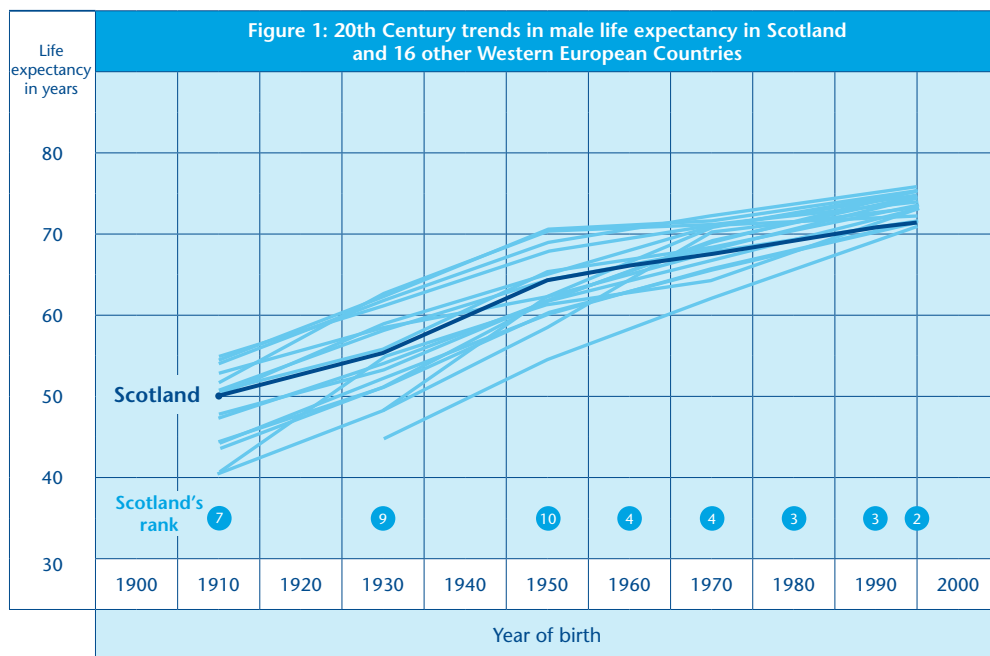
More data on comparative health at community level is available on: <http://www.nhsgrampian.org/trafficlighs>

More data and information on north

of Scotland inequalities project is available from Paddy.Hopkins@hbb.scot.nhs.uk

Ill health

In the past an indicator of ill health was the rate of admission to hospital for various conditions. In Scotland the principle policy document relating to health services is Delivering for Health (2005), which describes the main actions to be taken to implement the recommendations of the National Framework for Service Change. The National Framework had several main aims, including:



Source: David Leon et al 2002



- To ensure sustainable and safe local services.
- To view the NHS as a service delivered predominantly in local communities rather than in hospitals.
- To focus on preventative, anticipatory care rather than reactive management.
- To become a modern NHS using new technology.

- To develop new skills to support local services.
- To develop options for change with people, not for them.

As a result, care is being increasingly delivered within community settings, as close to the patient as possible. Measures of ill health taken from primary care (from health professionals working outwith

hospitals) will increasingly present a more accurate picture of the level of ill health within the Grampian population.

Quality Outcomes Framework (QOF)
The Quality & Outcomes Framework (QOF) is a voluntary system to remunerate general practices for providing good quality care to their patients, and to help fund work to further improve the quality of health care delivered. It is a fundamental part of the new General Medical Services (GMS) contract, introduced on 1st April 2004. The QOF measures achievement against a range of evidence-based indicators, with points and payments awarded according to the level of achievement.

There are several benefits of the information available through the introduction of the QOF.

- It enables individual practices to identify and prioritise practice developments.
- It enables NHS Boards and CHPs to consider practice developments, and identify areas of health inequalities at a local level.
- It assists NHS Scotland, and the wider public and independent

sector, in planning health services.

Table 5 shows the estimated prevalence of ten clinical conditions identified by the QOF for Scotland, Grampian and the three CHPs in 2005/2006. Prevalence is a measure of the amount of a disease in a population at a particular point in time.

Caution must be used when looking at these figures as prevalence is also affected by other factors such as:

- Health care seeking behaviour - people differ in the readiness with which they seek health care when they are not well.
- Access to services - people are more likely to consult for a condition if services are readily accessible.
- Diagnostic practice - it is impossible to completely standardise the methods clinicians use to make diagnoses.
- Data recording - there may be variations in the completeness and accuracy of practice records.
- The figures given are 'raw' prevalence figures as they have not been standardised by age or sex. That is, they take no account of how 'old' or 'young' a population is.

In addition the data presented on prevalence at the Grampian level is incomplete as it is taken from only the new GMS contract practices in Grampian, which comprise 67 out of a total 84 practices. However, the CHP level data includes all practices. Despite these limitations QOF data provides a useful basis for examining the burden of the ten clinical conditions. Table 5 shows that there is very little variation in the prevalence of these ten conditions across Grampian, and little difference between Grampian and Scottish figures. Grampian appears to have less chronic obstructive pulmonary disease (COPD) and hypertension (high blood pressure) than the Scottish figure, and appears to have more hypothyroidism (underactive thyroid).

Selected public health concerns

I would specifically like to highlight the following areas where public health intervention is essential to improve the health of the population and prevent ill health.

Illegal drug misuse

Illegal drug misuse continues to be a problem in Grampian. There were 23 drug-related deaths in Grampian in 2005; the vast majority of these caused by heroin/morphine. This is a reduction from previous years as seen in Table 6. The number of Scottish drug-related deaths peaked in 2002 and has declined since then, which is mirrored in Grampian. In 2002 Grampian had the second highest number of such deaths out of all 15 Scottish Health boards, second to Greater Glasgow. By 2005 Grampian's position was fifth.

However, there is no room for complacency, all drug-related deaths could be prevented.

Of course, drug-related deaths are only part of the picture of drug misuse. The Scottish Drug Misuse Database 2005 provides a large amount of information on the current misuse of illegal drugs.

Table 7 shows the number of new patients reported between the periods 2000/01 and 2004/05. The rate of new patients has increased in Scotland, Grampian and the three Local Authority areas over the two time periods. Grampian's rates are

	Scotland	Grampian	Aberdeen City	Aberdeenshire	Moray
Asthma	5.4	5.6	5.5	5.6	5.6
Coronary Heart Disease	4.5	4.1	3.9	4.1	4.4
Chronic Obstructive Pulmonary Disease	1.8	1.3	1.4	1.2	1.4
Mental Health	0.6	0.5	0.6	0.4	0.6
Hypertension	12.4	11.6	10.3	11.8	12.6
Cancer	0.7	0.7	0.7	0.7	0.8
Stroke and TIAs	1.9	1.7	1.6	1.7	1.9
Hypothyroidism	3.0	3.7	3.2	3.8	4.3
Epilepsy	0.7	0.7	0.7	0.6	0.7
Diabetes	3.4	3.2	2.9	3.2	3.6

Source: ISD Scotland ¹ Prevalence per 100 people.

	Scotland	Grampian
2000	292	31
2001	332	46
2002	382	47
2003	317	37
2004	356	39
2005	336	23

Source: General Register Office for Scotland

not as high as the Scottish rate, but there are variations across Grampian. In 2000/01 Aberdeen City had the highest new patient rate, by 2004/05 Aberdeenshire had caught up.

Of the 1010 new patients reported in Grampian in 2005, 788 were in the age group 20-34 years.

When looking at the types of drugs used, of the 1010:

- 699 were using heroin – 394 Aberdeen City, 234 Aberdeenshire, 71 Moray.
- 348 were using cannabis – 176 Aberdeen City, 122, Aberdeenshire, 50 Moray.
- 221 were using diazepam – 161 Aberdeen City, 36 Aberdeenshire, 24 Moray.
- 108 were using crack cocaine – 82 Aberdeen City, 19 Aberdeenshire, 7 Moray.

This reflects the anecdotal reports from those working in the health service that there is as much of a problem with heroin as ever and that a worrying development is the increasing use of crack cocaine.

A complete picture of the illegal drug misuse problem in Grampian can only be achieved by obtaining accurate prevalence data. A study carried out in 2001 and again in 2004 by the University of Glasgow (Table 8) estimated the prevalence of heroin use in the 15-45 years population. There has been an increase in the prevalence of heroin use across Scotland. The overall prevalence in Grampian is less than the Scottish prevalence. Within Grampian, Aberdeen City has the highest prevalence, being three times that of the prevalence in Aberdeenshire and Moray.

Table 9 gives an indication of the burden on the general hospital service from patients with drug misuse noted in their discharge form. The rates have increased in all areas. In the year 2004/05 Grampian had a higher rate than the Scottish rate and within Grampian the Aberdeen City rate was the highest of the three Local Authorities. Caution must be used with these figures as differences between the areas may be due to differences in clinician practice in recording drug misuse or differences in coding discharge forms. A real difficulty in the area of substance misuse is a lack of accurate

Table 7: New patients reported 2000/01 and 2004/05 in Scotland, Grampian and the three Local Authority areas.

	2000/01		2004/05	
	Number	EASR ¹	Number	EASR ¹
Scotland	10,581	219	14,332	302
Grampian	633	123	1,010	212
Aberdeen City	361	148	517	231
Aberdeenshire	204	111	416	241
Moray	69	88	85	118

Source: Scottish Drug Misuse Database 2005

EASR¹ = European Age Standardised Rate per 100,000 population

Table 8: Heroin prevalence estimates (age 15-45 population) in 2001 and 2004 for Scotland, Grampian and the three Local Authority areas.

	2004		2001	
	Estimated Numbers	Prevalence per 100 population aged 15-54	Estimated Numbers	Prevalence per 100 population aged 15-54
Scotland	55,800	2.0	51,582	1.84
Grampian	5,415	1.9	4,340	1.46
Aberdeen City	3,645	3.0	2,810	2.03
Aberdeenshire	1,372	1.1	1,220	1.10
Moray	398	0.9	310	0.70

Source: University of Glasgow Prevalence Studies

prevalence data. If we do not know how much of a problem we have and what type, accurate, responsive planning for health services and partner organisations is limited.

To find out more about the strategic direction, corporate action plans and profiles for alcohol and illegal drug misuse in Aberdeen, Aberdeenshire and Moray go to <http://www.alcoholinformation.isdscotland.org>

Sexual health

Sexually transmitted infections (STIs) are a major public health concern in the UK and locally in Grampian because STIs are becoming more common. Chlamydia is the most common treatable STI in Scotland. The rate of infection in Grampian is rising steadily in line with national trends.

Currently chlamydia detection within the female population is marginally higher in Grampian than the Scottish average. However, in the under 25 age group the detection rate is markedly higher. In a recent study, approximately 1 in 10 of those aged 16-24 years in Grampian tested positive for chlamydia. Therefore a

large pool of infection remains undetected in the population.

National data illustrates a slow decline in teenage pregnancy, which is mirrored in Grampian overall. Grampian is therefore expected to meet the Scottish Executive Health Improvement, Efficiency, Accessibility and Treatment (HEAT) target to “reduce by 20% the pregnancy rate (per 1000 population) in 13-15 year olds from 8.5 in 1995 to 6.8 by 2010” (baseline 1995). This trend is not reflected across all three Local Authority areas, with a high rate in Aberdeen City, and rates in Scotland remain among the worst in Western Europe. Most of these pregnancies are unintended and result in abortion.

Deprivation is correlated with sexually transmitted infections in addition to teenage pregnancy. That is, there is a higher prevalence of STIs in the more deprived populations than in the more affluent ones.

‘Improving Sexual Health in Grampian – an interagency strategy’ was launched in March 2006 and is a local partnership response to the national sexual health strategy ‘Respect and Responsibility’ (2005). Strategic activity is underway aiming

	2000/01 Rate ¹	2004/05 Rate ¹
Scotland	96	106
Grampian	85	127
Aberdeen City	153	213
Aberdeenshire	34	63
Moray	14	42

Source: Scottish Drug Misuse Database 2005
EASR¹ = European Age Standardised Rate per 100,000 population

to improve the sexual health and wellbeing of the population of Grampian and reduce inequalities in sexual health.

Breast feeding

Encouraging and supporting breastfeeding is recognised as an important public health activity. Breastfeeding in infancy is thought to have a protective effect against many childhood illnesses. Breastfed infants are likely to have a reduced risk of infection, particularly those affecting the ear, respiratory tract and gastrointestinal tract. This protective effect is particularly marked in low birth weight infants.

Other probable benefits include improved cognitive and psychological developments, and a reduced risk of childhood obesity. There is evidence that women who breastfed have lower risks of pre-menopausal breast cancer, epithelial ovarian cancer and hip fracture later in life.

The national target, set in 1994 and based on the UK wide Infant Feeding Survey 1990, states that by the year 2005 more than 50 percent of women should still be breastfeeding their babies at 6 weeks of life. Table 10 shows the feeding status of Scottish and Grampian babies at 6 weeks old in 2005 (provisional data).

All Local Authority areas in Grampian had a higher rate of the combined category 'exclusive breast milk/breast milk and formula milk' at 6 weeks of age than the Scottish rate. Aberdeenshire had the highest rate at 48.5%. However, overall Grampian fell just short of the 50% target.

Screening programmes

The take up rates of screening programmes in Grampian are typically high.

Breast Screening Programme

The aim of the programme is to detect breast cancers when they are very small, less than 10-15 mm ideally, so that treatment can be instituted at an earlier stage of the disease's development than would be the case without screening. It is known that when treatment is started earlier fewer women die as a result of their cancer and illness associated with treatment is also less.

In order to achieve this aim it is important to encourage as many women as possible to attend for screening and to provide a high quality programme so that as many

	Exclusive Breast Milk		Formula Milk		Breast Milk & Formula Milk		Total	Exclusive or Combination	
	Count	Row%	Count	Row%	Count	Row%	Count	Count	Row%
Scotland ¹									37.7
Babies in all Grampian practices ²	1,303	31.8	2,216	54.0	583	14.2	4,102	1,886	46.0
Babies in all Aberdeen City practices ²	504	29.6	930	54.6	270	15.8	1,704	774	45.4
Babies in all Aberdeenshire practices ²	594	35.2	869	51.5	224	13.3	1,687	818	48.5
Babies in all Moray practices ²	205	28.8	417	58.6	89	12.5	711	294	41.4

SOURCE: ¹ Preschool Child Health Surveillance Programme. ² NHSG Breast Infant Audit.

cancers as possible are detected, especially small ones. However, no programme is infallible and it is inevitable that a few cancers will be missed. In a high quality programme the aim is to try to ensure the number which are missed is kept as low as possible.

In Grampian, breast screening uptake is quite stable and was 82.7% in 2004/05 compared to a Scottish uptake of 76.3%. Uptake of breast screening in Grampian has always been high. However, these figures conceal a significant difference in the percentage of women who attend when they receive their first invitation to screening (prevalent

uptake) and those who attend following subsequent invitations (incident uptake). In 2004-05, 3,687 women in Grampian were screened for the first time. This represented 68.6% of those invited for the first time. However, in the same year 9,254 women responded to subsequent invitations, which represented 90.1% of those being invited. The comparable Scottish figures are 58.6% for prevalent uptake and 86.1% for incident uptake.

Cervical Screening Programme

The main aim of cervical screening is to reduce the mortality and morbidity associated with cervical

cancer by inviting women between the ages of 20 and 60 to attend every 3 years for a smear test. The number of cases of cervical cancer and deaths from the disease has fallen markedly in the years since smear tests were first introduced with the result that cervical cancer is now ranked as the 10th most common cancer in women in Scotland.

The uptake data for the quarter ending 30/9/05 from the call/recall system suggest, for the first time, that the 3.5 year uptake in Grampian has dipped below 80% at 79.6% of eligible women and 74.7% for all women. These data tend to differ

from the nationally provided uptake rates as ISD uses a different population denominator from the call/recall system. Nonetheless, both systems are suggesting a similar, long-term decline in attendance for a cervical smear. The reasons for this are not clear. It may be that the emphasis now on obtaining informed consent prior to screening has encouraged more informed refusal from women who have decided that they do not want to have a smear. Another possible factor is that since the early days of cervical screening many more screening programmes have been developed and it is possible there is a growing feeling of "screening fatigue" amongst some women who are subject to multiple invitations for screening.

Diabetic Retinopathy Screening

Diabetic retinopathy (eye disease) results from damage to the blood vessels in the retina, which is the nerve layer at the back of the eye. In the early stages this causes no symptoms but if left undetected and untreated it can go on to cause blindness. In fact diabetic retinopathy is the biggest single cause of blindness among adults of working age in Scotland. However, progression of the condition can be prevented by

laser treatment especially if, at the same time, there is tight control of blood sugar levels and blood pressure. It is estimated that up to 10% of diabetics have retinopathy requiring specialist ophthalmology treatment or follow up.

The healthcare needs of people with diabetes are a national priority for the NHS and work has been ongoing to rollout screening for retinopathy across Scotland in 2006.

Diabetic Retinopathy Screening started in Grampian in April 2002 as one of three pilot sites. The aim is to invite every year all those diagnosed with diabetes over the age of 12.

The objective is to detect, at an early and treatable stage, the changes in the retina caused by diabetes and offer appropriate clinical management and follow up where changes are observed.

The service is delivered from one fixed clinic in Aberdeen and two mobile units covering Aberdeenshire and Moray. It is the GP's responsibility to refer newly diagnosed diabetics to the screening service. Once the referral has been made the patient's details are entered onto the Diabetic Retinopathy Screening database and



an appointment for their first screening test is sent out. The results of the screen are sent directly to the patient and copied to the GP.

Since the screening programme started the numbers being called has increased steadily. So in 2002 approximately 10,000 patients were being called. As of January 2005 this number had risen to over 17,350. As obesity and diabetes with which it is associated become increasingly common it is expected that the numbers requiring to be screened will also continue to rise.

Bowel Screening

NHS Grampian, along with NHS Tayside and NHS Fife, has been piloting screening for bowel cancer for over 4 years. A similar pilot has been undertaken in a number of health authorities in England. The programme offers men and women aged 50 to 69 a test designed to look for blood in the stool. A testing kit is sent to the person's home every 2 years. The aim of the pilots was to establish if the benefits, which were observed in large-scale trials of bowel screening, would also be achieved when a service was offered to a population. There was also a need to establish whether screening

whole populations was feasible and what problems needed to be addressed before screening was rolled out across the country.

To date uptake has been satisfactory in all three of the pilot sites with Grampian generally having the highest uptake. In the second round, the most recent for which data are available, uptake in Grampian was 55%, in Tayside 54.4% and in Fife 51.1%. It has also been shown in all three areas that women are more likely to do the test than men. So in Grampian 50.8% of men completed the kit compared to 59.2% of women. In Tayside the comparable figures were 50.6% compared to 58% and in Fife the figures were 47.8% for men and 54.2% for women. However, men are at greater risk of developing the disease and so would benefit more from taking part in screening. From birth to age 64 the lifetime risk of developing bowel cancer is 1 in 59 for men and 1 in 85 for women. From birth to 74 this rises to 1 in 27 for men and 1 in 38 for women.

Bowel cancer is a common cause of cancer in Grampian. For men in 2004 it accounted for 95 deaths second only to lung cancer from which cause

there were 133 deaths. In women there were 86 deaths ranking third behind lung cancer, which caused 139 deaths and breast cancer from which cause there were 98 deaths.

Now two rounds of screening have been completed the results are encouraging and clearly demonstrate that screening for bowel cancer on the large scale is practical. From May 2005 the third phase of the pilot in Scotland has been run as a prelude to the roll out of bowel screening to the whole of Scotland from April 2007.

Guthrie Screening

As well as having general medical examinations to check for problems such as heart murmurs, babies a few days old, have the opportunity to be tested for three specific metabolic disorders; phenylketonuria, congenital hypothyroidism and, from 2003, cystic fibrosis (CF). The test involves taking four spots of blood from a heel prick. The blood is collected on to a specially designed card (the Guthrie card) which is sent to the Newborn Screening Laboratory at Yorkhill Children's Hospital in Glasgow. This laboratory undertakes the analysis of these tests for the whole of Scotland. Considerable work in recent years

has gone into producing detailed information to explain the nature and purpose of the tests so that parents, when they agree to the tests, understand what is being offered and the seriousness of the conditions being tested for. Both phenylketonuria and congenital hypothyroidism can be prevented with relatively simple lifelong treatments. Untreated they both lead to severe and irreversible mental impairment. Cystic fibrosis results in a failure to thrive because the baby is unable properly to digest its food. Lung secretions are thickened leading to repeated respiratory infections which over time cause progressive lung damage and loss of function. With treatment, also lifelong, the outlook for young people with CF has improved steadily over the years. There are now as many adults in Grampian living with CF as there are babies and children.

Since the introduction of informed consent, there has been a significant increase in the number of parents nationally refusing tests particularly for cystic fibrosis screening and in refusing permission to allow the Guthrie cards to be stored for more than 12 months.

Universal Neonatal Hearing Screening

At the end of 2004/05 NHS Grampian identified resources to allow the implementation of universal neonatal hearing screening early in 2005/06. A project manager has been recruited and a programme of training in hearing screening rolled out across Grampian for the screeners and midwives involved in the testing. The screening programme will be run using a national IT system that is already up and running in England. It is being purchased on an all Scotland basis so that economies of scale are achieved.

The aim is to detect babies with a hearing impairment early so that measures can be put in place, including the fitting of hearing aids, to reduce the impact of their disability. Evidence has shown that deaf children treated before the age of one year are less impaired by their deafness in acquiring speech and language skills and also in socialising with others.

Pre-School Surveillance

This is a wide ranging programme which starts soon after the baby is born and is designed to promote the health and well-being of babies as they grow to age 5 when they enter school.

The national Information Management and Technology (IM&T) strategy states that boards should put in place the three national information systems to support child health screening. These are the pre-school surveillance system, the special needs system and the school health system. So far in Grampian only the special needs system has been fully implemented. Several attempts have been made to introduce the pre-school system to Grampian practices until now without success. There were two main barriers to implementation. Computerised data collection systems were already in place in primary care leading to a reluctance to introduce another, which could result in duplication of effort and extra funding was required to support data entry and collation. This funding has now been secured and plans for implementation are underway.

School Health

Throughout their time at school children have their health and development checked from time to time by the school nursing service. Checks mostly concentrate on vision and hearing and also height and weight with increasing emphasis in



recent years on promoting good health.

The national computer system, which is available to record data generated from the school health checks, has been piloted successfully in two secondary schools in Aberdeen and their feeder primaries. Additional resource is required to roll the system out to all schools in Grampian and has now been secured.

Immunisation

The full implementation of the Scottish Immunisation Recording

System (SIRS) took place in 2005/6 in Grampian, which has improved the accuracy of recording of uptake by almost 5% in some immunisations. This involved a considerable effort from GP Practices and Practitioner Services Division.

Our audit of immunisation uptake in 2004 demonstrated that Grampian children were getting vaccinated at a level equal to or above the national average. However, the recording of those vaccinations on the SIRS system was poor because there was limited incentive for practices to promptly inform the system of the

immunisations they had given. This is because the SIRS system was not used in Grampian to call children for immunisation appointments and it had only limited relevance to payments made to GPs for immunisations given.

The full compulsory implementation of SIRS was not completed until mid-May 2006. Aberdeen City practices went live at the end of January, Moray in March and Aberdeenshire in mid-May.

A key part of the implementation was that practices were required to update their childrens' records on SIRS in the period immediately prior to going live (i.e. using the system to identify which children should be called for appointments). But it was not until practices had been using SIRS for a number of weeks that their data on the SIRS system became reliable.

This means the SIRS system did not hold accurate records of immunisations for all Grampian children until mid-June 2006.

The most recent analysis of SIRS immunisation uptake data (covering July to September 2006) is the first

one to use the updated data. It therefore more reliably reflects the true level of current immunisation uptake in Grampian children.

Table 11 compares the recorded uptake of immunisation in 2005 with the uptake recorded during the most recent quarter of 2006 (which used the updated data). It demonstrates the anticipated increase in recorded uptake resulting from SIRS implementation.

Mental health

The Mental Health (Care and Treatment) (Scotland) Act 2003 came into effect in October 2005. In Grampian a multi-agency Action Plan had been developed over many months to ensure its smooth and effective introduction and this has been fully and successfully implemented.

The Act has enabled significant investment in both health and social care services in order to maximise the care and support to people with mental health problems and their carers in Grampian.

Table 11: Recorded uptake of immunisation 2005 compared with most recent quarter of 2006.

	January - December 2005	July - September 2006
Update of Hib at 12 months of age	93.4%	97.4%
Uptake of MenC at 12 months of age	87.2%	98.1%
Uptake of Hib at 24 months of age	96.0%	96.7%
Uptake of MenC at 24 months of age	91.0%	95.6%
Uptake of MMR at 24 months of age	90.5%	92.7%

Source: SIRS



Section Three

Making choices in health care: a public and population health perspective

The example of health technology assessment

A population perspective on health involves looking at the overall impact on the whole population of any actions taken in health and health care. This includes considering the balance of actions to promote health and well being, to prevent disease, to treat disease and to rehabilitate and care for those with established disease. Public health practitioners take this population approach.

There are three main areas of public health practice.

- Health protection, mainly against infectious diseases, by public health measures and immunisation. Much of this

goes on unnoticed – indeed success may be reflected by lack of disease and hence invisibility. But it also includes screening programmes for e.g. cervical cancer.

- Health promotion, by informing the public of lifestyle measures to reduce the risk of disease and by understanding the environmental, psychological and social issues which impact on behaviour and promote health and well being.
- Health service planning, by providing information on the population impact (costs and benefits) of different interventions in health care.

Our overall aim is to improve the health of the people of Grampian by the most appropriate mixture of interventions, ranging from promoting healthy public policy, establishing specific health promotion actions, preventing disease where that is possible, screening for undetected disease if that is practical and then treating it early, to provision of effective and equitable health care.

Improving health could be by extending life (“adding years to life”), or by improving the quality of life (“adding life to years”). We need to consider not just the present patients and their problems, but future needs. So if there is new money to spend on, for example, heart disease, we

need to consider how much to allocate to health promotion, treatments for high cholesterol, coronary artery bypass grafting, faster treatment of heart attacks, or palliative care for advanced heart failure.

The public health contribution to health care planning involves;

- Needs assessment – looking at the current prevalences of diseases, the trends over time so that we can estimate future prevalences, and the outcomes of each disease. For example, how many children in Grampian have diabetes at present; how many new cases occur each year, and what happens to them.

- Health care planning – what services do we need now, and in the future; and consideration of the whole spectrum of health interventions from prevention to treatment. This includes “health technology assessment” – see below.
- Evaluation of services – did they achieve the health benefit required? Sometimes there are no effective treatments, and we use links with national research programmes to suggest topics for new research.

Health technology assessment (HTA) poses three main questions:

- Does it work?
- At what cost?
- Is it worth it?

Since funds for health care are always finite, it is never possible to provide every form of care that may do some good for some people. Hard choices have to be made. HTA is a form of policy analysis that helps decide what to fund and what not to fund.

Tensions arise mainly when a new intervention is clinically effective but not cost-effective, usually because the benefit is small and the cost high.

Does it work?

The first question is about clinical effectiveness. The key information is not whether a new drug is better, but how much better it is, taking into account both benefits and adverse effects. The effect size is vital in the economic analysis that follows evidence of clinical effectiveness.

There are often subsidiary questions – does it work for all people with the condition, or are there subgroups with more or less benefit?

At what cost?

This question may look simple, but is not. For example, cancer specialists often have to use expensive drugs. However in cost-effectiveness analysis, we should look at the whole cost of care with and without the new drugs. A new drug may have fewer side effects, or require less laboratory monitoring, or may be given orally and not require admission to a day case or in-patient bed for intravenous infusion. There may therefore be savings to offset against the increased cost.

Cost-effectiveness – “is it worth it”?

As mentioned above, for cost-effectiveness analysis, the issue is usually how much better a new drug



or other intervention is than the previous best treatment. The benefit can be of two kinds or both.

- Improved survival.
- Improved quality of life.

We can express both of these in a summary measure called the “quality adjusted life year” or QALY.

For example, a year of life of poor quality – say only 75% of normal quality – would give 0.75 QALY. Then we can add a cost to that and estimate the cost per QALY.

The cost per QALY is in effect being used to judge opportunity cost. If we fund a new cancer drug, we have to do without some other form of care.

The question is never about the value of life or other such philosophical questions. It is never about “should we spend £200,000 to prolong a life” but always about “if we have £200,000, how can we maximise the health gain achievable with that”.

The National Institute for Clinical Excellence (NICE) uses a cost of around £30,000 per QALY as a guide to what is cost-effective.

Conflicts

Conflict of views is inevitable at times. If a new drug (or other technology) is both clinically and cost-effective, peace and harmony reign. If it is not clinically effective, clinicians should not use it, and so economic appraisal is unnecessary.

Problems arise when a drug is clinically effective (in that it provides some advantage over current best treatment) but is too expensive (again, looking at the total cost of the care package) to be cost-effective.

Clinical freedom is about choice – the freedom of the clinician to choose whatever he or she thinks is the best treatment for the individual patient. Health economics is also about choice – making the best use of limited resources by choosing how best to allocate them. The public health view has also a much wider perspective – patients across all disease groups, and both now and in the future: prevention, screening, early diagnosis, treatments, and palliative care.

This means that consideration of overall population health means that the NHS Board can be advised not to



fund a particular treatment. Such decisions can be unpopular when a drug is clinically effective, because the public, in their role as patients or potential patients, want the best possible care. (Though in their other role as taxpayers, they prefer not to pay more tax.)

One problem with using the cost per QALY as a common currency is that opportunity cost is not well understood by the public. It might be easier if we always linked saying no to one item with saying yes to another. For example, if we said “we are not funding temozolomide for brain cancer; the funds will instead

be used for new drugs for diabetes; we can’t afford both” then the public would have a clearer idea of the realities of health care finance.

For example, in the media frenzy about Herceptin in breast cancer, the women with early breast cancer were highly visible, but the people who would be harmed if Herceptin were funded, because they would be deprived of care, were invisible.



Section Four

Obesity

Overweight and obesity are steadily increasing and are the result of societal and environmental influences, life circumstances and individual lifestyle. Obesity has an impact on physical and mental health and is a significant contributory risk factor for a range of chronic conditions. It is also anticipated that the treatment of obesity and its related illnesses will place an ever-increasing strain on NHS Grampian resources.

Obesity is a key public health issue and it is an NHS Grampian priority because it:

- Can affect children and adults, men and women.
- Reduces life expectancy by between 3-13 years.

Overweight and obesity are terms used to describe increasing degrees of excess body fat accumulation associated with risks to health.

Traditionally, overweight and obesity ranges have been assessed through the use of the Body Mass Index (BMI), which is defined as a person's weight in kilograms divided by the square of their height in metres (kg/m²). According to the WHO, in adults a BMI of 25 to 29.9kg/m² is defined

as 'overweight', a BMI of 30 to 40 kg/m² or more is defined as 'obese' and a BMI of over 40kg/m² is defined as 'morbidly obese'.¹

For example: A 5 foot 5 inch tall woman (1.65m) would have a BMI of

- 21 if she weighed 9 stones (57kg)
- 26.8 if she weighed 11.5 stones (73kgs)
- 32.6 if she weighed 14 stones (89kgs).

A 6 foot tall man (1.83m) would have a BMI of

- 20.9 if he weighed 11 stones (70kgs)
- 26.6 if he weighed 14 stones (89kgs)
- 32.3 if he weighed 17 stones (108kgs).

However, BMI does not distinguish between mass due to body fat and mass due to physical physique so alternative measuring methods such as waist circumference are also used for those with a BMI less than 35.

The following levels (Table 12) for men and women for waist show the increased relative risk of coronary heart disease with increasing waist circumference.

The simple BMI classification for obesity in adults is not applicable to children. This is because the ratio of weight gain to height gain changes during normal growth. The age and sex-specific reference measurements for children are based on UK national reference data for children's BMI in the form of centile (percentage) charts by age and sex.

The impact of weight on health

Table 12: Waist measurements indicating increased risk of CHD		
	Increased Risk	Substantial Risk
Men	Greater than 94 cm (37 inches)	Greater than 102 cm (40 inches)
Women	Greater than 80 cm (32 inches)	Greater than 88 cm (35 inches)

Source: SIGN Guideline No 8

Complications of weight gain are many and include a greater risk of:

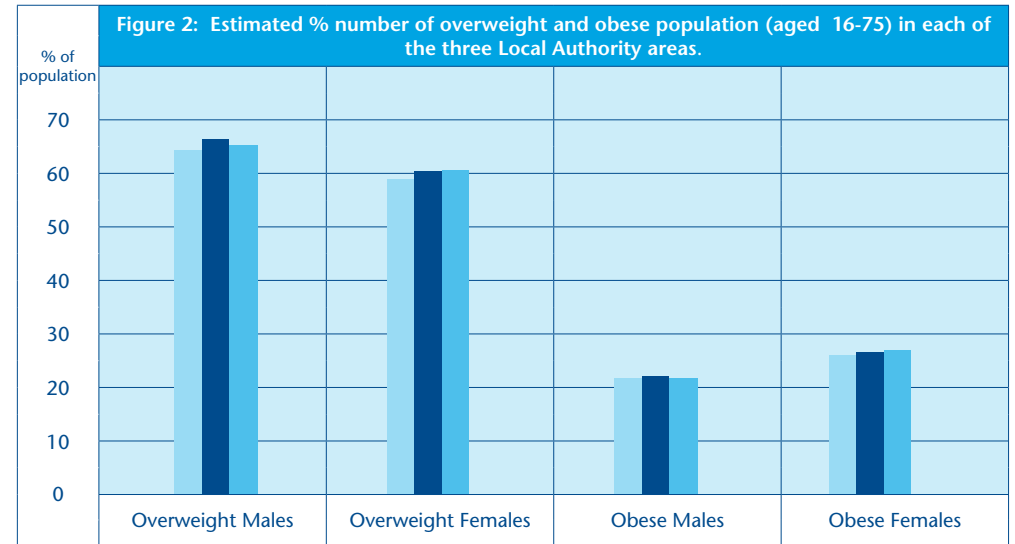
- Type 2 diabetes.
- Raised blood pressure: progressive with weight gain, especially with abdominal obesity.
- Stroke: related to blood pressure rise.
- Hyperlipidaemia (fats in the blood) and a low HDL 'good' cholesterol level.
- Coronary heart disease (angina and heart attacks): related to increased lipids and high blood pressure.
- Gallstones, especially in women.
- Cancers: postmenopausal breast, endometrial (lining of the womb), ovarian, gallbladder and colon (bowel) cancers.
- Breathlessness, respiratory disease, sleep apnoea.
- Menstrual abnormalities and hirsutism (excessive face and body hair).
- Pregnancy complications: increased risk of neural tube defects, perinatal mortality, high blood pressure, toxæmia, gestational diabetes, preterm labour, Caesarean section and hospitalisation.
- Weight-related musculo-skeletal disorders and arthritis with back, joint and foot disorders.

- Stress incontinence.
- Psychological impact, which often goes unrecognised: social isolation, low self-esteem, depressive cycles, binge eating, night eating and reduced employment prospects.
- Disability, which may lead to early retirement on reduced income.

Obesity also limits an individual's quality of life through reduced energy levels, functional ability and mental wellbeing.

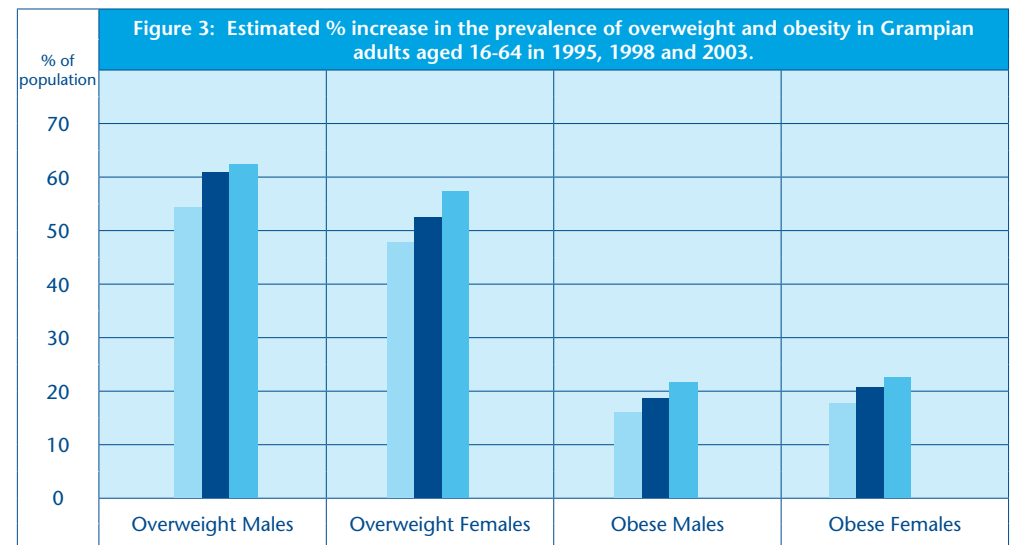
If you lose weight, your risk for these conditions is reduced.

Where you carry body fat is important. If fat accumulates mostly around your stomach (sometimes called apple-shaped), you are at greater risk for type 2 diabetes, high blood pressure, high cholesterol, and coronary artery disease than people who are lean or people with fat around the hips (sometimes called pear-shaped).



Source: Scottish Health Survey (2003).

■ Aberdeen ■ Aberdeenshire ■ Moray



Source: Scottish Health Survey

■ SHS 1995 ■ SHS 1998 ■ SHS 2003

Obesity in children

Studies provide good evidence of an association between childhood obesity and cardiovascular and other risk factors. Obesity in childhood is associated with a number of other illnesses:

- The risk of developing asthma and the worsening of pre-existing asthma.
- Abnormalities of foot structure and function.
- An increased risk of type 1 diabetes.

Obese children are more likely to show evidence of psychological distress than are non-obese children and the effect is greater for girls than for boys. Obesity in childhood and adolescence is also associated with poor self-esteem, being perceived as unattractive, depression, disordered eating, bulimia and body dissatisfaction.²

Estimated prevalence

Figure 2 shows the estimated number of overweight and obese people aged over 16 years in Grampian Local Authority areas. The percentages are very similar across the three areas.

These were calculated by taking the obesity rates (which are specific to age groups) found among those Scottish residents who participated in the Scottish Health Survey (2003) and applying them to the population in each age group of the Local Authority populations.

This assumes that the rates in Grampian are the same as in the rest of Scotland, which may not be the case. The calculations can only give an estimate of the actual prevalence of obesity in Grampian. However these estimates suggest that;

- 43% males and 34% females are overweight.
- 22% of males and 26% of females are obese.
- 1.6% males and 3.4% females are morbidly obese.

The lack of Grampian specific data is a serious weakness in health services planning for prevention and treatment.

Figure 3 highlights the estimated increase in obesity since 1995, again based on the Scottish average. This rapid increase in such a short period is of great public health concern.

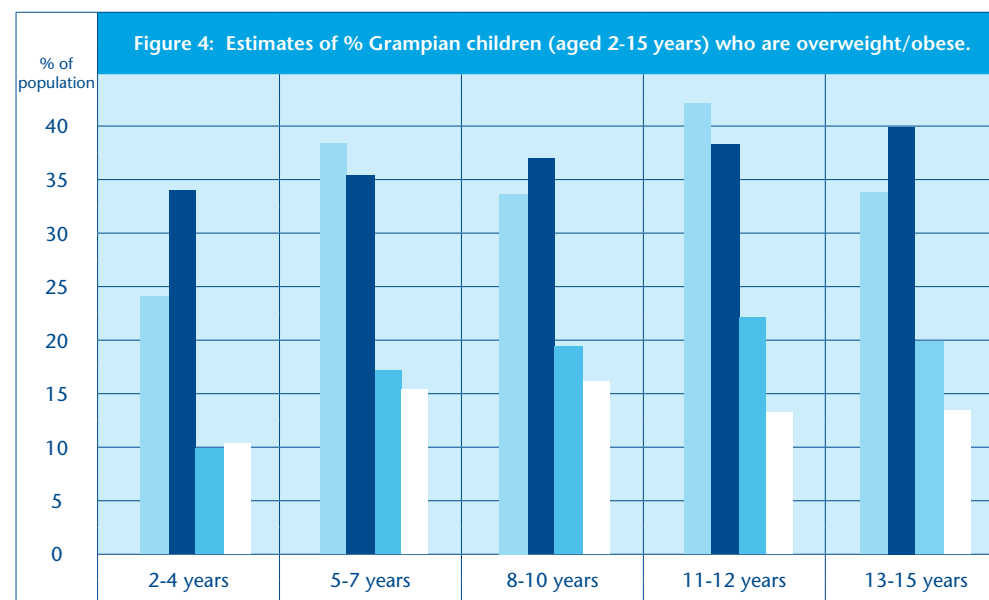
Figure 4 highlights the estimated proportions of children who are overweight and obese, again based

on the Scottish average. Obesity increases with age for the younger children, but appears to level off in adolescence. Around 35% of boys and 30% of girls aged 2-15 years can be classified as overweight or obese in Grampian.

A local study of primary school children in Aberdeen found that the prevalence of obesity had declined from 14.7% in 1997 to 10.2% in 2004. (Mitchell, McDougall and Crum, 2006) While this is a

reassuring finding, it is essential that Grampian has robust, comprehensive data on weight in primary school children from the School Health Screening programme. This will provide a firm baseline on which to base local policies and actions and evaluate outcomes.

Limited survey data suggest that the prevalence of obesity rises with increasing socio-economic deprivation.



Source: Scottish Health Survey 2003

■ Overweight Male ■ Overweight Female ■ Obese Male □ Obese Female

Causes of obesity

Many factors play a part in causing overweight and obesity. There is a genetic element to the metabolism and distribution of body fat. Genes appear to influence the metabolism and distribution of body fat, and are thought to contribute 25-40% to the causes of overweight and obesity.

However, the rapid increase in levels of obesity throughout the developed world has occurred in too short a time to be caused by genetics. This so called 'epidemic' has been brought about mainly by the consumption of a more energy-dense (high calorie) diet and a more sedentary way of life.

For many people there has been a general reduction in activity during daily living (for example, less walking, greater use of cars, more use of escalators and lifts), and also reductions in the amount of physical education and sport carried out at school and at home.

The marked rise in sedentary behaviour is associated with increased time spent watching television, playing computer games, surfing the internet and using the telephone.

There may be a wider societal and political context to these changes. These include, for example; the loss of school playing fields; the lack of a safe environment in which to walk or cycle to school or for physical play at the home; transport policies that favour driving above cycling or walking; a food industry that targets children with advertisements for high energy foods, and health promotion policies that fail to target appropriate dietary change or address issues of health inequality.

Cost of obesity

As the vast majority of cases go untreated the true cost of the obesity 'health-time bomb' remains unknown. Even so, only 2% of the £171 million spent on treating obesity and its consequences by NHS Scotland (based on prevalence rates in 1998 and therefore a conservative estimate) is allocated towards treating the condition itself. The remaining costs are consumed by the treatment of related conditions and illnesses such as high blood pressure, diabetes and heart disease. Furthermore the National Audit Office estimate that the health costs



are only 18% of the total societal costs resulting from obesity and related disease. Obesity is therefore a condition with significant cost consequences that rank second only to smoking as a cause of burden upon the health service. Given the recent rapid rises in levels of obesity the cost to individuals in terms of poor health associated with obesity and the costs to the NHS of treating it are likely to rise significantly.

Treatment and prevention

The effects of interventions to treat overweight and obesity are modest

and difficult to sustain. Evidence suggests that for obese children and young people, weight maintenance is an acceptable goal, through sustained behavioural changes including increased physical activity.

Moderate weight loss of 5-10% in obese individuals is associated with important health benefits, particularly in a reduction in blood pressure and a reduced risk of developing type 2 diabetes and coronary heart disease. The scale of the problem, however, dictates that prevention must be the focus of a strategic approach.

Challenges for NHS Grampian

Overweight and obesity are steadily increasing and are the result of societal and environmental influences, life circumstances and individual lifestyle. Obesity has an impact on physical and mental health and is a significant contributory risk factor for a range of chronic conditions. It is also anticipated that the treatment of obesity and its related illnesses will place an ever-increasing strain on NHS Grampian resources.

Many of the contributing factors towards overweight and obesity are part of the fabric of our society and can only be addressed by sustained and concerted action through multi-disciplinary partnerships across all sectors.

NHS Grampian must assume responsibility for providing a vision and a strategic lead given the impact obesity has on the health of the population. Three strategic strands requiring specific and integrated planning have been identified - prevention, treatment and weight maintenance. The NHS Grampian Healthy Weight Strategy is currently in draft form and NHS Grampian will work with colleagues across the

health service and partner agencies to ensure that all are working towards the same strategic goals.

A clear strategic direction will require:

1. A shared recognition of the importance of obesity.
2. A shared strategic approach to prevention.
3. The effective co-ordination and delivery of integrated quality, cost-effective patient care appropriate to individual need.
4. The promotion of the self-care agenda encouraging individuals to take responsibility for their own and their family's weight.
5. Commitment from the community and the public, private and voluntary sectors to ensure that a strategic approach is endorsed and supported across all sectors.
6. Implementation of the National Child Health Surveillance Systems and continuation with the Adult and Youth Lifestyle Surveys until these gaps in data are filled.

A strategic approach, with co-ordinated activities for prevention, treatment and weight maintenance in Grampian will enable closer working practices between all partners and stakeholders and co-ordinate existing activities, services and practices within NHS Grampian. Arresting the recent rapid rate of increase in levels of obesity and overweight, never mind reducing the level of prevalence, will require a sustained and concerted effort over a prolonged period of time.

Grampian is famous for having the finest natural produce on its doorstep – including fish from the sea, salmon, beef, lamb, venison, whisky and cheese. We should make the most of this local produce to encourage healthy eating and lifestyles across Grampian.

What do we mean by working with partners? The following gives examples of the types of actions partner agencies can undertake.³

Scottish Executive

- Almost all the Executive's policies influence the determinants of health; policy making at the centre will affect the wider influences and causes of obesity.

Local Authority

- Commission health impact assessments of Local Authority policies (e.g. regeneration plans, housing plans, transport plans, leisure services, catering).
- Provide leisure services for appropriate physical activity.
- Provide safe walking/cycle routes.

Local educational institutions

- Encourage healthy schools initiatives.
- Train professional and voluntary sector personnel in basics of dietary and exercise advice.

Local commerce and industry

- Provide healthy catering and exercise facilities for staff.
- Sponsor community programmes.
- Provide support materials or facilities.

Local media

- Provide information and encouragement to promote healthy eating, everyday physical activity.

Food industry

- Practical advice on healthy eating.
- Advertising policies.
- Helpful labelling and packaging of food.

- Continuing work already underway by manufacturers to reformulate products, and work looking at how appropriate portion sizes can help reduce sugar, fat and salt intake.

Who is doing what at the moment?

Treatment of obesity in Grampian currently focuses on interventions within a number of services:

- Primary care (some GP practices offer weight management).
- Community dietetic department
This work includes;
 - Training for Primary Care Health Professionals.
 - Support for practices to facilitate weight management (e.g. Moray Food and Health Project weight management care pathway, Adult and Children's guideline on assessment and management of overweight and obese children developed and distributed (Shire/City).
 - Face to face clinical contact with patients referred from

a variety of sources (mainly GPs and Health Visitors) – overweight/obese patients account for approximately 50% of clinic contacts.

- Group education sessions.
- Joint working on a range of NHSG initiatives including Healthy Helpings weight management programme, Key Nutrition Messages, Smoking Cessation and Weight Gain.
- Secondary care (including the Nutrition Clinic and the Bariatric Service).

Better integration of these services would improve the pathway of care and address gaps and overlaps in provision that currently exists. There is also a requirement to further develop skills within primary care in order to move more services into that sector (the Grampian Diabetes Care Model is an example of this).

Public health activity in Grampian implements strategic approaches to lifestyle issues (food, physical activity, breastfeeding, mental health and Healthy Working Lives).

The Healthy Helpings (HH) weight management programme is core funded through Public Health and is being reviewed and redeveloped in partnership with Community Dietetics. The programme comprises 8 weekly 1-hour sessions and is designed to offer a generic approach to weight management useable in a variety of settings by trained facilitators.

Healthy Helpings will be piloted in two stages, initially in two settings (Primary Care and Community) in early 2007 followed by a wider pilot in a broader range of settings. Following successful piloting it is anticipated that the Healthy Helpings Programme will be rolled out with the support of CHPs later in 2007.

A number of initiatives are lead by Local Authorities (Health Promoting Schools, Hungry for Success, Nutritional Guidance for Early Years, Active Schools). Paths for All, Jog Scotland and commercial weight management programmes (e.g. Weightwatchers) are also offered in the private/voluntary sectors.

We need to build on these many initiatives through the Healthy Weight Strategy to achieve a

coordinated, whole population approach to this major public health issue.





Section Five

Diabetes

We need to do more to help people understand the longer term risks of diabetes and accept the importance of modifying their lifestyle to either avoid getting type 2 diabetes, or control it if they already have it. Our aim is to encourage lifestyle changes, which will halt the increase in type 2 diabetes in Grampian.

Diabetes is a common disease and is becoming more so. There are two main types:

- Type 1 (formerly known as insulin-dependent diabetes) in which insulin is required to maintain life. The annual incidence (the number of new patients developing diabetes each year) of diabetes in Scottish children has trebled over the last 30 years.
- Type 2 (formerly known as non-insulin dependent diabetes, or maturity onset diabetes) which usually comes on in middle age or later; usually in people who are overweight. Initial treatment is with diet, but tablets are added if diet alone does not

control blood sugar levels, and over time many people progress to needing insulin.

Type 2 is much more common than type 1 – about 85% of people with diabetes have type 2. It is sometimes called “mild diabetes” but this is wrong – if not controlled it can have serious consequences and many diabetics who need dialysis for renal failure have type 2 diabetes. The age of onset appears to be falling, and there are now children in Scotland with type 2 diabetes.

Diabetes is an important public health problem for the following reasons.

- About 3.4% of the people of Grampian are known to have

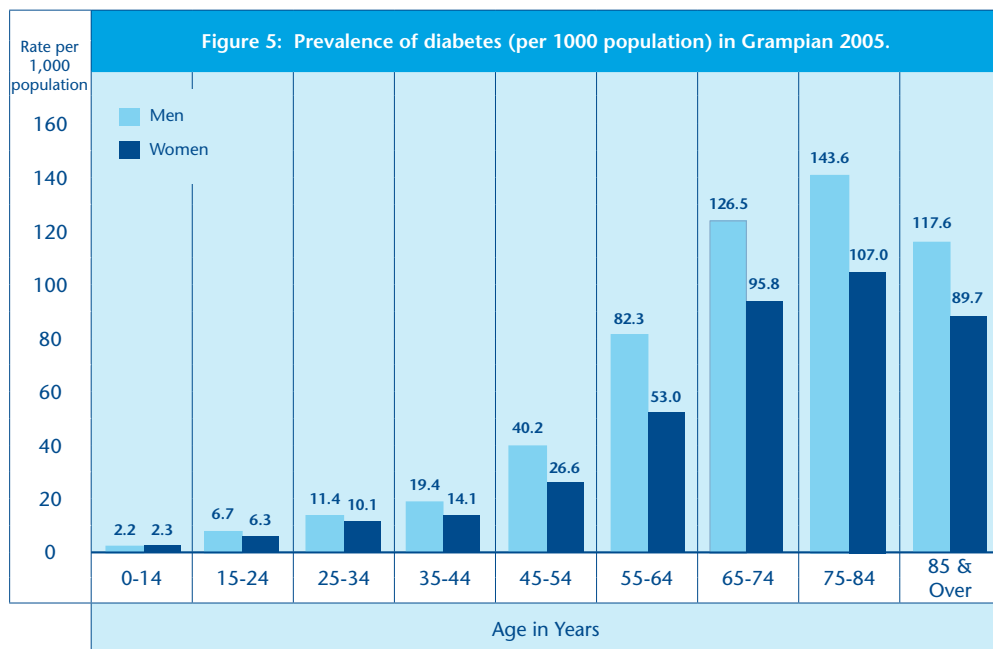
diabetes, and there will be others with undiagnosed diabetes.

- Despite advances in treatment, it can have serious health consequences.
- Some diabetes could be prevented by lifestyle measures such as avoiding becoming overweight and/or obese, and by undertaking physical activity.
- Diabetes is very costly to the NHS. Most of the cost is for hospital treatment of the complications of diabetes such as kidney failure leading to dialysis, or arterial (blood vessel) disease leading to heart attacks,

strokes and limb amputations. It is estimated that between 5% and 10% of all NHS expenditure is for diabetes and its complications.

- There have been calls for population screening for type 2 diabetes, because many people with that form are undiagnosed, yet may be developing complications such as heart disease.

Figure 5 shows the age distribution of diabetes in Grampian. The number of people with type 2 diabetes has been increasing, in line with trends in overweight, and the increasingly elderly population. There are about 19,000 people with diabetes in



Source: Grampian retinopathy screening service.

Table 13: Prevalence of diabetes according to the Scottish Index of Multiple Deprivation.

SIMD quintile	Prevalence %	Standard ratio Grampian = 100
1 - Most affluent	2.9%	84
2	3.3%	95
3	3.6%	102
4	4.0%	114
5 - Least affluent	4.5%	128

Source: Scottish Index of Multiple Deprivation (SIMD), 2005.

Grampian at present. The ageing of the population alone will increase that to over 20,000 in 2011 and almost 22,000 in 2016. But the number with the condition will increase by more than that unless we can halt or reverse the trends in increasing overweight and low levels of physical activity.

Inequalities

There are socio-economic variations in the prevalence of diabetes, mainly due to higher prevalence of type 2 diabetes in less affluent areas. This correlates with lifestyle and the prevalence of overweight and obesity. Conversely, childhood diabetes appears to be more common in the more affluent areas of Scotland. Table 13 shows the prevalence of diabetes according to the SIMD (Scottish Index of Multiple Deprivation) score – there are differences even within a relatively affluent area such as Grampian.

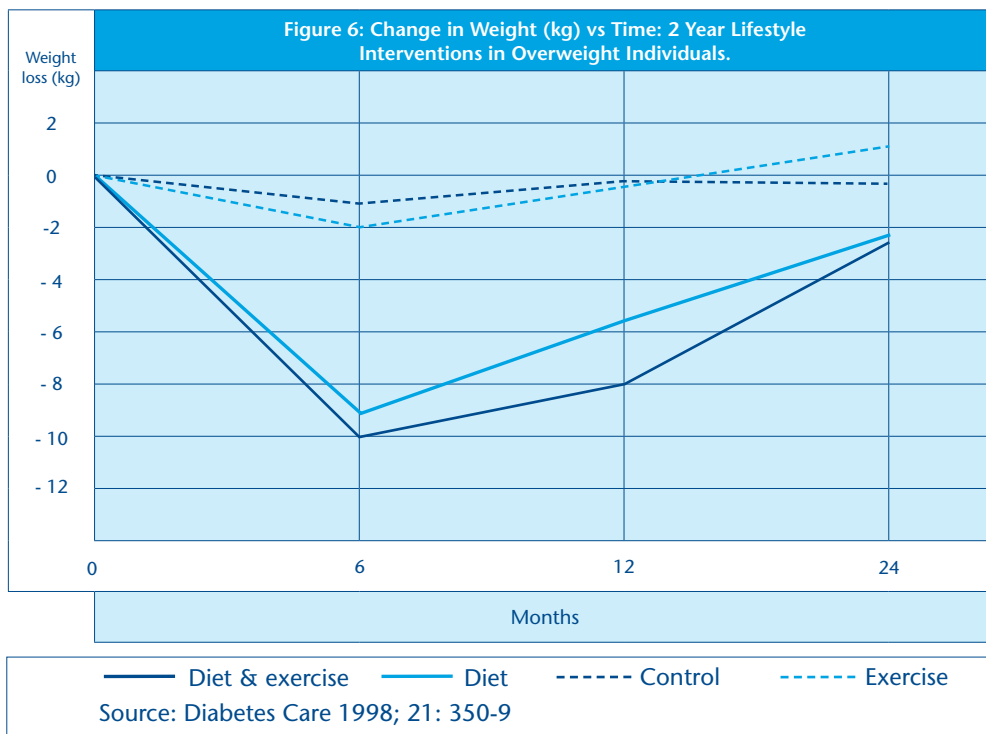
People living in the least affluent fifth of the area have roughly a 50% greater risk of diabetes than those people in the most affluent.

Prevention

The cause of type 1 diabetes is not known and so there is currently no scope for prevention. However, there is good evidence that weight loss and physical activity can reduce the risk of type 2 diabetes. This has been shown in good quality randomised trials. However, compliance with diet and exercise is a major problem. Unfortunately, will power does not come in tablet form.

It is not unusual to see good results in the short-term, say 6 to 12 months, but for things to worsen again over time. This is shown in Figure 6, where the bottom two lines illustrate that the effect of weight loss wears off when the intervention is reduced. Longer interventions give better results, but even then the full extent of the initial weight loss is not maintained.

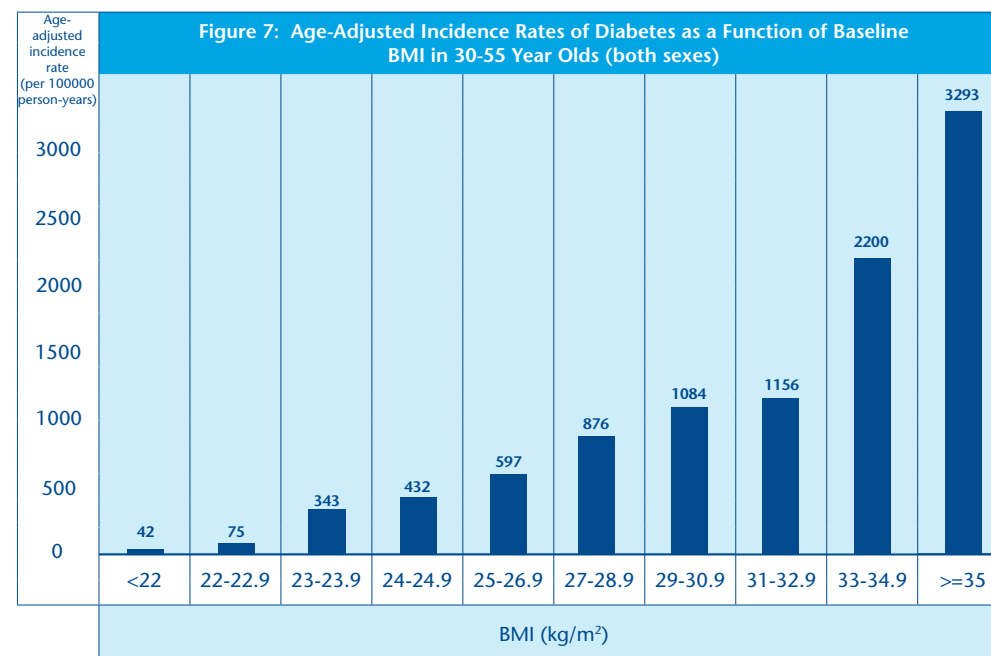
Figure 7 shows the increased number of new cases of diabetes depending on a person's BMI (see Obesity chapter). **The more overweight a person is, the higher their risk of developing diabetes.**



We need to do more to help people understand the longer term risks of diabetes and accept the importance of modifying their lifestyle to either avoid getting type 2 diabetes, or control it if they already have it.

Our aim is to encourage lifestyle changes, which will halt the increase in type 2 diabetes in Grampian. We also need to consider the balance between interventions targeted towards people at high risk, and

public health measures aimed at the whole population. High risk groups include those who are overweight, have high blood pressure or high cholesterol levels, have a family history of type 2 diabetes, or have arterial disease. These conditions are often associated.



Source: National Health and Nutrition Examination Survey Epidemiologic Follow-up Study, 1971-1992. Am J Epidemiol 1997; 146:214-22.

Screening

There have been calls for population screening for type 2 diabetes. This would involve identification of people at higher than usual risk, based on an individual's age and whether they are overweight, or have associated problems such as high blood pressure or high cholesterol. The UK National Screening Committee is currently considering what should be done, but is likely to adopt an integrated

approach aimed at reducing the risk of cardiovascular disease, not just diabetes.

One issue to be resolved is what to do for people with "impaired glucose tolerance" - whose blood glucose is above normal but not as high as diabetes levels. People with impaired glucose tolerance are at almost double the risk of heart disease, and at least 30% will go on to develop diabetes.

Treatment

There are several aspects to the management of diabetes;

- Control of blood glucose levels, (by diet, physical activity, tablets and insulin, or combinations of these, as required);
- Regular screening for complications and;
- Control of cholesterol levels and blood pressure.

It is important to manage risk factors to reduce the risk of acute and chronic complications, and we have a good evidence base for this.

Management involves a team of professionals – dieticians, podiatrists, diabetes specialist nurses, general practitioners and other primary care staff, paediatricians and diabetologists. However the most important person in the management of diabetes is the patient.

The role of health care is to support self-care, by providing advice, education, laboratory and other testing, screening for complications such as eye disease, and treatment of risk factors or other complications when required. The management of complications involves a range of

specialties such as Ophthalmology, Cardiology, Vascular Surgery, and Renal Medicine.

Grampian has been one of the Scottish pilot sites for the introduction of DAFNE (Dose adjustment for normal eating), a form of structured education, involving an intensive five-day course for small groups of people with type 1 diabetes. Although basic education for type 1 diabetes has always been provided in clinics, the reactions from patients who have done the DAFNE course have been striking (Box 1), suggesting that education provided in busy clinics has been insufficient.

The aim of courses such as DAFNE is to facilitate self-care. The courses are labour intensive for Diabetes Clinic staff, and cost over £200 per patient, but better control will reduce future

Table 14: NHS Grampian prescription costs July 2005 to June 2006.

Insulins	£2,074,862
Oral anti-diabetic drugs	£1,192,212
Glucose testing materials for use at home	£1,438,459
TOTAL	£4,705,533

Source: NHS Grampian

complications and hence costs of health care. Even the cost of treatments to control blood glucose are quite substantial, as shown in Table 14. People who have done the DAFNE course can often considerably reduce their insulin dosages, and this offsets the cost of the courses.

However the main cost of diabetes is not treatment to control blood glucose, but treatment of the complications such as heart disease, renal failure and peripheral vascular disease leading to amputation.

Preventing blindness

Diabetes is one of the most common causes of blindness. Diabetic retinopathy can advance to sight-threatening levels with little or nothing in the way of symptoms, and so regular screening of people with diabetes is required. The aim of screening is to detect eye disease at an early stage and then treat it to prevent loss of vision. Laser treatment has been proven to reduce blindness due to diabetes. In Grampian, the diabetic retinopathy screening service provides an accessible service based on digital cameras, either at the screening

Box 1

Comments from patients who have completed the DAFNE course.

"The whole week has been great. I understand more about diabetes than I managed to pick up in 20 years."

"It's like a light bulb being switched on after being in the dark for the past 25 years."

"Every diabetic should do this course."

"This has been a fantastic week. I have learned so much, feel so much better, and have reduced my insulin intake by 50%."

"Instead of being ruled by my diabetes, I now control it."



centre or by mobile cameras taken in a screening van to local community centres such as GP surgeries. The aim is to screen people with diabetes annually. Trained graders examine the photographs and people with problems are then referred to the Ophthalmology department.

Preventing blindness has two aspects.

Firstly, better control of blood glucose and blood pressure levels will reduce the risk of eye disease in the first place.

Secondly, if retinopathy does develop, screening, early detection and laser treatment will reduce the risk of it progressing to visual loss.

Developments in insulin treatment

These have included new forms of insulin but also new ways of giving it, such as insulin pumps.

The biggest development has been a research-based drive to more intensive insulin regimens – more frequent injections, more home blood glucose testing and more self-

adjustment of insulin dosage. The burden of such changes rests mainly on the patient, but more advice from, for example, diabetes specialist nurses, is required. DAFNE courses referred to earlier also help.

Trials have shown that better control of blood sugar reduces the risk of complications such as blindness and renal failure. However many people with diabetes do not achieve good control. An audit of the quality of control amongst children (under 15) in Scotland by the Scottish Study Group for the Care of Diabetes in the Young showed that only about 10% were achieving the target level set by the National Institute for Clinical Excellence in its guidelines for type 1 diabetes. The importance of education and support for individuals is highlighted here.

Services for people with diabetes
One of the features of diabetes is that it places demands on many part of the NHS.

- General practice – diagnosis, treatment, and ongoing advice from community teams.
- Specialist paediatric and adult diabetes clinics, by doctors, nurses, dieticians, podiatrists and clinical psychologists.

- Ophthalmology providing screening for, and treatment of, eye disease.
- Renal Medicine providing dialysis.
- Other specialist services, such as vascular surgery, cardiology and limb-fitting.
- Acute medicine, for metabolic emergencies such as diabetic ketoacidosis (a potentially life-threatening complication with high blood glucose and acid blood) and severe hypoglycaemia (when blood glucose falls too low).

An example of a local service:

Aberdeen City CHP Diabetes Podiatry

In 2005 the podiatry-working group was formed, and members of the group included: the Diabetes Managed Clinical Network Manager (MCN), Consultant Diabetologist and a Diabetes Podiatrist representing each CHP across NHS Grampian. It was named the "Diabetic Foot Clinical Accord". Work is progressing and the group will invite representatives from Orthotic and Vascular services as the Accord develops.

A resource pack for diabetes has been provided to all GP practices within the City CHP. The Podiatry Service provided the diabetic foot section. Pressure relief guidelines for the management of the Diabetic Foot has been developed in conjunction with the orthotic department. They have been approved by the MCN and distributed. Diabetes podiatrists across the City CHP continue to provide intensive treatment for high-risk diabetic patients, education groups for those newly diagnosed with diabetes and education for professionals.

Challenges for NHS Grampian

There are several challenges facing the health services in Grampian, and we need to:

1. Ensure we have the information and evidence available on the impact of diabetes on health in Grampian and how to tackle the problem, including identification of the at-risk population.
2. With partners create healthy environments which encourage a healthy, active lifestyle.
3. Encourage and support people to maintain a healthy weight and to adopt healthier lifestyles to reduce their risk of developing type 2 diabetes.
4. Plan services that can cope with the increasing numbers of both types of diabetes.
5. Provide more education in order to support self-care, building on the existing investment in DAFNE.
6. Maintain specialist services while developing community diabetes services, aiming to

develop integrated and accessible care with patients seen in the locations, and by the professionals, most appropriate to their needs.





Section Six

Alcohol

Alcohol is an important and embedded part of social, economic and cultural life in Grampian as elsewhere in Scotland. Most adults enjoy alcohol safely, within the guideline limits for safe alcohol consumption; however, drinking over and well over these limits is a major concern for public health. It may lead to alcohol-related health conditions, disease and hospital admissions; crime and antisocial behaviour; loss of productivity in the work place and family problems including domestic violence.

In Scotland, the economic cost to society of alcohol-related problems was estimated at over £1.1 billion in 2002/03.⁴

Updated Government advice for drinking alcohol is based on daily amounts (not weekly limits). These are no more than 2 to 4 units per day for men and no more than 2 to 3 units per day for women. In addition, each person should have two alcohol-free days per week. A description of what constitutes a unit of alcohol is shown in Table 15.

It should be noted that these are pub measures. Drinks poured at home are likely to be larger than the above unit measures.

These recommendations reflect the high health risks associated with binge drinking, which is defined as consuming at least 8 units of alcohol for men or at least 6 for women during one drinking session.

The Scottish Executive's Plan for Action on Alcohol Problems (2002) has two main priorities.

- To reduce binge drinking because of the harmful social and individual consequences.
- To reduce harmful drinking by children and young people because of the particular health and social risks.
- These priorities are right for the Grampian population too.

Behaviour and consumption

Two drinking patterns are particularly likely to increase the risk of harm due to alcohol misuse - binge drinking and chronic drinking.

Chronic drinking is defined as drinking large amounts of alcohol regularly. Before the updated daily recommendations were established, the recommended maximum weekly drinking limits were set at 21 units for men and 14 units for women.

Estimates from the Scottish Health Survey (2003) suggest that in Grampian the percentage of adults aged 16 and above consuming more than the recommended weekly amounts was 22% of men and 15% of women. For men this is less than

Table 15: Alcohol Units.	
Alcohol drink	Units
One pint of strong lager	3
One pint of ordinary strength lager	2
One pint of bitter	2
175ml glass of red or white wine - small glass	2
One pint of ordinary strength cider	2
An alcopop	1.5
A pub measure of spirits - a single	1

Source: Alcohol Concern

the Scottish average of 27%, for women the Scottish rate is similar at 14%. When compared with other Scottish Health Board areas, the

percentage of adults in Grampian consuming over the recommended weekly limits was one of the lowest. However, statistical significance is not always reached, which means there may not be true differences between Grampian and some other Scottish Health Board areas (Figure 8).

Binge drinking refers to the consumption of excessive amounts of alcohol in a short period of time, often with the specific objective of getting drunk. Some people do this regularly, while others do it occasionally. Drinking patterns on the heaviest drinking day were also assessed in the Scottish Health Survey (2003).

Again, whilst binge-drinking rates in Grampian are higher than we would like, they are below the Scottish average for men and similar to the Scottish average for women.

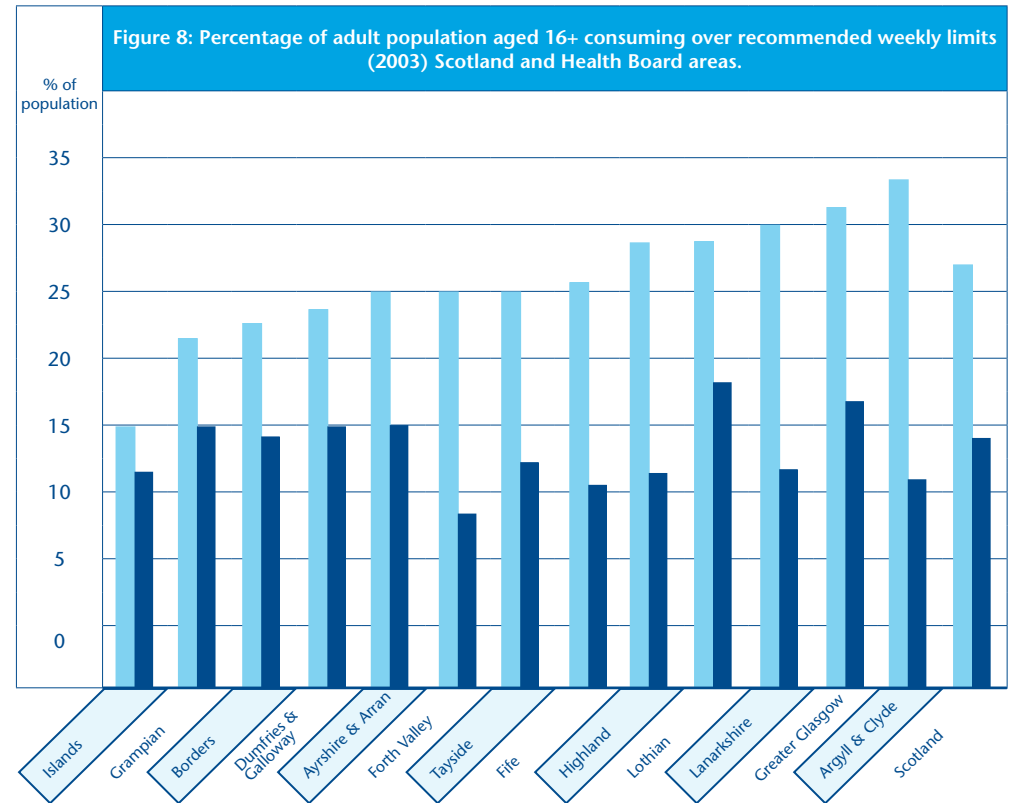
- More than a third of men aged 16 and over (39%) consumed 4 or more units on their heaviest drinking day, compared to the Scottish average of 45%, while one fifth of men (20%) consumed 8 or more units on their heaviest drinking day in one week (Scottish average 26%).
- Just under a third of women aged

16 and over (31%) consumed 3 or more units on the heaviest drinking day in a week, similar to the Scottish average of 32%. Sixteen percent of women consumed more than 6 units on the heaviest drinking day, which was the same as the Scottish average.

These figures represent a large number of men and women in Grampian putting their health (and others health) at risk from drinking too much alcohol.

Alcohol consumption in school children

Updated information on consumption of alcohol in Grampian school-aged children is not currently available. However, the latest Scottish Schools Adolescent Lifestyle and Substance Use Survey (SALSUS, 2004) suggests that although the general trend is one of increased alcohol drinking in Scottish school-age children, a small decrease in these proportions is apparent compared to two years previously. In both age groups surveyed in 2004, 13 and 15 year-old Scottish boys drank more alcohol on average than girls (Table 16). However, the



Source: Scottish Health Survey 2003.

■ Men ■ Women

Table 16. Average units of alcohol drunk in week before survey, 2004.

	Boys	Girls
15 year olds	13 units	11 units
13 year olds	10 units	8 units

Source: Scottish SALSUS 2004.

Table 17: Proportion of school-aged children drinking any alcohol in week before survey, Scotland and the three Grampian Local Authority areas.				
	2002		2004	
	Boys	Girls	Boys	Girls
15 year olds Scotland	47%	46%	40%	46%
Aberdeen City	53%	53%		
Aberdeenshire	53%	57%		
Moray	55%	46%		
13 year olds Scotland (boys and girls)	23%	23%	20%	20%
Aberdeen City	24%	23%		
Aberdeenshire	28%	21%		
Moray	23%	26%		

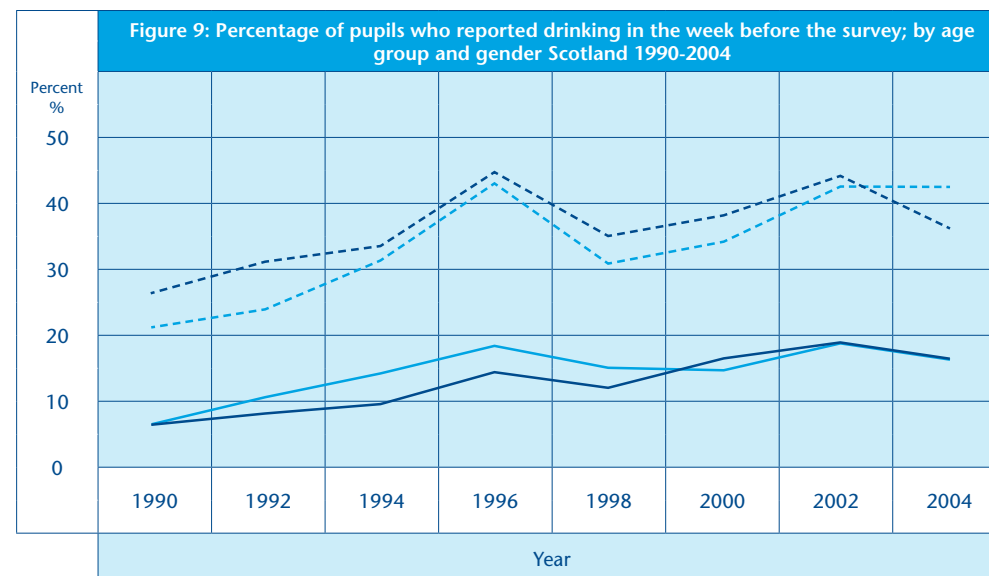
Source: Scottish SALSUS
(NB Interpret council estimates cautiously as small numbers of children were surveyed)

proportion of 15-year-old girls who reported drinking any alcohol in the week before the survey was higher compared to boys. Analyses suggest that this is when the first signs of girls surpassing boys in their drinking patterns becomes apparent (Table 17 and Figure 9).

On a more encouraging note, for 13 year olds in Scotland the overall prevalence of drinking decreased in 2004 compared to 2002 from 23% to 20%. It is yet to be seen whether

this trend will continue (Figure 9).

SALSUS information on 13 and 15 year-old drinking estimates was analysed to local authority level in 2002, as shown in Table 17, suggesting there may be small differences in school-aged children's drinking rates by local authority. These must be interpreted cautiously, as the estimates will be based on relatively small numbers of children surveyed in each local authority area. It is reasonable to assume that



Source: Scottish SALSUS 2004

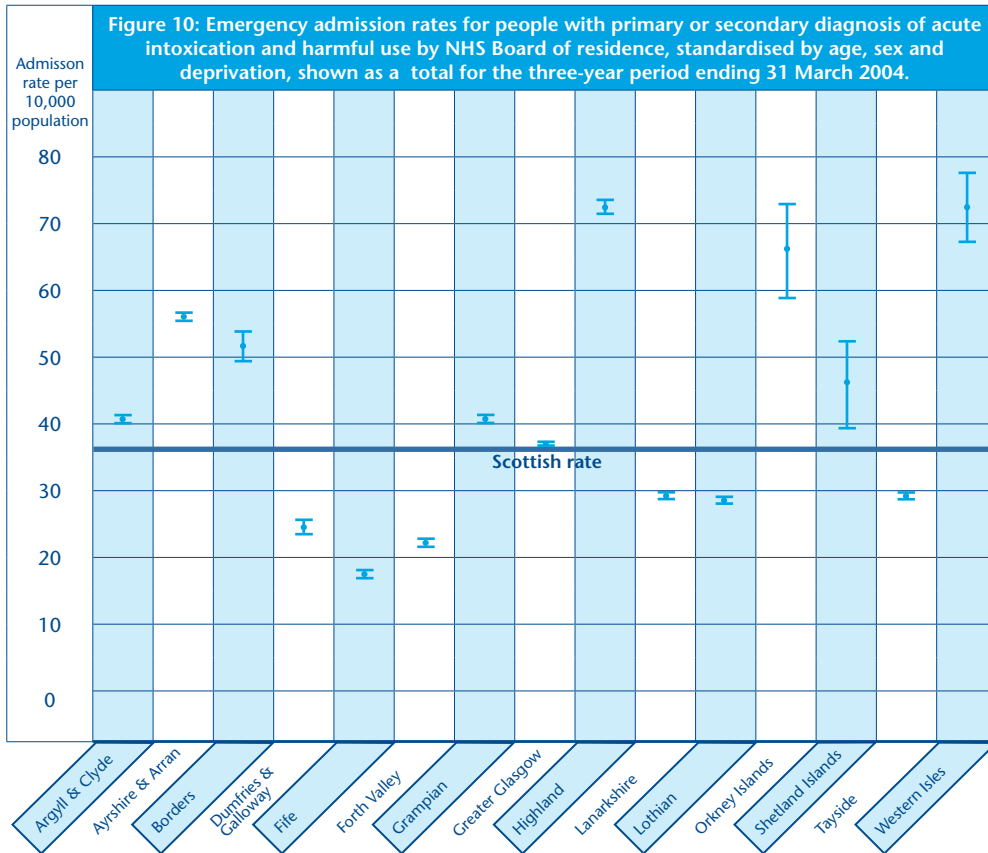
- 13 year old boys
- 13 year old girls
- - - - 15 year old boys
- - - - 15 year old girls

Grampian adolescent drinking patterns are similar to Scottish youths.

Health harm

It has long been clear that excess drinking puts long-term health at significant risk and that the risk of harm increases in line with consumption. The chronic health effects of alcohol can affect numerous organs in the body. These effects include:

- Liver cirrhosis
 - Cancer
 - Strokes
 - Pancreatitis
 - Gastritis (inflammation of the stomach lining)
 - High blood pressure (hypertension)
 - Fertility problems
 - Impotence
 - Neurological disorders
 - Mental health problems⁵
- Information on the most serious alcohol-related health problems can

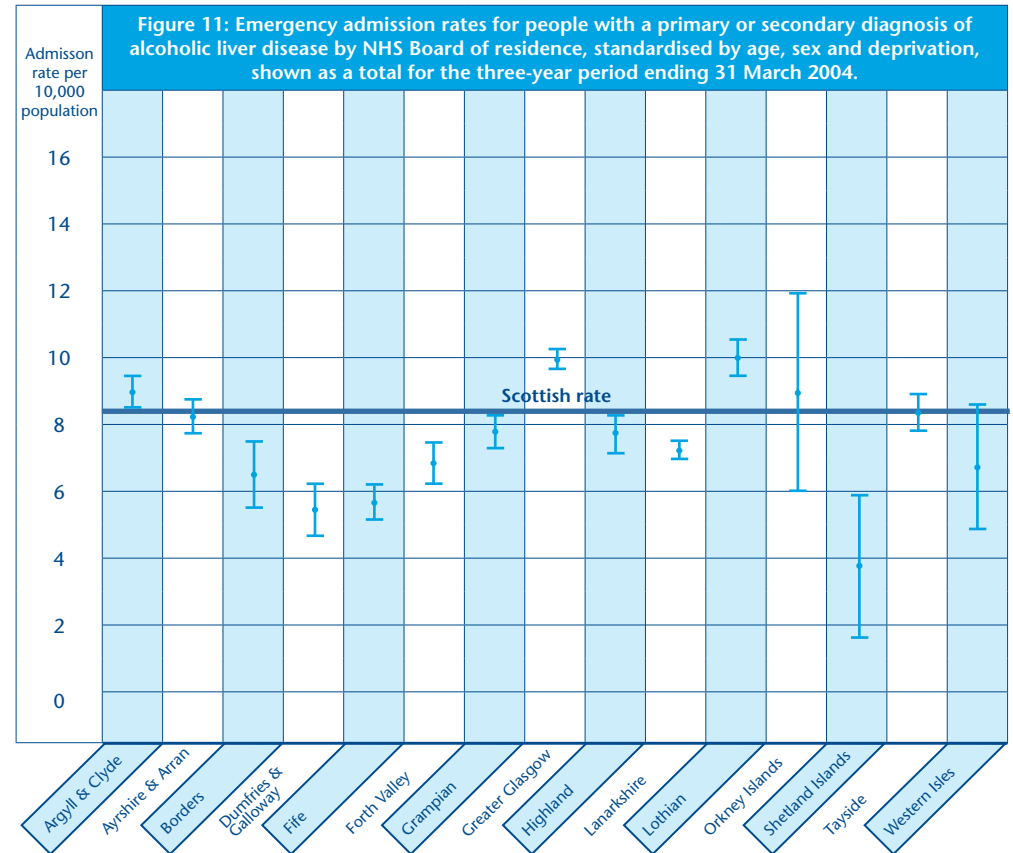


Source: ISD Scotland (SMR01) and GRO(S) for 2001 census population.

be derived from data recorded on hospital discharges. The rates in Figures 10 to 12 have been standardised for age, sex and deprivation.

Emergency admission rates for people with primary or secondary

diagnoses of acute intoxication and harmful use by NHS board of residence shows that admission rates for Grampian residents are significantly higher than for Scotland (data for the 3 year period ending 31 March 2004 per 10,000 population). Acute intoxication commonly results

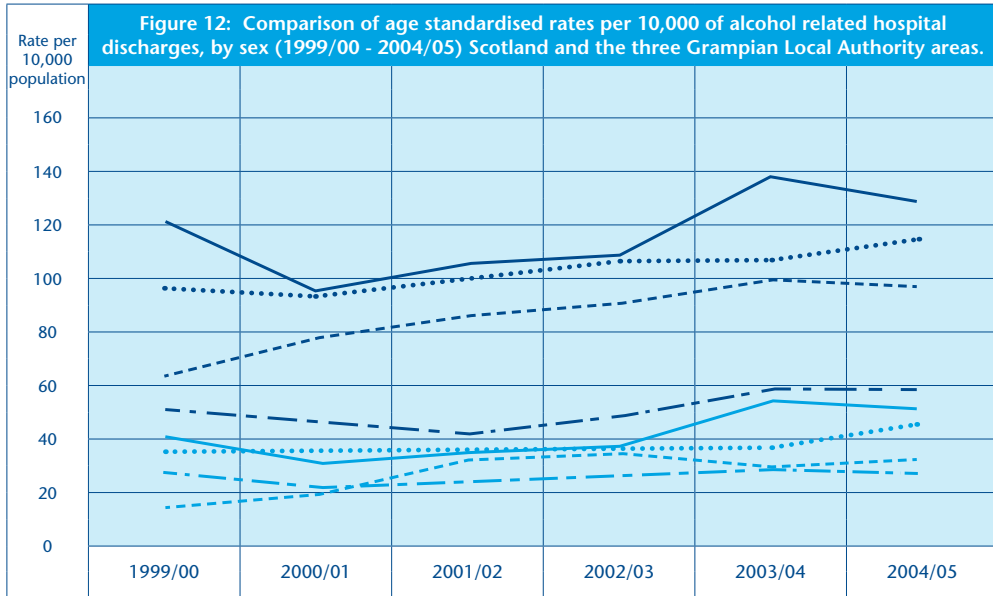


Source: ISD Scotland (SMR01) and GRO(S) for 2001 census population.

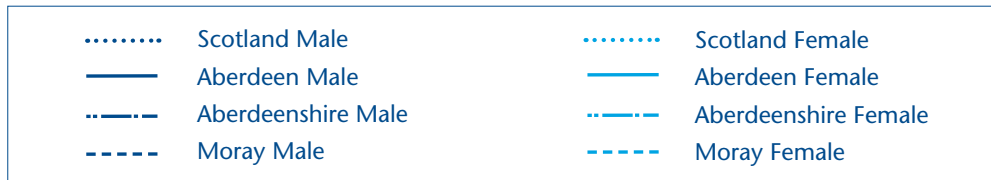
from binge drinking. This finding may therefore reflect an underlying binge drinking problem in Grampian (Figure 10). One possible explanation for this could be for example the high concentration of licensed premises in Aberdeen city centre and the impact that easy access to alcohol in many

outlets can have on individual's drinking habits.⁶ This issue requires further investigation as a priority.

Emergency admission rates for people with a primary or secondary diagnosis of alcoholic liver disease (a marker of more long-term



Source: SMR01, SID

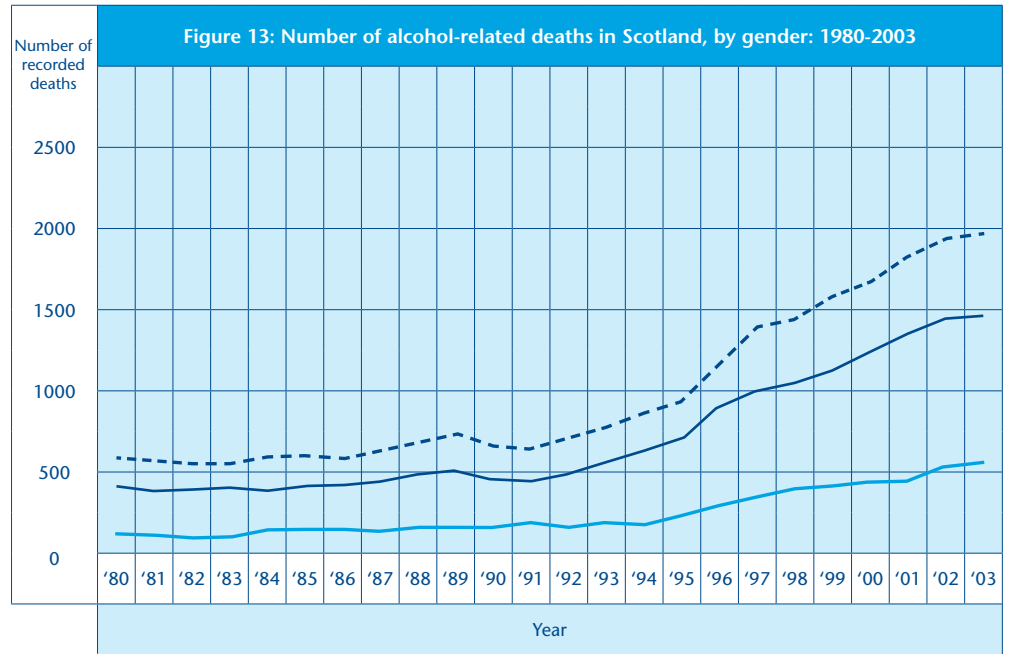


consequences of alcohol) shows Grampian rates to be just below Scottish rates (Figure 11 - data for the 3-year period ending 31 March 2004).

Trends in hospital discharges vary across the different CHP areas in Grampian where it appears that

Aberdeenshire men are admitted less frequently to hospital for alcohol-related problems than men who are residents of Moray or Aberdeen City.

The reasons for these findings are not known but based on evidence from elsewhere, possible explanations include different

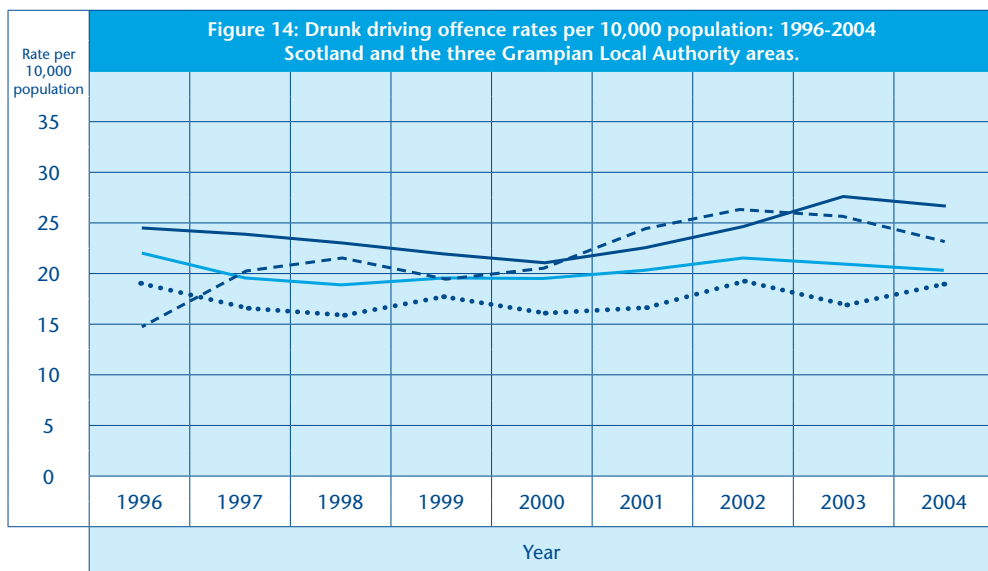


Source: National Alcohol Information Resource (NAIR), based on GRO data



drinking habits in different areas such as drinking at home or in local pubs, compared to the city centre; or differing ease of access to hospital admission due, for example, to distance or varied admission policies across these areas. Figure 12 shows age-standardised rates of alcohol-related acute hospital discharges, over a six-year period for the three

CHP areas in Grampian, compared with Scotland. Again more investigation of this issue is required to ensure our policies are based on sound evidence and understanding of the problem.



Source: Scottish Executive recorded offences data



Alcohol-related mortality

For Grampian in 2004, 107 deaths had alcohol as an underlying and/or contributing cause of death. Alcohol-related deaths are increasing in Scotland as a whole as recorded from information available from death certification. In 2004, there were 2,052 alcohol-related deaths having risen 21% over the previous five years when such deaths

numbered 1694 in 2000 and more than 250% from 1980 when there were 583.

It is highly likely that data on alcohol-related deaths is incomplete due to inadvertent miscoding of causes of death or lack of recognition of alcohol as a contributory cause of death. Although a gender difference is apparent, it is not clear how much of this may also be due to under-reporting (Figure 13). Further

investigation of the true contribution of alcohol to premature death in Grampian, either as a primary cause or as a contributory factor will again make sure that multi-agency policies to combat alcohol misuse reflect an understanding of the nature of the problem for Grampian.

Social harm

The consequences of alcohol misuse may involve crime, antisocial behaviour, drink driving, absenteeism, workplace accidents and their impact on victims.

Alcohol misuse is implicated in:

- 40% of violent crimes.
- 39% of deaths in fires.
- 15% of drownings.
- 17% of road traffic deaths.⁵

In 2004 there were 578, 480 and 219 drink driving offences in Aberdeen City, Aberdeenshire and Moray respectively (equating to 28, 21 and 25 drink driving offences per 10,000 population compared to the Scottish rate of 22). Drunk driving offence rates have been higher in Aberdeen City and Moray council areas and lower in Aberdeenshire compared to Scotland from 1997 to 2004 (Figure 14).

The numbers of road accidents

causing injury that involve illegal alcohol levels (i.e. above the current drink-drive limit of 80 milligrams of alcohol per 100 millilitres of blood) is not available for Grampian. However estimates for Scotland show that between 1999 and 2003 there were an average of 292 fatal accidents each year of which 50 (17%) occurred where the motor vehicle drivers or riders had illegal alcohol levels.⁷ When compared to the previous 5-year period, this showed a worsening in the proportion of alcohol-related road fatalities (14%).

Alcohol services in Grampian

Delivery of action on alcohol is taken forward at a local level by Joint Alcohol and Drug Action Teams (JADATs). These Action Teams bring together senior representatives of statutory and voluntary services to form a multi-agency response to drug and alcohol misuse. There are three Action Teams in Grampian, organised around the three Local Authorities areas.

The priorities of all three Action Teams are influenced by the National Plan for Alcohol⁸ and include the promotion of sensible drinking, and

the reduction of binge drinking to prevent harmful and social consequences. Strategies for prevention, early intervention, treatment and rehabilitation cover the whole population, although key groups include children and young people. The aim of all Action Teams is to implement shared assessment and to develop integrated services with the NHS, Social Work and other Local Authority sectors, Police, Prisons and the Voluntary Sector.

Aberdeen City

The Joint Alcohol and Drugs Alcohol Team (JADAT) in Aberdeen produced an alcohol harm strategy in 2005, which concentrates on developments with children and young people.⁹ During 2005/6, the JADAT engaged in a number of local and national initiatives to encourage individual responsibility, change behaviour and help reduce alcohol related crime. This included developing material and resources to raise awareness, and engaging in community safety projects. More information is available on achievements during 2005/6 in the Corporate Action Plan 2006/7.¹⁰

The JADAT established a Community Alcohol Team to provide and

commission specialist alcohol services. In addition to addressing cross-organisational issues such as care co-ordination, the Community Action Team will focus on moving City alcohol services into communities and attaching alcohol Teams to GP Practices.

Aberdeenshire

The Alcohol and Drug Action Team in Aberdeenshire (ADAT) has set local targets to improve the efficiency of services and the effectiveness of outcomes. The targets concentrate on reducing the harmful effects of alcohol and monitoring the provision of alcohol misuse services. During 2005/6 the ADAT has made progress in developing a single shared assessment for care planning (for use by all involved agencies), engaged in awareness raising and education programmes, increased capacity in services targeted at children and young people, and improved through-care services for offenders released from prison.

The ADAT plans to develop a more equitable community based service across Aberdeenshire. The aim is to appoint specialist GPs, and to reach agreement on service locations.

Moray

The Corporate Action Plan of the Moray Drug and Alcohol Action Team (DAAT) also covers a broad spectrum of interventions to reduce alcohol related harm. Specifically it focuses on culture change and communities; prevention, education and young people; provision of support and treatment services, controls and availability. Achievements during 2005/06 include a new Direct Access Treatment Service for young people, and various preventative interventions supported by the Community Safety Partnership. The further integration of drug and alcohol services with prevention services has also recently taken place in Moray and will enhance strategic and operational co-ordination as well as improving awareness and access to services for the public.

Examples of local work

During 2003/4 the Development Officers of two Drug and Alcohol Action Teams (Aberdeenshire and Aberdeen City) identified a need to investigate service provision for those using alcohol during pregnancy, in the two geographical areas. This was in recognition of the harmful effect of high alcohol intake during

pregnancy, the uncertainty of the effect of low level intake, increasing binge drinking among women of child-bearing age as well as the apparent lack of evidence to inform practice.

1. Alcohol and the unborn child – a project in Aberdeen City

An action research project was developed in Aberdeen City by a sub group of the Drug Action Team and the project was carried out by University of Aberdeen, Dugald Baird Centre for Women's Health. The overall aims were to summarise current evidence of the effects of maternal use of alcohol during pregnancy and early nurturing; to raise awareness among multi-agency staff of the current evidence; improve consistency of care and advice for pregnant women and new mothers who use alcohol; and to identify professionals' views and training needs around alcohol, pregnancy and early parenting.

The evidence indicated high and increasing levels of total alcohol consumption and regular bingeing in young women from age 15 years. It suggested that, as alcohol consumption tends to result in unprotected sex, a large proportion

of young women are at risk of unwanted pregnancies in which the foetus is exposed to high levels of alcohol before the pregnancy is identified.

The study indicated that professionals do not feel well prepared in this area and want more information. Most women / clients who were interviewed could not recall being given specific information relating to alcohol use during pregnancy even although this is routinely given. Key recommendations focus on areas of policy, practice and research. In summary, it is recommended that;

- There is a need to develop a clear evidence-based message in relation to harm reduction from alcohol use during pregnancy.
- Further awareness raising in alcohol use during pregnancy and early nurturing for all professional groups is required.
- Further local and regional research is required to establish levels of alcohol consumption by women during pregnancy.

The action research nature of the study had the effect of raising awareness of the issue of alcohol use during pregnancy and early nurturing to a wide range of multi-agency

professionals. It has also highlighted the link between alcohol use and unwanted pregnancies. The report provides an excellent, easily accessible and up to date summary of the literature on alcohol use during pregnancy, for use by all multi-agency professionals.

2. Alcohol and the unborn child – a project in Aberdeenshire

The study aimed to improve the consistency of care for women in Aberdeenshire through providing evidence for the development of future services, structures and capabilities. It also aimed to increase awareness regarding the impact and prevalence of alcohol use in pregnancy and the potential impact in Aberdeenshire. The study benchmarked the services currently provided in Aberdeenshire, and also drew on international research and best practice. The work was contiguous with the development of a framework for Getting Our Priorities Right within Aberdeenshire.

In light of recent information about increased drinking levels in women in general, the study did not solely focus on the extreme end of the spectrum in relation to either alcohol or drug use i.e. those women who



have as a result of their substance use a highly chaotic lifestyle. It looked at the topic across the spectrum of use and drew conclusions.

The study was completed in October 2005 and an action plan was developed from the recommendations. Actions include the following.

- Development of strategic plan for alcohol and drug use during pregnancy.
- Development and dissemination of referral pathway.
- Development of specialist service to provide training and support.

- Care management protocol to be developed.
- Development and pilot of routine enquiry tool and approach to disclosure of alcohol and drug use during pregnancy.
- Awareness raising and training.
- Further local research.

Funding to take forward further actions has now been secured from the Changing Childrens' Services Fund and Communications Funding of the Aberdeenshire Alcohol and Drug Action team. The development of the routine enquiry approach and in particular the Healthy Drinking Homework booklet is progressing.

Several midwifery teams have agreed to pilot the booklet and a comparison will be made with a control group in areas where existing information on drug and alcohol use during pregnancy is used. Training sessions will be run to inform midwives about the booklet and further awareness raising sessions will be organised for multi-agency staff.

Future work

The combined learning from the two projects will inform service provision and practice development across Grampian, with the aim of providing a consistent, evidence based and effective approach to drug and alcohol use in pregnancy and early nurturing. Future work will aim to further build capacity in multi-agency staff across Grampian in this important area.

So what does all this mean for Grampian?

Comparing Grampian to the rest of Scotland can show that our average figures are often better than the Scottish figures. **This does not mean that we have little or no problem in Grampian.** Grampian's population has indeed less people on average living in areas of multiple deprivation than other areas and alcohol misuse and deprivation are linked, however the fact remains that Scotland still has one of the worst health profiles in Europe and Grampian's place as better than the Scottish average still leaves it showing poorly within Europe.

Some of the figures presented here show worryingly high numbers of people whose health is affected by alcohol, and indications are that in some areas at least (for example binge drinking) further work could confirm a particular Grampian problem. In addition Grampian's population is ageing and the impact of alcohol here will be important to assess.¹¹

Alcohol consumption rates in women too are of great concern, particularly since these appear to be increasing at a more rapid rate than in men.

However, the proportion of men affected adversely by alcohol at a population level remains of greatest concern and therefore interventions should remain focussed on reducing alcohol consumption regardless of apparent differences in gender.

Much of the alcohol information on which this report is based is neither locally specific nor recent. Although assumptions can be made about local application of nationally derived data, occasional confirmation of this through periodic robust local surveys and other more specific pieces of work is important. Resumption of the Grampian Lifestyle Surveys will help to provide robust alcohol-related data for the Grampian population, which in turn will be key to planning services and promoting preventive interventions.

While much activity and resources are put into local interventions centred on public awareness, changing behaviours and healthcare services, acknowledgement must be made that the most effective interventions in reducing the impact of harmful alcohol consumption are likely to sit at a broad population, societal level.

Examples of the actions required at a wider local and national level are described below.

- Pricing – the Faculty of Public Health supports a raise in the tax on alcohol. The cheaper alcohol is, relatively speaking, the greater the amount consumed at a population level and the greater the amount of alcohol-related harm.
- Availability – this includes licensing hours; the number and location of outlets selling alcohol; and enforcing the existing legislation in relation to underage sales. The more readily available alcohol is, the greater the amount consumed at a population level and the greater the amount of alcohol-related harm. Recent reports that the 24-hour drinking laws have not altered criminal behaviour do not take into account the impact on alcohol-related ill health.
- How alcohol is marketed – this includes ethical advertising to children; responsible alcohol promotions; and clear, informative labelling.



Section Seven

Key messages from this report

- Effective public health action needs a basis of robust, comprehensive information on the nature of the population we serve, its health and disease and the most effective ways to improve health.
- We need to be able to compare Grampian and its constituent Local Authorities' populations with other areas in Scotland, the UK and increasingly with Europe.
- We need good local information on health need and health inequalities. The Traffic Lights are proving a powerful tool at local level: we need to build on this by engaging local populations about specific issues and matching that with good data and research evidence.
- Grampian does apparently well when its health statistics are compared with Scotland. However, we must remember that Scotland compares particularly badly with the rest of Western Europe and we must not be complacent. For example apart from the major issues highlighted in this report, there appears to be a worrying increase locally in the use of crack cocaine and the teenage pregnancy rate in Aberdeen City continues to be too high.
- Within the NHS there has always been and will continue to be the need to make choices on how to spend the resources (money and staff time) available to us. To ensure overall population health, and to address any inequalities within our population, these decisions have to be based on good quality information and evidence based analyses.
- The section on population projections has a direct relevance to services. Funding is fundamentally based on a head count and it is important that this count is as accurate as possible. Aberdeen City is projected to reduce by 24% with a 43% reduction in school age children. Is this the correct figure? Work on validating these projections must be supported.
- We know we have a changing population mix, and we must understand and consider the needs of new migrants to Grampian.
- Finally, obesity, excessive drinking of alcohol and diabetes are major public health issues in Grampian both now and into the future. While health services have a key role in tackling obesity, alcohol misuse and the underlying causes of diabetes, as well as treating the health consequences of them, public health action is required by all agencies in partnership at national regional and local levels.

Appendix One








Progress on recommended next steps from 2004/5

Key areas of activity:

Key areas of activity:	Progress:
<ul style="list-style-type: none"> Better information and communication to measure progress in improving health and providing health services. 	Partial —
<ul style="list-style-type: none"> New data systems e.g. Quality and Outcomes Framework for general practice should be considered alongside existing data to provide a detailed picture of health status of communities. 	Met ✓
<ul style="list-style-type: none"> Negotiation and acceptance of fundamental principles, aims and objectives for tackling health inequalities are needed throughout the Sectors of the health system. Monitoring progress should include intervention indicators as well as organisational development. 	Partial —
<ul style="list-style-type: none"> Smoking cessation services and new investment for tobacco control should be targeted where need is greatest. Preventative and educational programmes should be co-ordinated with other community efforts. 	Met ✓
<ul style="list-style-type: none"> Proposals within the new Mental Health Improvement Strategy must be translated into a collective, prioritised action and implementation plan. 	Met ✓
<ul style="list-style-type: none"> In sexual health, leadership is required at all levels to improve integrated service planning and delivery. 	Met ✓

Progress:

Progress:	Progress:
<ul style="list-style-type: none"> Substance misuse including drug and alcohol plans should concentrate on ways to extend the knowledge and expertise of clinical professionals to provide intensive or brief interventions for patients which modify attitudes, beliefs and behaviour. New initiatives should be supported to conduct rigorous evaluation. 	Met ✓
<ul style="list-style-type: none"> An obesity network should be established to develop a single strategy covering prevention, management and maintenance. 	Met ✓
<ul style="list-style-type: none"> Local evidence should be generated by local people where there are known gaps and greater collaboration is needed with University departments to shape and deliver the research agenda. 	Met ✓
<ul style="list-style-type: none"> All sectors of the NHS and partner agencies need to ensure we have robust contingency plans in place to enable us to respond to an influenza pandemic. 	Met ✓
<ul style="list-style-type: none"> The NHS and partner agencies need to facilitate adherence to good personal hygiene practices. 	Partial —
<ul style="list-style-type: none"> NHS Grampian needs to fully implement the national vaccination scheduling and recording system by March 2006. 	Met ✓

<ul style="list-style-type: none"> • Ensure implementation of pre-school surveillance is co-ordinated with the child health surveillance programme. 	Partial 
<ul style="list-style-type: none"> • Emergency Planning Group must review the rota for senior managers to ensure leadership during major incidents. 	Met 
<ul style="list-style-type: none"> • Emergency Planning Group needs to support training to improve staff response to all major incidents and communicate risks effectively. 	Partial 
<ul style="list-style-type: none"> • NHS Grampian should continue to enhance organisational ability and capacity to respond to a wide range of emergency situations. 	Met 
<ul style="list-style-type: none"> • NHS Grampian must continue to develop engagement with communities of Grampian to shape future health services. 	Met 
<ul style="list-style-type: none"> • As part of the prioritisation process, NHS Grampian should consider piloting programme budgeting. 	Not met 
<ul style="list-style-type: none"> • NHS Grampian must draw on best evidence in how to make systems work effectively in developing the change programme. 	Partial 

Information on progress can be requested from healthpoint@nhs.net

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- More demographic data available on: <http://www.hi-netgrampian.org/hinet/1400.html>
- Disease patterns at national, regional and community level available on: <http://www.hi-netgrampian.org/hinet/1400.html>
- Comparative health is available on: www.scotpho.org.uk
- Progress towards national inequality indicators available on: <http://www.hi-netgrampian.org/hinet/1400.html>
- Data on comparative health at community level available on: www.nhsgrampian.org/trafficlights
- Data and information on North of Scotland inequalities project available from: Paddy.Hopkins@hnb.scot.nhs.uk
- More information on screening programmes is available in a report published on: <http://www.hi-netgrampian.org>

Acknowledgements

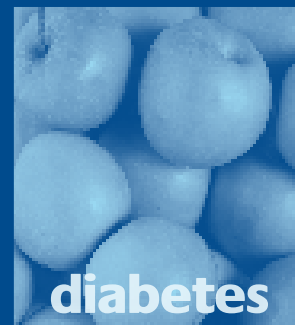
The production of this annual report and the actions which it highlights is a joint effort of the public health team across Grampian. I would however wish to highlight in particular the contributions of certain individuals. Particular thanks go to Jillian Evans who steered the work from the start and to Karen Foster who completed that editorial duty. Thanks also to the section contributors, Caroline Comerford, Cairns Smith, Neil Buchanan, Norman Waugh, Donald Pearson, Maria Rossi, Emmanuel Okpo, Jennifer Hall, Susan Macphee and Diana Webster and to Ann Lane who assisted in the production.

Design

Corporate Graphic Design, NHS Grampian.

Photography

Department of Medical Illustration, University of Aberdeen.
Corporate Communications, NHS Grampian.
Aberdeenshire Council.



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Ask for publication CGD 060424