# Index

## Introduction

1. **Health Intelligence** 9

## Health Improvement

2. **Health Improvement** 21
   - Community Planning and the NHS 22
   - The Role of the Community Health Partnerships in Health Improvement 24
   - Homelessness 31
   - Alcohol 37

## Improving Services for Health

3. **Improving Services for Health** 53
   - Redesign 54
   - Abdominal Aortic Aneurysm Screening 59
   - Dental and Oral Health 61
   - Older People and Palliative Care 63
   - Pharmaceutical Public Health 66

## Health Protection

4. **Health Protection** 71
   - Environmental Health 76
   - Emergency Planning 78

## Department Structure

5. **Department Structure** 81
This is my first annual report as Director of Public Health in Fife having joined NHS Fife in May 2009.

The main function of the Annual Report of the Director of Public Health (DPH) is to assess the health of the Fife population.

It is over 20 years since the then UK Chief Medical Officer, Donald Acheson recommended that Directors of Public Health should produce an annual report on the health of the population. Donald Acheson died this year and I will reflect on his significant contributions to public health in this introduction.

Since those first annual reports back in 1990, much has changed. Twenty years ago, information on the health status of the population was hard to find. DPH Annual Reports played a crucial role to ensure Health Boards and Councils were informed on population health issues.

However, nowadays health data is much more accessible due to modern information technology, the internet and Freedom of Information legislation. Today’s challenge is to sieve the plethora of data and produce quality health information that can be used to direct local health actions to improve the public’s health.

Directors of Public Health in Scotland are fortunate as they can draw on a “deep well” of high quality information. NHS Scotland is recognised throughout the UK, if not the world, for the quality of information available to guide rational planning of its public services. In Fife sophisticated tools have been developed such as the “Know Fife dataset” which enables easy use of health data to monitor policies to address inequalities in health. However, information alone is not enough. It must be placed in a policy context. And this has been the challenge of this Annual Report.

I hope this has been achieved by the succinct and authoritative contributions by public health consultants from NHS Fife’s Public Health Department in this report.

This report is structured around the now established 4 domains of public health:

- health protection;
- health improvement;
- improving services for health; and
- health intelligence linking information and evidence; research and development.
Health Protection

Some contributions report on issues of public concern; the work of the health protection team, in conjunction with environmental health colleagues in Fife Council, provide a year round 24/7 response to threats to public health through communicable disease or environmental hazard.

H1N1 Influenza - responding to the pandemic

On my arrival in post in mid-May the major challenge to health protection was the expected pandemic from the new ‘novel’ influenza virus with a serotype of H1N1. Early reports of high mortality in cases from Mexico in April led to the activation of the well-prepared plans to address the pandemic.

The initial “containment phase” lasted until the break-up of the Scottish schools in early July. In the “containment phase” the objective was to minimise spread. H1N1 cases were assiduously identified and their close contacts offered preventive doses of antiviral drugs. This approach sought to “buy time” to enable a vaccine to be developed.

By early August 2009, plans were being put in place to provide immunisation programmes to “at-risk” groups and staff in health and social care to ensure that those who cared for the most vulnerable would be protected.

Though the expected epidemic rise in cases did not occur, the H1N1 virus is still circulating and arrangements are still in place for “those at risk” and new entrants to health and social care posts to receive the vaccine.

We are now in the phase of reflection and review. Dame Deidre Hine, former Chief Medical Officer for Wales has been appointed to review the UK response. I aim to report in next year’s report more fully on an assessment of the response and lessons to learn.

The first Joint Health Protection Plan with Fife Council

The Health Protection section of the report outlines the main reported notifiable diseases including meningococcal disease and Verotoxigenic escherichia coli (VTEC) often known as E.coli 0157. Health Protection staff in the public health department work closely with their colleagues in Environmental Health in Fife Council.

This year has seen the introduction of the Joint Health Protection Plan in response to the new Scottish Public Health legislation (Public Health etc. (Scotland) Act 2008). This is the first Fife Joint Health Protection Plan and it sets out the wide range and diverse work in protecting public and environmental health and will be the basis for assessing the delivery and quality of Health Protection services in future years.
Health Improvement Through Tackling Health Inequalities

Many of the first Director of Public Health Annual Reports analysed extensively local variations in health status. These local analyses pursued the theme of inequalities in health that were identified by Sir Douglas Black in his groundbreaking report in 1980. His report indicated that the most effective way to improve the nation’s health would be by reducing the gap in health outcome between least and most deprived groups. Sadly the Secretary of State for Health that received the report did not act on its recommendations. But Directors of Public Health used their Annual Reports to set challenging local action plans to tackle these health inequalities identified in their communities.

In 1998 Donald Acheson revisited the “Black Report” and noted that in nearly 20 years the health gap had not reduced. He produced an independent report to the then UK Government that set out the national framework for tackling inequalities in health in the UK.

The report’s recommendations have become the mainstream approach of national governments throughout the UK and the basis for a whole range of programmes seeking to use public services to make the healthy choices the easy choices.

Tackling Inequalities in Health in Fife

The section in this year’s annual report sets out the background and policy basis being applied in Scotland to address inequalities in health. It highlights how Fife’s public services, working through the Fife Partnership, have been addressing the inequalities in health by tackling the underlying factors, often called the “social determinants of health”, by improving the local economy, improving educational attainment, through maximising employment opportunities, and through promoting cohesion and sustainability of local communities. The Fife Health and Well Being Alliance has led this through its Joint Health Improvement Plan.

The Fife Health and Well-being Alliance is an essential part of the Fife Partnership that contributes to the delivery of the “Single Outcome Agreement” where health equality of outcome is measured alongside indicators of economic, income and educational attainment measures that determine opportunities for a healthy life in a community.

As Director of Public Health, I report to the Fife Partnership on progress towards reducing inequalities in health. A lot has been achieved, but as this Annual Report indicates the gap in health outcomes remains and is sustaining.
It is over 10 years since the original “diagnosis” by Donald Acheson on tackling inequalities and there has been some reflection on whether his initial recommendations were correct.

**Updating Acheson’s Recommendations**

Many of the recommendations regarding services of the earlier Acheson review have been achieved, but recommendations regarding changes to fiscal policy have not in the main been followed.

A number of recent reports have considered this. Last year saw the publication of the report to the World Health Organisation by Michael Marmot on the social determinants of health. The Department of Health in England received a review on the implication of this in February of this year and our section comments on its implications. The Marmot Review indicates that more focus is needed on factors that encourage more “joined-up” working across government, and the avoidance of too exclusive focus on programmes seeking lifestyle and behaviour change at the expense of social factors that determine such behaviours.

The Scottish Government in 2008 reviewed its policy themes addressing inequalities and their determinants and launched a new and innovative programme called “Equally Well”. In particular “Equally Well” seeks to draw on the knowledge of workers on the front line to use their “street” knowledge to effect change. A test site in the Templehall area of Kirkcaldy has been established in 2009 and is starting to demonstrate innovative ways of tackling issues of violence and alcohol use that can be applied more widely. The Annual Report highlights developments in addressing health inequalities in Fife.

**Alcohol and Public Health**

The major public health discussion this year has been concerning approaches to tackling the increasing burden of health and societal damage as a consequence of alcohol misuse. This year’s annual report considers the issue and its impact on the population of Fife. It sets out the statistics of alcohol-related harm and places this in context of effective measures that can be taken through polices at a national level.

This chapter has been used to advise the response of NHS Fife and the Fife Partnership on responding to the current consultation at the Scottish Parliament as part of the legislative process. In particular it sets out the rationale for the introduction of a minimum selling price per unit of alcohol for consumption which I have supported publicly in a letter with other Directors of Public Health in Scotland.
Public Health and Health Services

20 years ago one of the major areas of work of public health departments was undertaking health needs assessments. Health needs assessments brought together evidence on the burden of conditions in the community and effectiveness of services. Health Needs Assessments also enabled Health Boards to determine competing priorities for the limited quantity of new resources.

This area of public health should become more prominent with the more difficult economic circumstances. Comprehensive Health Needs Assessments are crucial to determining priorities for more limited resources available to develop services.

This is particularly important when the development of new services is driven through national initiatives. The challenge to set priorities is highlighted by the informative overview article on the “roll-out” of the Abdominal Aortic Aneurysm (AAA) national screening programme where I note that the required redesign of existing local services needs to be considered within local priorities for service development.

A significant challenge over the next decade will be how services in health and social care respond to the growing proportion of very elderly persons with multiple needs and the section outlines the arrangements in Fife delivered in partnership to ensure a coordinated and appropriate service response.

New approaches and innovative approaches are needed. An example of a radical approach applied to practical circumstances is demonstrated in the contribution regarding “winter pressures” using the “Three Horizons” approach.

Health Intelligence Feeding Research and Development

Most of this report is reliant upon good health information and evidence that together are described as health intelligence. However, public health must be constantly looking for new approaches and scanning horizons to see what is “coming around the corner” and looking to “where the action isn’t”.

But this work needs to be structured and value added by collaboration with the academic sector. NHS Fife has established a major initiative in Research and Development and this has included the appointment of two new professors of public health in the Universities of Dundee and St Andrews whose work programme is reported here.
This year saw the opening of the new Medical School at the University of St Andrews. Donald Acheson was the first Dean of the Southampton Medical School, the first new school opened after the Second World War. At the opening of the Medical School, Acheson was challenged by Archie Cochrane, the then Director of the Medical Research Council Epidemiology Unit researching disease in coal mining communities in South Wales and now remembered through the international Cochrane Collaborations on Effectiveness. Cochrane wanted to know whether the new Medical School would improve the health of the community it served. Acheson, said he wasn’t sure, and that studies would be difficult. Cochrane replied, yes they would be, but they should be done. As the new Medical School opens in St Andrews, it is timely to reflect on whether it will make a significant contribution to the health of the population wherein it is located. Studies would be difficult, but with the establishment of a new public health chair, there is a strong commitment that it will contribute to improving health of the population in Fife.

Public Health - A Multidisciplinary Discipline

The Annual Report reflects the multidisciplinary nature of public health. I am grateful for the contribution of pharmaceutical public health, taking a population based overview on the use of medicines, and for the contribution on oral public health. I note in particular that NHS Fife oral public health leads the ChildSmile Programme for oral health for children in Scotland.

Building A Constituency To Improve Health

I have often been asked - “who is the audience for the annual report?”

In the main it will be read by those in public bodies and their related committees that contribute to the development of policies to improve health. That could be everyone but in a practical sense it is probably between 1% and 2% of the population who are involved in some way with improving services to improve health in developing services, providing services, being on a board or committee or working with a voluntary group.

I am keen to expand the audience because I believe that if public health in Fife is to improve then the main drivers will be the public themselves.

Derek Wanless, when preparing his report on population health to the UK Government in 2004 was surprised at the weak advocacy within government for improving health in comparison to disease-specific groups. He encouraged the public health community of professionals to build a stronger “constituency” to promote health. Building a “constituency” to advocate for public health I believe must start at the local level.
Introduction

This requires engaging with a wider network of organisations, groups and individuals committed to improving health. The Annual Report has an important role in building a local public health network for developing such a local “constituency”. In that vein I therefore hope the Annual Report opens a dialogue with those who read this report and I would welcome comments on issues raised in the report and suggestions on themes to tackle in future years.

Edward Coyle
Director of Public Health
NHS Fife

References

1.  http://knowfife.fife.gov.uk/
Summary

The population of Fife has increased in the last decade and is predicted to continue to grow in next two decades.

The age structure of the Fife population is similar to Scotland, with working-age people accounting for more than 60% of the overall population but estimates show that in the next 20 years there will be a continuous rise in the proportion of the population who are of pensionable age and a significant increase in the proportion who are aged 85 and more.

Life expectancy at birth in Fife is higher for females than males but over the last decade figures have improved faster for males than females.

2007/8 saw the greatest number of births to Fife residents since 1994. The age of mothers continues to increase with the highest proportion ever recorded for babies to mothers aged 40 or more.

The number of deaths in Fife fluctuates annually but between 1998 and 2008 there has been a 15% reduction in mortality rates. In 2008 the most common cause of death to Fife residents of all ages was cancer followed by heart disease.

The rate of premature death, deaths to persons aged less than 75 years, in the most deprived populations in Fife is more than twice that of the least deprived populations.

In Fife rates of new cancer registrations have decreased by 8% over the last decade with lung cancer the most commonly diagnosed cancer in 2007.

The Scottish Index of Multiple Deprivation (SIMD) 2009 shows that more Fife data zones are now within Scotland’s most deprived areas. It also shows that in Fife, almost 60,000 adults and children are living in income deprived circumstances and 11.6% of the working age population are employment deprived.
Population

As at June 2008 the population of Fife was estimated to be 361,890 individuals. The average age of males and females in Fife was estimated to be 39 and 42 years respectively, similar values to the 39 and 41 years estimated for Scotland as a whole. At present 52% of the overall Fife population are women, however in the older age groups this proportion is nearly two thirds which reflects the longer expectancy of life for women explained in further detail below. 62% of the 2008 Fife population were of working age, 18% were children and a further 20% were of pensionable age similar to proportions nationally.\(^1\)

Within Fife, Dunfermline and West Fife CHP had the largest and youngest population in 2008 but Kirkcaldy and Levenmouth CHP was the most densely populated CHP with an average of 1,320 persons living in each square mile and had the greatest proportion of residents of pensionable age (Table 1).\(^1\)

Table 1: CHP, Fife and Scotland populations; 2008

<table>
<thead>
<tr>
<th></th>
<th>Total Population</th>
<th>Population Density</th>
<th>% Children</th>
<th>% wk-age</th>
<th>% Pension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunfermline &amp; West Fife</td>
<td>141,230</td>
<td>1,096</td>
<td>19.1</td>
<td>62</td>
<td>18.9</td>
</tr>
<tr>
<td>Kirkcaldy &amp; Levenmouth</td>
<td>96,751</td>
<td>1,320</td>
<td>18</td>
<td>60.3</td>
<td>22.7</td>
</tr>
<tr>
<td>Glenrothes &amp; North East Fife</td>
<td>123,879</td>
<td>407</td>
<td>16.7</td>
<td>62.2</td>
<td>21.1</td>
</tr>
<tr>
<td>Fife</td>
<td>361,890</td>
<td>714</td>
<td>18</td>
<td>62</td>
<td>20.0</td>
</tr>
<tr>
<td>Scotland</td>
<td>5,168,500</td>
<td>170</td>
<td>17.7</td>
<td>62.7</td>
<td>19.7</td>
</tr>
</tbody>
</table>

Source: GRO(S)/Active Mapping

Since 1998 the population of Fife is estimated to have increased in size by 4.4%. The 2006 based population projections estimate that between 2008 and 2028 the population of Fife will continue to increase by 10.6% to 400,307 persons. Most notable is the increase in the proportion of people of pensionable age living in Fife which is predicted to be 28% by 2028 compared to 20% currently. Chart 1 illustrates the changing composition of the Fife population since 1988 and projected until 2028.\(^1\)
Amongst those of pensionable age the proportion of this group who are classified as the oldest old (aged 85 and over) was 7% in 1988, is currently 10% and is projected to be 15% by 2028. This corresponds to those aged 85 and over currently being 2% of the total population which will rise to 4% by 2028. This is associated with continued increases in life expectancy for Fife residents.

Life Expectancy

Life expectancy at birth for males and females born in Fife between 2006 and 2008 is now 75.9 and 80.4 years respectively. Females continue to have greater life expectancy than males in Fife but the rate of improvement was greater in men between 1996-1998 and 2006-2008, 2.5 years among men compared to 1.5 years among women.

Expectancy of life at birth differs significantly between babies from the least and most deprived areas in Fife. Analyses produced by the GRO(S) show that life expectancy for babies born during 2003-2007 from the 15% most deprived areas in Fife was 71 years for males and 77.7 years for females compared to 76.4 and 80.5 years for babies from the rest of Fife, a difference of 5.4 and 2.8 years respectively.2
Births

In the 2007/8 financial year there were 4,129 live births in NHS-hospitals to Fife residents aged 15 to 44yrs, a rate of 57.4 births per 1,000 female population of this age. This is the fifth consecutive annual increase in the number of live births, 265 more births than was recorded in 2006/7, and represents the largest number of births to Fife residents since 1994. The latest birth rate in Fife is higher than that recorded nationally (53.6) and was the highest of all NHS Board areas.

The age of mothers continues to increase with 3.1% of babies in 2007/8 being born in Fife to mothers aged 40 and over, the highest proportion ever recorded. Chart 2 shows that the majority (29%) of babies in Fife are still born to those aged 25-29 with 25% of babies born to those aged 30-34. Within Fife, Dunfermline and West Fife CHP had the greatest number of live births (1,738) in 2007/8 with Glenrothes and North East Fife having the highest proportion of babies born to mothers aged 35 and over (21%) and Kirkcaldy and Levenmouth the highest proportion aged under 20 (11%). Nationally the proportions were slightly different with 27% of babies born to mothers aged 30-34 and 26% to those aged 25-29. Across Scotland increasing maternal age is reinforced by examining average completed family size of selected age cohorts. By the age of 30 those born in 1956 already had a completed family size of 1.4 compared to 0.9 among those 30 year olds who were born in 1976 cohort. The same data shows that families are getting smaller with average completed family size by the age of 45 being 2.03 in 1996 and 1.87 in 2006.

Chart 2: Age of mother of babies born in 2007/8; Fife, CHPs and Scotland

Source: ISD (SMR02)
During 2007/8, 5.2% (208 births) of all singleton live births weighed less than 2500 grams which categorises them as low birth weight (LBW). Both the Joint Health Improvement Plan and Fife Single Outcome Agreement have indicators focused on reducing the proportion of LBW babies in Fife. Data from the last five financial years shows that the proportion of singleton LBW babies has decreased each year from 6.2% in 2003/4 to the present value.\(^3\) However a greater proportion of LBW babies being from deprived areas persists with 30% of all LBW being from the most deprived population quintile in Fife compared to 13% from the least deprived in 2007/8.\(^3\) This was a trend noted the 2008 Department of Public Health Annual Report.

### Deaths

In 2008 there were 3,916 deaths of Fife residents, a slight increase on the 3,780 deaths recorded in 2007. Just over half of all deaths were to females (54%) and 62% were to those aged 75 and over. Cancer accounted for the greatest number of deaths (1098) with lung cancer accounting for 26% of these deaths. Colorectal and breast cancer were the other main types of cancer deaths. Heart disease was the second largest cause of death to Fife residents accounting for 844 deaths of which three quarters were deaths from ischaemic/coronary heart disease (642).\(^5\) This is a similar pattern to that reported nationally.\(^5\)

The number of deaths from heart disease and cancer summarised above represent the most common categories of causes of death for all ages, however many different individual causes of death (3 character ICD 10 codes) across different ages are combined to make up these broad groupings.\(^5\) The five most frequently occurring individual causes of death are shown in Table 1. During 2004 to 2008, for both males and females of all ages, the most common individual cause of death was chronic ischaemic heart disease which was also the most common cause for men aged 45 and over and females aged 75 and over. Lung cancer was the third most common cause of death for both males and females of all ages but the most common cause for females aged 45-74.\(^5\)

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a. Deprivation quintiles are created by ranking the Fife population by the SIMD index and creating five groups from most to least deprived each containing approximately 20% of the population.
Table 1: Most frequently occurring individual causes of death by gender, Fife 2004-2008.

<table>
<thead>
<tr>
<th>Males</th>
<th>% deaths</th>
<th>Female</th>
<th>% deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic ischaemic heart disease</td>
<td>12.0</td>
<td>Chronic ischaemic heart disease</td>
<td>8.1</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>8.6</td>
<td>Acute myocardial infarction</td>
<td>7.1</td>
</tr>
<tr>
<td>Malignant neoplasm of bronchus and lung</td>
<td>8.4</td>
<td>Malignant neoplasm of bronchus and lung</td>
<td>6.1</td>
</tr>
<tr>
<td>Other chronic obstructive pulmonary disease</td>
<td>5.0</td>
<td>Stroke, not specified as haemorrhage or infarction</td>
<td>5.4</td>
</tr>
<tr>
<td>Pneumonia, organism unspecified</td>
<td>3.6</td>
<td>Pneumonia, organism unspecified</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Source: Information Services/GRO (S)

Within Fife, Kirkcaldy and Levenmouth CHP had the greatest standardised mortality rate for all causes of death of the three CHP areas in 2008. It also had the greatest standardised rates of mortality for all cancers but rates were higher in Dunfermline and West Fife CHP for deaths from coronary heart disease. Significant patterns exist when examining mortality rates by deprivation in Fife and in Scotland. Analysis by Scottish Index of Multiple Deprivation (SIMD) 2009 quintiles shows that rates increase with increasing deprivation and the mortality rate amongst the most deprived is almost twice the rate amongst the least deprived (Chart 3).

Fife had a lower standardised rate of death in 2008 than Scotland, 674 per 100,000 population compared to 701 per 100,000 population maintaining the trend of lower death rates in Fife. The number of deaths in Fife fluctuates annually. However between 1998 and 2008 there has been a 15% reduction in standardised all cause mortality rates.
Premature Mortality

Premature mortality is defined as deaths to persons before they reach the age of 75 years. 38% (1,479) of the total number of deaths in Fife during 2008 were to persons aged under 75 with cancer and heart disease continuing to be the main causes of premature death for both males and females.

Amongst the under 75s four of the top five individual causes of death during 2004 to 2008 were the same as amongst Fife residents of all ages; lung cancer, chronic ischaemic heart disease, acute myocardial infarction and other chronic obstructive pulmonary disease (COPD). The fifth most common cause of death amongst under 75s was alcoholic liver disease accounting for 3.3% of all deaths during this period.5

The inequality between premature mortality rates amongst the least and most deprived quintiles is greater than that for all ages with rates amongst the most deprived 2.4 times greater (Chart 3). Fife had a lower all cause standardised mortality rate for deaths to those aged 75 and under than reported nationally in 2008, 360.3 per 100,000 population compared to 382.8 per 100,000 population.5 To reduce the rates of premature mortality for key causes and among the most deprived areas a number of national and local targets have been created.
The Scottish Government set targets to reduce the rates of premature mortality in 1995 by 2010 from three main causes of death. Scotland is on track to achieve both the 50% reduction in premature stroke deaths and 60% reduction in premature coronary heart disease deaths and has already achieved the 20% reduction in cancer deaths. Chart 4 shows progress in Fife towards these targets. Since 1995 rates of premature CHD and stroke mortality have reduced by 58% and 48% respectively and we are on track to meet the 2010 targets. Premature death rates from cancer are 11.8% lower now than in 1995 so it is not yet clear if we will achieve a 20% reduction in these deaths by 2010.

Chart 4: Premature mortality rates for cancer, CHD and stroke; Fife 1995-2008 and 2010 target

Local mortality reduction targets set in the Joint Health Improvement Plan monitor premature mortality from all causes, all cancers and coronary heart disease in the 20% most deprived population in Fife. The latest figures for premature all cause mortality amongst the under 75s in the most deprived population in Fife show a 24% reduction since 1998/99 from a rate of 642.6 per 100,000 population to 489.5 per 100,000 in 2008/9. However the gap between the most and least deprived mortality rates remains the same at 2.3 times greater amongst the most deprived now and in 1998/99.
Health Status

Information on health related behaviours is provided by the Scottish Health Survey across Scotland. A new continuous design survey began in 2008 and the first national results show that almost two thirds of adults were overweight or obese, 26% were regular smokers, daily fruit and vegetable consumption was low and 30% of men and 20% of women drank more than the weekly recommended amounts. Many of these behaviours contribute directly or indirectly to the health status and mortality figures described elsewhere in this report. We will be able to see how Fife compares to these figures early in 2011 and how our CHPs compare to Fife and each other in early 2013.

Other sources of health related behaviours are limited but the latest Scottish Household Survey (2007) showed 25% of Fife respondents were current smokers and data collected at pregnancy booking in 2008 reported that 24.3% of pregnant mothers smoked.

During 2008/9 there were 46,443 inpatient and day case admissions to acute hospitals involving Fife residents, lower than reported in the previous four financial years. 38% of these admissions involved residents aged 65 and over. Diseases of the digestive system was the diagnostic category assigned to 12% of admissions followed by diseases of the circulatory system (9%) and diseases of the respiratory system (8%).

Within these diagnostic categories coronary heart disease had an incidence rate of 403 per 100,000 population (1,457 first diagnoses) with 43% of CHD diagnosis being acute myocardial infarction. The incidence rate for CHD increased on the previous year but was lower than the rate in 2004/05. There were 415 first diagnoses of chronic obstructive pulmonary disease (COPD) in 2008/9, the highest number and incidence rate in five years. Cerebrovascular admissions including stroke remain fairly constant with an incidence rate of 184 per 100,000 population in 2008/9 compared to 181 per 100,000 population in 2004/5. 60% of first diagnoses of acute myocardial infarction were to those aged under 75 years as were 47% of COPD diagnoses and cerebrovascular disease diagnoses.

Rates of new cancer registrations have decreased by 8% over the last decade (1997-2007) with 1,871 registrations for all malignant cancers in 2007. Lung cancer was the most commonly diagnosed cancer in 2007 with the largest annual number of registrations (337) recorded in the period 1988 to 2007 and the highest standardised rate since 1996. In the last decade rates of lung cancer registration have fallen 7% among men but increased by 32% among women which is a slower reduction and greater increase than seen nationally (20% and 10% respectively).

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b. Incidence looks for the first occurrence of a diagnosis within a 10 year period. Previous or subsequent admissions of a patient with the same diagnosis are not counted.
Determinants of Health and Wellbeing
- Life Circumstances

Inequalities that exist in health and well-being are often reflected in the inequalities that exist in life circumstances. This year has seen the second update of the Scottish Index of Multiple Deprivation (SIMD) an area-based measure of deprivation which was created in 2004 to show relative deprivation across a range of indicators at a low geographical level (data zone). There are 6505 data zones in Scotland and each is ranked from 1 (most deprived) to 6505 (least deprived). More Fife data zones are being classified as multiply deprived in every update to the SIMD. In 2009 Fife had 55 of its 453 data zones in the 15% (976) most deprived in Scotland compared to 47 in 2006 and 34 in 2004 and now has the joint fourth highest local authority national share of the most deprived data zones along with Dundee, compared to sixth in 2006. Early analyses of SIMD 2009 shows enduring and expanding deprivation in parts of Fife with data zones that previously adjoined existing areas of most deprivation now also being classified within the most deprived, for example the number of most deprived data zones in Glenrothes had increased from three to seven since 2006.11

The SIMD also allows us to look at the number of people who are income deprived, defined as the number of children and adults living in households in receipt of one or more of a range of benefits. It is important to note that in 2009 more people are being picked up as income deprived with the inclusion of Working and Child Tax credit data which was not available for 2006, however the two versions are highly correlated.11

In Fife, the number of people who are income deprived has risen from 44,645 (12.6%) in 2006 to 59,065 (16.4%) in 2009. Among the most deprived 20% of the population in 2009 an average of 35% of children and adults are classed as income deprived. The level of income deprivation for individual data zones within this quintile ranges from 23% to 61%. These figures contrast sharply with the average of 3.7% (range 1 to 10%) among the least deprived population but also illustrate that among lesser deprived populations there are still individuals living in income deprived households.11

An additional data set that can be used as an indicator of low income among older people living in Fife is pension credit. Guaranteed pension credit is paid to persons eligible for a state pension to enable them to have an income that meets the minimum level set by the law. Analysis of this dataset shows that at the end of 2008 4,820 persons aged 60 and over (6%) were in receipt of this benefit. Amongst the most deprived population this rose to 9% (range 2% to 24%) of those aged 60 and over compared to 2% (range 0 to 7%) of those in the least deprived.12

Measures of employment deprivation, defined as the number of working age population who are unemployed or who are not in work due to ill-health or disability, have remained constant between the two latest updates of the SIMD with 25,825 (11.6%) working age people in Fife employment deprived in the 2009 update. This figure is
lower than the 28,240 reported in 2006. Almost a quarter of working age people (23%) were employment deprived among the most deprived 20% of the population compared to 3.3% among the 20% least deprived. The level of employment deprivation for individual data zones within the most deprived quintile ranges from 16% to 34% in comparison to the range 0 to 7% among the least deprived. Further work on SIMD 2009 and the implications for Fife will be published throughout 2010 and will be available from KnowFife.

References

Health Improvement
Improving health and reducing inequalities

Health Improvement - its place in NHS policy

In Partnership for Care - Scotland’s Health White Paper published back in February 2003 clear messages were presented that link to the focus of this chapter on health improvement and tackling health inequalities. The paper emphasised the actions required to create a step change in the health of Scottish society and proposed:

1. Partnerships with local authorities, voluntary sector and local communities.
   Legislation was promised which would secure the place of health improvement as a priority for NHS Boards and in community planning.¹
2. The establishment of Community Health Partnerships
4. An emphasis on the strategic value of local Joint Health Improvement Plans.

‘Only by putting health improvement onto everyone’s agenda can we join together the various initiatives and achieve an impact which will be more than the sum of its parts.’²

These 4 elements - creative local community planning, local population-focused Community Health Partnerships, addressing the interlinked issues of homelessness and health and the clear focus provided by an actively implemented Joint Health Improvement Plan - form the topics for this chapter on health improvement and tackling health inequalities in Fife.

The evolving policy landscape

The policy landscape has moved on since 2003 however the clear message given to NHS boards and their partners is that they must identify and address inequality as a matter of priority. For example The Kerr Report: Building a Health Service Fit for the Future (2005)³ focussed on reducing health inequalities, long term conditions, keeping care local and targeted action in deprived areas.

Better Health, Better Care (2007)⁴ released under a new administration further emphasised this message and placed health improvement, tackling health inequalities and the quality of health care at the centre of health services. The strapline linked to the ‘healthier’ objective of the newly published national framework Scotland Performs⁵ as to ‘help people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local and faster access to health care.’
In June 2008 the report of the Ministerial Task Force on Health Inequalities known as Equally Well was released and followed by an Action Plan in December of that year. This brought a new focus to cross-governmental action to tackle the root causes - the social determinants - that underpin the wellbeing and health of individuals and communities.

‘Scotland’s health is improving rapidly but it is not improving fast enough for the poorest sections of our society. Health inequalities ….. remain our major challenge.’

Finally in February of this year Fair Society, Healthy Lives - the strategic review of health inequalities in England post 2010 chaired by Sir Michael Marmot was published. While commissioned by the English Department of Health the review provides a more local application of the themes arising from the global Commission on Social Determinants of Health also chaired by Michael Marmot. Together with the 3 social policy frameworks; Equally Well (health inequalities), Achieving Our Potential (poverty and income inequality), and the Early Years Framework (early intervention) arising from the Scottish administration the policy landscape is set for community planning partners including the NHS to address the root social causes of poverty, inequity and poor health.

1. Community Planning and the NHS

Fife Partnership is the community planning partnership for Fife and has been in place since 2000. Membership comprises Fife Council, NHS Fife, Fife Constabulary, CVS Fife, Scottish Enterprise, Skills Development Scotland, Fife further and higher education sector, Scottish Government and SEStran.

Now in its third Community Plan (2007) work is currently in place in preparation for a revision in 2010. Each of the 5 themes in the Community Plan - of which improving health is one - has a designated executive outcome theme lead and co-ordinator. Work is managed through a matrix of strategic and thematic partnership groups. The 2nd Fife Single Outcome Agreement (SOA) was signed off in early 2009 and contains 20 local outcomes underpinning the 5 key themes.

The NHS Board chair is the current vice-chair of Fife Partnership. The NHS CEO and Director of Public Health (DPH) also hold seats on the Partnership Board. The DPH carries the partnership executive lead for the ‘Improving health and wellbeing’ theme. NHS executives on the NHS Senior Management Team (SMT) are designated NHS theme leads for other community planning themes. In addition one SMT member has overarching executive lead responsibility for ‘community planning’. Community planning and partnership issues are encompassed in the schedule of reporting within the SMT.
Performance monitoring is undertaken on a partnership basis through the Fife SOA targets. NHS executives and managers are highly active across the matrix of strategic, thematic and local community planning groups and processes. The partnership Health and Wellbeing Alliance, chaired by the NHS Board Chairman is responsible for the health improvement and health inequalities community planning theme. The Joint Health Improvement Plan 2007-2010 is the partnership strategic document that guides this work. However tackling the root causes of health inequality requires collaborative action with other community planning strategic groups such as the Sustainable Communities Group, the Community Safety Partnership Group and the Opportunities Fife Strategy Group to name but three. The current work to refresh the Fife Community Plan for 2010 onwards will provide additional focus for partnership working to address the underlying determinants of inequality, poverty and ill health across Fife.

2. The role of the Community Health Partnerships (CHPs) in Health Improvement

It is a natural step to move from partnership working at a Fife level to the function that CHPs play in improving health within defined geographies. CHPs were established as key building blocks in the modernisation of the NHS with a vital role in partnership, integration and service redesign. They were seen as an opportunity for partners to work together to improve the lives of the local communities which they serve.

The statutory guidance\(^\text{11}\) was issued in October 2004 and stated that CHPs would play a pivotal role in delivering health improvement for their local communities. This was further defined as an expectation to, ‘improve the health of local communities, tackle inequalities, and promote policies that address poverty and deprivation by working within community planning frameworks’.

The prominence given within the original guidance for health improvement was incontrovertible:

‘It is expected that CHPs will be designed with local population health improvement placed at the heart of service planning and delivery. Improving the health of local communities requires a multi agency response and CHPs (based around a defined population) will be well positioned to make a significant contribution to improving the health of their local communities, especially the most disadvantaged communities.’
Schemes of establishment for the CHPs were expected to specify:

- the role of CHPs in local community planning processes
- the role of CHPs in helping to shape Joint Health Improvement Plans and local health plans
- how public health expertise would be used to support the work of CHPs
- how CHPs would be developed to maximise their contribution to health improvement and reducing health inequalities

This health improvement role was mapped out in a CHP Health Improvement Advice Note\textsuperscript{12} in 2005. The manner in which CHPs could contribute to reducing health inequalities was seen to be by:

- measuring health and health needs and identifying those geographical areas, groups and individuals with the greatest inequalities
- ensuring equity of outcomes, not just equity of access, so working to deliver optimum treatments to the most deprived communities and groups in their area
- working with community planning partners to design services and interventions which meet the needs of particular groups (eg homeless people, minority ethnic groups, people with disabilities, people with severe mental illness)
- taking a community development approach to empower communities and encourage participation.

In addition, CHPs were expected to support a “Health Promoting Health Service” approach which later became embodied in CEL14 (2008).\textsuperscript{13}

An updated Advice Note to CHPs was issued as a CEL in June 2009\textsuperscript{14} which highlighted the key changes in policy and context particularly in relation to the impact of the Single Outcome Agreements as the basis of outcome focused planning for Community Planning Partners.

**How are the CHPs structured to deliver their health improvement role?**

As already stated the Health and Wellbeing Alliance is the overarching strategic partnership with responsibility for health improvement. The chairs of the CHP Committees all hold membership on this group thus providing a clear line of sight for partnership-based work. A Health and Wellbeing Alliance Co-ordination Group, chaired by the Director of Public Health meets 2 monthly in support of the tactical implementation of Alliance activity. The CHP General Managers are all invited members of this group.

Each of the 3 CHPs have an Improving Health Team who provide the specialist expertise to the wider CHP workforce and Fife-wide in some topics areas. In Kirkcaldy and Levenmouth (KLM) the team leader reports to management through the head of nursing while in Dunfermline and West Fife (DWF) the team leader is a member...
of the management team and reports directly to the Deputy General Manager. The Glenrothes and North East Fife (GNEF) team reports to management via the service head for Community Palliative Care. These teams contribute to the annual CHP Delivery Plans which provides the expected outcomes that are fed into the corporate NHS Fife Local Delivery Plan (LDP). In Kirkcaldy and Levenmouth a 3 yearly Clinical Delivery Plan - which includes a focus on health improvement - guides the annual CHP LDP. Composition and responsibilities of the teams vary but consist of between 10-20 staff with administrative assistance. Typically the remits carried would include Keep Well, Smoking Cessation, Mental Health, Children and Young People, Communities and the Environment, Breast Feeding and Homelessness to name but a few. There is a close interface between aspects of the long term conditions agenda and that of health improvement particularly as the emphasis on anticipatory care and self management takes effect.

Public health support is provided to the CHPs via an assigned Consultant in Public Health Medicine (CPHM). Fife Health Promotion Department is hosted within the GNEF CHP but provides a service to all 4 NHS delivery units (the 3 CHPs and the Operational Division comprising the acute hospitals).

In order to ensure sharing of information and best practice an **Improving Health Team Network** of around 50 members exists to bring together the wider workforce. This network provides a forum to explore such issues as Keep Well, the health improvement HEAT targets and latterly the opportunities of green space to improve wellbeing.

More recently a **Strategic Health Improvement Forum** has been established to bring together the health improvement leads from the 4 NHS delivery units, the Fife Council Health Improvement Advisor, Head of Health Promotion, Consultant in Public Health and the Director of Public Health. This group will foster a coherent approach to the strategic planning and delivery of health improvement activity.

**How do CHPs deliver health improvement with their partners?**

The Chief Executive’s Letter of March 2008 CEL14\(^5\) - ‘A health promoting health service’ spelled out the vision as;

‘**every health care contact is a health improvement opportunity**’

While this CEL was focused on action in acute care settings Fife NHS Board recommended in April 2008 that the principle be rolled out across all delivery units. This vision therefore underpins the routine service delivery in primary care and should blend the delivery of acute and chronic health care management with opportunities for health improvement advice and activity. To this end the anticipatory care approach exemplified in the Keep Well health checks and aspects of the management of long term conditions all contribute to the delivery of health improvement as much as activity designed to directly address the current Health Improvement HEAT targets.
CHPs provide a health improvement service to their local communities in a number of roles:

- **Local Community Planning.** This requires active health-focussed participation by CHP managers and staff at council area and multimember ward meetings. Additional contribution is possible through the 7 area community safety partnerships groups chaired by the area police commander where issues such as antisocial behaviour or alcohol-fuelled violence can be tackled at a local level.

- **Local Management Units (LMUs).** Health improvement and positive impacts on inequality are also seen working closely with social work colleagues in the work of the LMUs around topics such as shared assessment and care or mechanisms to reduce hospital admissions.

- **Local Childrens’ Services Groups.** These groups are in process of being reformed around the overarching child rights and responsibilities agenda known as GIRFEC (Getting It Right For Every Child) whereby local GIRFEC groups will replace the previous local operational arrangements.

- **Fife wide hosted services.** Each CHP ‘hosts’ the management of a number of NHS community based services which are delivered across all 3 CHP areas. An example would be the role that Dunfermline and West Fife CHP holds for the Fife Keep Well Health Checks programme or the Alcohol Brief Intervention actions which are managed through the Kirkcaldy and Levenmouth CHP.

- **Primary Care Services.** This is the core function for which CHPs are best known - the provision of local primary health care by GPs and public health nurse teams of health visitors, community midwives, school nurses and other health centre staff. Each Medical Practice will have its own unique approach to managing the health improvement opportunities that the primary care setting affords.

- **Improving Health Teams.** Each CHP has a team who provide the CHP with a dedicated resource to address chosen priority areas for direct health improvement actions. Their work feeds into delivering the health improvement HEAT targets for the CHP but also seeks to address the wider determinants of health which lie upstream and are captured within the SOA to which the CHP contributes. Case study examples arising from the work of these teams are described in the attached boxes.

Certain areas of work with young people are delivered across all 3 CHPs and examples of these would be interventions such as Boozebusters, breastfeeding, smoking cessation and local access youth-friendly sexual health advice.

Health Scotland are supporting Fife with a local social marketing campaign for professionals to link in with the health promoting health service approach to make every contact a health improvement one.
Boozebusters

Boozebusters is an alcohol education programme delivered to S2 pupils using a drama production and facilitated workshops. Partnership working ensures professionals from a range of backgrounds, including NHS staff, Fife Constabulary, Community Learning and Development, Voluntary Youth Sector organisations, Community Wardens and Community Use Schools, use their combined wealth of knowledge and experience to enrich the workshops and to encourage pupils to become involved in positive youth work activities which are available locally.

Breastfeeding and nutrition of children under five years of age

CEL 3616 funding is managed via the Dunfermline and West Fife Improving Health Team as a Fife-wide responsibility. This dedicated funding stream supports a Breastfeeding Peer Support Project, breastfeeding drop-ins at Forth Park, social marketing activity and the implementation of UNICEF’s Baby Friendly in The Community. Fife has 13 breastfeeding support groups which offer breastfeeding support from the ante-natal period for as long as the woman requires the service. A school educational resource has been developed in partnership with Fife Council Education Department to support the Curriculum for Excellence outcomes for health and wellbeing. This has been distributed to all secondary schools and an evaluation of its use is planned.

Healthy Start Multivitamins are now distributed Fife wide to all pregnant mothers, and mothers who have a child up to age 1 year, and children from 6 months to age 4 years via the network of child health clinics.

Keep Well

Keep Well supports anticipatory care approaches by engaging with participating GP practices in areas with the greatest health needs. Patients aged 45-64 are invited by letter to attend a Keep Well health check to discuss their health in depth with a practitioner. The assessment includes blood and cholesterol checks and discussions about lifestyle behaviours. Individuals can then be signposted to other services or for support as required and it is hoped this intervention will help prevent chronic conditions such as CHD, diabetes and stroke. Advice on welfare, literacy and employability is also available.

The Hub

The Hub is a sexual health services for 12-25 year olds. It provides free confidential health advice on a wide range of health issues which affect young people. It strives to empower young people to make positive choices about their health and in particular their sexual health. Services include condom distribution, pregnancy testing, health
advice and signposting to other relevant agencies. The service develops in response to the needs of young people and is therefore flexible and dynamic.

There are currently six established hubs across Kirkcaldy and Levenmouth CHP. The Hubs function on a drop-in basis and where possible run alongside established youth provision. They are held within community venues that are youth friendly and run at times that are accessible to young people.

The Hub service is led by Kirkcaldy and Levenmouth CHP, and involves partnership working with a range of organisations including Kirkcaldy YMCA, Trust in Fife and Fife Council Community Learning & Development. Coordinated by the Improving Health Team, this service is delivered by a bank of sessional health workers (Registered Nurses) and supported by youth workers.

The Mercat Health Shop

The Health Shop is situated within the Mercat Shopping Centre in Kirkcaldy. The aim is to improve the health of people in Kirkcaldy by providing health information and health checks within the local shopping centre, thus enabling and empowering people to make informed choices about their health.

The concept of a Health Shop in such a public venue was seen as an innovative way to tackle health inequalities.

The Health Shop runs every Thursday afternoon and is staffed by Health Improvement Nurses, Vascular Nurses as well as staff from a wide range of organisations. The Smoking Cessation Service attend most weeks to offer one to one advice and referral for ongoing support. Nurses offer free health checks, including blood pressure recording, height and weight measurement and health information on issues such as diet, physical activity, alcohol and smoking. Many clients attend regularly for ongoing support to help with weight management, healthy eating and making behavioural changes.

Outreach work is now being undertaken in the form of the Health Shop - Out and About. Nurses offer health checks and health advice where people congregate, such as pubs, football grounds and have used the Revolution Bus to offer the service in the bus station in Leven and at the homeless drop-in at the local Homes4Good Centre.

Healthy Communities: Meeting the Shared Challenge

Community-led health is an effective way to address health inequalities and to support healthy communities. Meeting the Shared Challenge is a Scottish Government funded programme that aims to support community-led approaches to health improvement throughout Scotland. The Auchmuty area of Glenrothes is one of the communities benefiting from this initiative where the Auchmuty Tennants Association
(ATA) identified key issues and linked the programme to local realities and services. Issues raised included drugs and alcohol, environment and safety, availability of facilities and premises in which to hold community events, communication between agencies and the community and working with young people. By facilitated discussion many of these issues were clarified and solutions found.

As a result of the programme, the ATA is now working in partnership with the Local Authority, the Glenrothes and North East Fife CHP and local voluntary organisations on a mental health project. Mental Health First Aid Training has been delivered to ATA members and voluntary organizations are in the process of negotiating use of the community flat for various therapeutic interventions around mental health. One of the ATA members has also expressed an interest in becoming a volunteer befriender for people with mental health issues. A student from Adam Smith College is involved with the project as part of their work experience which further enhances the interagency, inter-professional nature of this work.

**Janny’s Hoose at Bell Baxter High School, Cupar**

As part of the overall aim to improve the quality of life for young people in Cupar and Howe of Fife, Janny’s Hoose is a facility where young people are able to access information and support that aims to improve their health and wellbeing, life skills and career perspectives. A wide range of agencies will provide their services through drop-ins, 1-1 support and group activities.

Young people will develop the facility by designing the garden and interior and setting up projects (for example, growing their own vegetables). It already has a fully equipped kitchen to facilitate cooking skills. This may have particular relevance for young people disengaged from formal education.

The realisation of the facility will be completed in 3 stages; initially it will be used to support pupils of Bell Baxter High School through drop-in sessions, 1-1 consultations and group work from 9am-5pm. The second stage is to extend the use of the facility to the evenings and open it up to parents. If this evaluates well it may be extended for community use in the future.
3. Health and Homelessness

Homelessness has risen up the Scottish Government agenda in recent years with challenging targets being set for councils and partner NHS Boards. The current key challenges are around:

- The abolition of priority need by 2012
- The monitoring of the Homelessness Standards for NHS Boards
- Ensuring the health needs of the homeless population group are addressed within the service delivery plans relating to mental health, suicide prevention, alcohol and substance misuse, sexual health, dentistry, podiatry, primary care access and discharge planning.

It is important to recognise that the definition of ‘homeless’ includes those ‘at risk of homelessness’. In Fife in 2009/10 there were around 4,000 homeless household applications to the council service.

Guidance was issued to NHS Boards in 2001\(^{17}\) which required Boards to:

- Develop Health and Homelessness Action Plans as an integral part of the Local Health Plan (now Local Development Plan)
- Create linkages with Local Authority Homelessness Strategies and Community Plans

This was followed by Health & Homelessness Standards\(^{18}\) in March 2005. Boards are monitored against these standards through the NHS Performance Assessment Framework. Whilst the NHS Board holds the strategic responsibility for the Standards, it is expected that delivery is mostly through CHP activity and hosted services such as mental health, alcohol and drug services. A multi-agency Health and Homelessness Group was formed in September 2007 which co-ordinates the partnership response to the health aspects of homelessness in Fife.

The NHS executive partnership lead for housing is the General Manager, Dunfermline and West Fife Community Health Partnership while the executive lead for health and homelessness is the Director of Public Health. The NHS Community Health Partnerships, NHS Operational Division, Fife Council, Fife Alcohol and Drug Partnership and an extensive voluntary sector partnership are the delivery mechanisms for the shared plan.
The **Health and Homelessness Action Plan** is aligned with the **Fife Approach to Homelessness 2009-14** and feeds into the **Fife Local Housing Strategy** overseen by the Fife Housing Partnership. The work falls into 7 themes for which examples of current activity are outlined below:

<table>
<thead>
<tr>
<th>Vulnerable Families</th>
<th>Fairer Scotland Funding is supporting a pilot scheme for homeless families to access a 6 week programme of healthy family or homemaking sessions, Fife Cares child home safety check, and a home starter pack including selections from a children’s clothing, toys and equipment recycling charity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention &amp; Wellbeing</td>
<td>A partnership proposal between Frontline Fife, the Gillespie Church Dunfermline and NHS Fife Keep Well has been accepted by Health Scotland to develop a walk in centre for homeless people and those in temporary accommodation. Information and/or access to a range of health and social services will be made available.</td>
</tr>
<tr>
<td>Training and Information</td>
<td>A Fife health and homelessness conference was held in June 2009 which gave new impetus to partnership and multi professional working. As part of this event the recently appointed DPH had spent a day visiting homelessness services across Fife and recorded a video diary of his thoughts and experiences. One of the workshop tasks on that day was to create a snakes and ladders game describing the service experiences of a homeless person. This work won a poster award at the 2009 Scottish Public Health Conference, is now part of a training module, and has been requested for use in a neighbouring NHS Board.</td>
</tr>
<tr>
<td>Access and Discharge</td>
<td>An access to health services survey was carried out with 88 homeless persons in March 2009 and the results fed into the June conference. One poignant comment summed up the experience of homelessness saying, ‘Staff should understand how it feels to be homeless and have no-one that cares for you’. Assigned health visitors liaise with housing services and provide regular visits to hostels. They also have a system to track information detailing all homeless families movements across Fife ensuring families don’t get ‘lost’ to the service. A gap analysis has been used to identify areas for development in the Acute Division. Work is in progress with Discharge Support Nurses to look at ways of addressing these issues and to develop a ‘Discharge from Hospital Protocol’ for those identified as having no address to be discharged to.</td>
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<tr>
<td>Substance Misuse</td>
<td>Hostel drop-in services are being delivered by a partnership of DAPL, NHS Addictions Services &amp; Clued Up funded through the ADP. The Hepatitis C Action Plan and BBV MCN are also part of this approach.</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Fife is fortunate to have a homelessness liaison (mental health) nurse who provides prompt assessment and direct referral into mainstream mental health services. By working across the whole sector of homelessness she has proved invaluable in fast tracking customers to access the appropriate service. She also deals with emergencies among homeless customers who are in a crisis situation due to their mental health.</td>
</tr>
<tr>
<td>Primary Care Services</td>
<td>A ‘Guide to NHS Services’ booklet is about to be published for key homelessness workers within partner agencies and across NHS services which come into contact with homeless individuals. Keep Well health checks are being offered at gypsy travelling sites and in hostels across Fife.</td>
</tr>
</tbody>
</table>

These short descriptions cannot do justice to the breadth and innovation of work being taken forward to tackle the health issues faced by homeless persons. The health and homelessness group will continue to work collaboratively with the 4 delivery units and key NHS services to ensure access and outcomes are maximised for this disadvantaged population group.
4. Fife’s Joint Health Improvement Plan

The envelope for all partnership working for health improvement and reducing health inequalities is the Joint Health Improvement Plan (JHIP) 2007-2010 - a Healthier Future for Fife. The JHIP provides a framework of key outcomes and focus areas across life stages.

The current JHIP was developed in consultation with partnership groups and forums and reflects the range and complexity of issues impacting on health and wellbeing in Fife. This complexity is captured in the outcomes triangle below and in the large number of named lead partners (39) who are engaged in delivering the JHIP.

Aspects of the work are supported by three funding streams; the Health Improvement Fund (HIF), Fairer Scotland Fund (FSF) and Choose Life (dedicated suicide prevention monies). Partners are now beginning to align core service funding to targeted support to disadvantaged individuals and communities. This gradual shift in resource to upstream prevention, early intervention, and targeted support for those who need it most is the common denominator in all recent national frameworks for tackling inequality. Monitoring this resource shift and measuring the opportunity cost of tackling the underlying determinants of health inequality is a challenge for all of us in this next decade.
Looking Forward

Currently the reconvened Ministerial Task Force on Health Inequalities is considering evidence on progress since the launch of Equally Well in 2008. The report when published later this year will help guide NHS Boards and their community planning partners in priorities to tackle inequality. The evidence and cost benefits for early intervention are now clear signalling a requirement to act early in the life stage of children and new parents. In times of public sector cost pressures the need for partnership working at the community planning table is ever more pressing as is the need to empower local communities to develop resilience and responsibility for their shared wellbeing. The Dahlgren & Whitehead model remains a valuable framework to guide policy action in tackling social equity in health.

The current reviews of both the Fife Community Plan and the Joint Health Improvement Plan in 2010 bring opportunity to reinvigorate the vision of a ‘Flourishing Fife’ where personal, community and environmental wellbeing are seen as the foundation for prosperity and shared economic progress.
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Alcohol

Summary

Alcohol is our favourite drug in society, deeply ingrained in our cultural psyche.

Relative rises in disposable income, coupled with extended promotions and price discounting of alcohol underpinned by extensive marketing and advertising all mean that alcohol is now cheap, easily available and heavily promoted in Scotland.

About a third of all adult men and a fifth of adult women in Fife are drinking more than the recommended weekly limits. There are an estimated 26,000 problem drinkers in Fife.

Alcohol-related harm increases with rising alcohol consumption. Death rates from alcohol-related causes, especially liver cirrhosis, are on the increase in Fife, as are alcohol-related admissions to psychiatric hospitals.

Alcohol contributes to health inequalities: alcohol-related premature death rates among those living in the most deprived areas of Fife are five times higher than for those living in the least deprived areas.

The increasing burden of societal alcohol-related ill-health demands the implementation of effective local and national alcohol control policies. Effective national alcohol control policies include:

• controlling price through minimum unit pricing and banning discounting;
• restricting alcohol marketing and advertising;
• enforcing licensing legislation;
• enforcing legal age of purchase;
• lowering drink-driving limits and introducing random breath testing.

Alcohol education programmes have limited effect on drinking behaviour in the long term. Educational programmes containing certain features are more likely to be effective.

Mass media campaigns and public service messages may be effective in building or sustaining support for public health alcohol policies.
Introduction

Alcohol is our favourite drug. Linked to almost every significant event in our lives, it’s deeply ingrained in our culture. Yet we have an ambiguous attitude towards alcohol: overuse carries disapproval and may have adverse health and social consequences.

The Alcohol Market

The UK alcohol industry is supported by advertising and marketing worth an estimated £800m annually.¹

Drink is now relatively cheap. Since 1980 UK alcoholic drinks prices have increased by 19% more than retail prices. But because households’ disposable income has increased by 102% in real terms, alcohol was 69% more affordable in 2007 than in 1980.²

Competition has driven down drinks prices through extended promotions, ‘buy-one-get-one-free’ offers and below-cost selling. Big pub chains offer high volume cheap selling, but discounting is particularly prevalent in the off-trade: in some supermarkets it’s possible to buy certain brands of cider for under 20 pence per unit³. These practices encourage additional or impulse buying.

Drinking Levels in Scotland and Fife

Table 1 shows current nationally recommended sensible drinking limits. A unit is 10ml of pure alcohol.

Table 1: Current Nationally Recommended Sensible Drinking Limits

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>3-4 units, with at least 2 alcohol-free days per week</td>
<td>2-3 units, with at least 2 alcohol-free days per week</td>
</tr>
<tr>
<td>Weekly</td>
<td>21 units</td>
<td>14 units</td>
</tr>
</tbody>
</table>
Table 2 places sensible drinking limits in context by showing the strengths of various alcoholic drinks.

**Table 2: Alcohol Content of a Range of Alcoholic Drinks**

<table>
<thead>
<tr>
<th>Drink Description</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pint of 5% beer</td>
<td>2.8 units</td>
</tr>
<tr>
<td>125ml (small) glass of 12% wine</td>
<td>1.5 units</td>
</tr>
<tr>
<td>175 ml (medium) glass of 12% wine</td>
<td>2.1 units</td>
</tr>
<tr>
<td>250 ml (large) glass of 12% wine</td>
<td>3 units</td>
</tr>
<tr>
<td>Small measure (25ml) of spirits</td>
<td>1 unit</td>
</tr>
<tr>
<td>2-litre bottle of strong (7.5%) cider</td>
<td>15 units</td>
</tr>
</tbody>
</table>

The annual volume *per capita* population over 18 years of pure alcohol sold in Scotland from 2005-7 was over 12 litres. When evened out across the population this represents nearly a whole bottle of vodka every week of the year for everyone over 18 years.

The 2003 Scottish Health Survey, corrected in 2008 for underreporting of consumption, showed that in 2003 89.5% of adult men and 81.5% of adult women in Fife were current drinkers. Figure 1 shows that average adult drinking levels in Fife were within recommended levels, but figure 2 shows that 32% of adult men and 22% of adult women in Fife were drinking more than the recommended weekly limit.

**Figure 1: Average Number of Units per Week Adults (aged 16+) in Fife and Scotland Drink, 2003**

Source: Scottish Health Survey 2003, corrected in 2008 for underreporting
Figure 2: Percentage of Adults (aged 16+) Drinking Over the Recommended Weekly Limits, 2003, Fife and Scotland

Source: Scottish Health Survey 2003, corrected in 2008 for underreporting

Figure 3 shows that the percentage of adult drinkers in Fife classed as “problem drinkers” was higher than for Scotland. This represents over 26,000 adult “problem drinkers” in Fife in 2003.

“Problem drinkers” are defined as those who when asked answer “yes” to two or more of the following questions:

- Have you ever thought you should cut down on your drinking?
- Have you ever felt annoyed by others criticising your drinking
- Have you ever felt bad or guilty about your drinking?
- Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover?
The Scottish Adolescent Lifestyle and Substance Use Survey (SALSUS) shows that between 2002 and 2006 drinking levels fell significantly among 15 year-olds in Fife but not among 13 year-olds (table 3).

Table 3: Changes in drinking habits in 13-15 year-old People in Fife, 2002-6

<table>
<thead>
<tr>
<th></th>
<th>13 year-olds</th>
<th>15 year-olds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever had a proper alcoholic drink</td>
<td>73%</td>
<td>66%</td>
</tr>
<tr>
<td>Had an alcoholic drink in the last week</td>
<td>22%</td>
<td>18%</td>
</tr>
</tbody>
</table>

¹difference between 2002 and 2006 levels statistically significant.
Source: SALSUS
Alcohol-related Harm

Alcohol-related harm rises with overall consumption.\(^4\) Scottish alcohol-related mortality has more than doubled in the last 15 years\(^5\). In 2003 an estimated 2,882 (5%) of all deaths in Scotland were attributable to alcohol.\(^6\)

Figure 4 shows recent trends in death rates from all alcohol-related causes for men and women aged under 75 years of age. There has been a slight rise in local death rates for men and women mirroring national trends.

**Figure 4: Annual Standardized Death Rate in Fife and Scotland 2000-2007 where Alcohol was the Underlying or a Contributory Cause**

Source: Registrar General Scotland
Figure 5 shows a steady rise in death rates from chronic liver disease and cirrhosis, particularly for men aged under 75 years in Fife.

**Figure 5: Standardized Death Rate from Chronic Liver Disease & Cirrhosis per 100,000 Males and Females under 75 in Fife, 1997-2009, Rolling Three-year Average**

Alcohol-related health harm also contributes to health inequalities (table 4). The rate of alcohol-related premature deaths among Fife residents aged 15-74 years living in the most deprived quintile according to the Scottish Index of Multiple Deprivation 2009 was over five times higher than for those living in the least deprived quintile.
Table 4: Directly Standardized Mortality Rate per 100,000 of Alcohol-related Premature Deaths for Fife residents aged 15-74 years for the Least and Most Deprived Quintiles, April 2002- March 2009

<table>
<thead>
<tr>
<th></th>
<th>S-Year Composite Financial Year of Death Registration</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2002-7</td>
<td>2003-8</td>
<td>2004-9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>Rate</td>
<td>No.</td>
</tr>
<tr>
<td>NHS Fife 20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Least Deprived</td>
<td>Alcohol</td>
<td>32</td>
<td>11.4</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Alcoholic Liver Disease</td>
<td>15</td>
<td>5.5</td>
<td>19</td>
</tr>
<tr>
<td>NHS Fife 20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most Deprived</td>
<td>Alcohol</td>
<td>171</td>
<td>63.3</td>
<td>188</td>
</tr>
<tr>
<td></td>
<td>Alcoholic Liver Disease</td>
<td>99</td>
<td>37.3</td>
<td>109</td>
</tr>
</tbody>
</table>

Source: Registrar General Scotland

Figures 6 and 7 show trends in discharge rates from acute and psychiatric hospitals in Fife related to alcohol. There has been no clear recent local trend in acute hospital discharges, but there has been a rising trend in psychiatric hospital discharges since 2004.

**Figure 6: Directly Standardised Rate per 100,000 of General Acute Hospital Discharges in Fife with a Primary Alcohol-Related Diagnosis 1998-9 to 2008-9**

Source: ISD
The wider adverse social burden of excess drinking includes: family breakdown; crime and disorder (especially at weekends); and loss of productivity through sickness absence. Alcohol misuse costs an estimated £2.25 billion every year in Scotland (table 5).

Table 5: Scottish Annual Costs of Alcohol Misuse 2006-7

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Scotland</td>
<td>£405m</td>
</tr>
<tr>
<td>Social work</td>
<td>£170m</td>
</tr>
<tr>
<td>Criminal justice and emergency services</td>
<td>£385m</td>
</tr>
<tr>
<td>Wider economic cost e.g. work absenteeism</td>
<td>£820m</td>
</tr>
<tr>
<td>Human societal cost</td>
<td>£470m</td>
</tr>
<tr>
<td>Total cost</td>
<td>£2,250m</td>
</tr>
</tbody>
</table>

Source: Costs of Alcohol Use and Misuse, Scottish Government, May 2008: http://www.scotland.gov.uk/Publications/2008/05/06091510/0
Effective Alcohol Control Policies

The increasing burden of societal alcohol-related ill-health demands the implementation of effective local and national alcohol control policies. A number of recent national or international reports have reviewed the evidence for the effectiveness of various alcohol policies and reached similar conclusions.4,7,8

Controlling Price

Figure 8 shows the inverse relationship between the price of alcohol relative to income and level of consumption among UK residents aged 15 years or over.

Figure 8: Relationship between UK Alcohol Price Relative to Income Levels and Consumption, 1960-2002


Alcohol consumption responds to price changes. Table 6 shows the estimated effect on Scottish consumption of differing minimum unit prices, taken from a recent modelling study.9
Table 6: Estimated Effect on Consumption in Scotland of Differing Alcohol Minimum Unit Prices

<table>
<thead>
<tr>
<th>Minimum price per unit</th>
<th>% drop in consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>25p</td>
<td>0.2</td>
</tr>
<tr>
<td>30p</td>
<td>0.5</td>
</tr>
<tr>
<td>35p</td>
<td>1.3</td>
</tr>
<tr>
<td>40p</td>
<td>2.7</td>
</tr>
<tr>
<td>45p</td>
<td>4.7</td>
</tr>
<tr>
<td>50p</td>
<td>7.2</td>
</tr>
<tr>
<td>55p</td>
<td>10.0</td>
</tr>
<tr>
<td>60p</td>
<td>12.9</td>
</tr>
<tr>
<td>65p</td>
<td>15.9</td>
</tr>
<tr>
<td>70p</td>
<td>18.9</td>
</tr>
</tbody>
</table>

Source: University of Sheffield. Model-based appraisal of alcohol minimum pricing and off-licensed trade discount bans in Scotland: a Scottish adaptation of the Sheffield Alcohol Policy Model version 2; 2009.

Table 7 illustrates the eventual effect on various health and social harms resulting from differing minimum prices.

Table 7: Estimated Eventual Annual Number of Alcohol-related Adverse Health or Social Sequelae in Scotland Avoided by Minimum Unit Pricing

<table>
<thead>
<tr>
<th>Minimum Unit Price</th>
<th>40 pence</th>
<th>50 pence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital admissions</td>
<td>3,600</td>
<td>8,900</td>
</tr>
<tr>
<td>Crimes</td>
<td>1,100</td>
<td>4,200</td>
</tr>
<tr>
<td>Days of work absenteeism</td>
<td>12,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Unemployment</td>
<td>800</td>
<td>1,700</td>
</tr>
</tbody>
</table>

Source: University of Sheffield. Model-based appraisal of alcohol minimum pricing and off-licensed trade discount bans in Scotland: a Scottish adaptation of the Sheffield Alcohol Policy Model version 2; 2009.

A total ban on off-trade discounting combined with a 40p minimum unit price would reduce consumption by an estimated 5.3%.9
Minimum pricing and discount removal would disproportionately affect those buying the most alcohol: under a 40p minimum price combined with an off-trade discount ban harmful, hazardous or moderate drinkers would spend on average of £2.63, £1.12 and £0.21 more per week respectively.  

Increasing alcohol taxation is less effective than minimum pricing in controlling consumption because retailers can choose whether or not to pass the price increase on to customers. Alcohol tax went up 6% in 2008, but supermarkets continued to sell heavily discounted alcohol. The advantage of minimum pricing is that this option is not available to retailers.

Minimum pricing and discount removal are thus effective in reducing population consumption and resulting harm, especially for hazardous or harmful drinkers. By disproportionately affecting people on lower incomes, it will also help to address alcohol-related health inequalities. The Scottish Government should introduce minimum unit pricing and outlaw alcohol price discounting forthwith.

The unit cost of alcohol needs to be at least 40 pence to have a significant impact. Lower minimum prices tend to cause switching from one type of drink to another, with little effect on overall consumption.

**Restricting Alcohol Marketing and Advertising**

Alcohol advertising and promotion have increased substantially in recent years, now using sophisticated marketing techniques for example internet-based sites such as Facebook. Such advertising is independently linked with the onset, amount and continuance of young people’s drinking. UK regulation of alcohol marketing and promotion is based on a voluntary code but this has several weaknesses.

First, with the exception of the pre-vetting of television advertisements, regulatory controls are only applied after an advertisement has been run and a complaint has been made. Any action will therefore only occur after the advertisement has already had an effect.

Second, relying on complaints about particular marketing approaches such as internet advertising on Facebook or Bebo is of limited effectiveness, particularly when young and impressionable people will be the only ones seeing them.

Third, the code’s focus on content inadequately addresses the promotion of alcohol-related images and associations. For example sponsorship of sporting events creates links between alcohol and sporting success.
Fourth, objections can be made on the style, language or design of a particular advertisement, but not on the volume of advertising.

The UK government should impose and enforce much greater restrictions on UK alcohol marketing. In France, the ‘Loi Evin’ prohibits the use of key media, including television and sponsorship. And rather than saying what cannot be done it defines what is permitted - and this is limited to factual information about the product.

**Enforcing Licensing Legislation**

Long opening hours and high alcohol outlet density are associated with drunkenness and alcohol-related violence and disorder, by encouraging movement between bars and causing increased local noise and disturbance.

Dark, noisy and crowded licensed premises with little seating, loud music, and large numbers of young customers are particularly associated with heavy drinking and alcohol-related crime and disorder. The layout, design and internal physical characteristics of licensed premises are therefore important factors to be considered during licensing. Responsible beverage service training programmes increase the likelihood of servers intervening appropriately with customers who are drunk, and decrease bad serving practices such as promoting particular drinks.

The police enforce licensing regulations in conjunction with local authorities and Trading Standards Officers. Active enforcement of laws regulating licensing hours and prohibiting the sale of alcohol to individuals who are intoxicated or those underage have been shown to be effective at increasing compliance with legislation. In 2009 the Licensing (Scotland) Act 2005 came into force. This contains five core objectives relating to the regulation of licensed premises:

- preventing crime and disorder;
- securing public safety;
- preventing public nuisance;
- protecting and improving public health;
- protecting children from harm.

It is important that these regulations are strictly and rigorously enforced, and that the enforcement agencies are adequately funded and resourced.
Enforcing Legal Age of Purchase

Regulating access to alcohol through restrictions on the legal age of purchase is effective in reducing consumption in young people and preventing alcohol-related problems. The use of test purchasing schemes supported by enforcement is an effective way of securing compliance with the legislation.

Lowering Drink-driving Limits

In the UK, the legal drink-drive limit is 80mg alcohol per 100ml of blood: among the highest in Europe. The relative crash risk of drivers with a blood alcohol level of 80mg per 100ml is 10 times that for a person with a zero blood alcohol level. Lowering the legal limit to 50mg/100ml would prevent an estimated 80 road deaths a year in England.7

Our drink-drive laws are enforced through selective breath testing and seasonal high-profile media campaigns. In contrast, random breath testing permits police to stop motorists who are not suspected of committing an offence or of being involved in an incident: motorists are therefore unable to influence the likelihood of being tested.

UK legislation to lower the drink-drive limit from 80mg/100ml to 50mg/100ml and to permit the use of random roadside testing should be introduced. This is currently a reserved matter but this position may change in the light of the Commission on Scottish Devolution.

Education and Information

School-based alcohol education programmes are relatively ineffective alcohol policy approaches but have been given disproportionate attention. They can influence knowledge and attitudes, but have limited effect on drinking behaviour in the long term: and in some cases have even increased alcohol consumption among young people. The research evidence indicates that educational programmes containing certain features are more likely to be effective i.e.:

• social norming;
• strengthening families;
• building resistance skills;
• a multicomponent approach.
Mass media campaigns and public service messages aimed at countering alcohol industry advertising have been shown to raise awareness but not to change attitudes or drinking behaviour. There is some evidence, however, that they may be effective in building or sustaining support for public health alcohol policies.

Educational programmes need to evidence-based, but more importantly our overreliance on them must be redressed in favour of more effective alcohol control policies such as minimum unit pricing and restrictions on advertising and promotion.
References

1. Roycroft G (ed.). Under the influence. The damaging effect of alcohol marketing on young people. BMA Board of Science; 2009.
6. Alcohol attributable mortality and morbidity: alcohol population attributable fractions for Scotland. Information Services Division; 2009.
8. Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm. WHO Europe; 2009.
Improving Services for Health
Using a Three Horizons approach to support Service Re-design Work in NHS Fife

Background

Re-designing health services has been a challenge for many years. Finding ways to deploy resources optimally in response to changes in demand requires constant adaptation. However, re-design projects yield progressively smaller results for the amount of effort required to implement them for three main reasons: the law of diminishing returns, the changing health needs of the population, the changing context of the wider world.

The law of diminishing returns

Current re-design strategies focus on individual care pathways, or care groups, are built on evidence-based practice and aim to develop capacity in terms of buildings and staff to meet demand. These approaches can only achieve marginal and incremental improvements in care because each pathway is developed separately based on a specific medical condition, each care group is dealt with separately, based on age or underlying condition (e.g. learning disability) and facilities are managed separately, based on services provided. The cost of services rise as each specialty develops additional sub-specialties and each pathway additional elements and sub-pathways. Co-ordinators are appointed to manage these pathways and the collaboration needed across medical disciplines to help implement them. This is one of the reasons why despite a 100% increase in spend in the NHS in the last 12 years, there has not been a 100% increase in effectiveness in terms of treating patients.

The changing health needs of the population

Current re-design strategies are poorly adapted to respond to the changing health needs of the population. In the last 20 years, there have been dozens of reports on ageing, obesity, diabetes, alcohol and drug problems, the links between physical and mental health and the needs of people at the end of life but the healthcare system continues to practice episodic care, treating each episode of illness in isolation. A healthcare model based on the assumption of acute illness which responds rapidly to treatment is finding it difficult to adapt to the realities of older people with multiple and complex needs, younger adults with combined physical health problems and addictions, children with developmental delay who have chaotic family lives, anti-microbial resistance and the complications of healthcare treatment itself.

Doctors have become adept at identifying the immediate cause of presenting symptoms and treating these but have less success in dealing with underlying determinants of ill health or in recognising the end of life stage of illness where a more measured and considered approach to treatment is needed.
The changing context of the wider world

We live in a consumer culture which has the effect of increasing public expectation and a willingness to seek compensation when things go wrong. This can be good in terms of pressuring health services to respond to individual needs, but it can run the risk of encouraging more defensive medicine.

More empowered patients, who gain access to a great deal of information from the internet can increase expectations further. The funding of special interest groups by the pharmaceutical industry can also fuel demands for new medicines.

There are deeper changes taking place in the economy which impact on health. The near collapse of the financial system and subsequent recession in the UK has had an impact in redundancies and reduced income in families. The stress this creates can increase the chance of illness. The knock-on effect to public finances is putting a squeeze on public spending posing a challenge to running health and social care services in their current form.

Rising fuel costs can impact on people on low income, forcing unpleasant choices - to eat or to stay warm. This in turn can have a negative impact on health.

The need for a Three Horizon Approach

It should be clear by now that the challenge for re-designing health services is to adapt them to a radically different operating environment, where health needs are frequently complex and unique to the individual, financial resources are pegged at current levels and the wider world is changing fast.

The Three Horizons developed by International Futures Forum offers a framework for doing this.

This model recognises that systems are in flux. Whilst one predominates at any one time (the first horizon), there are innovations going on all the time and at some point these take over from the first horizon (the second horizon). Meanwhile, there are also more radical processes going on that lead to the emergence of quite different systems (the third horizon).

There are many aspects of this model that are important to appreciate: the first aspect is that all horizons are present at any moment - there is evidence of the third horizon in the present and evidence of the first in the third. For example, whilst the Roman civilisation collapsed a long time ago, we still use some of their road grid. The second aspect is that innovation can either be used to keep the first horizon going for a bit longer or support transition to the third horizon. This is important for service re-design as much of our innovative effort is currently spent keeping the existing system going (known as “H1 capture and extension”). Whilst this is understandable as we
try and “keep the lights on” in the current system, it reduces the chance of a smooth transition to the third horizon. A third and most important aspect of the model is the consciousness of a third horizon allows innovation in the second horizon to be harnessed to design a new system. This change in consciousness changes the nature of our task from propping up the current system to supporting the emergence of a new one.

Three Horizons

Using the Three Horizon model in Fife

Following on from the review of care arrangements over the winter, it was agreed that new thinking was needed to inform longer term strategies to deal with winter pressures.

Work started with a series of interviews with people working in health and social care and three members of the public. They were asked to identify what they saw as limitations of the current healthcare system (H1), aspirations for a future system (H3), evidence of H3 in the present and innovations that are taking place in Fife (H2) that might help to create H3. Responses were anonymised.
To help with discussion, responses to the question: what signs or symptoms do you have the current way of providing care is under strain or even failing (H1 in decline) were clustered into seven themes:

1. People are being looked after in the wrong place
2. The way targets are used fragments care
3. Financial pressures put strain on staff and increase workload
4. Staff are demoralised and demotivated
5. Management attention is on silos and short term needs
6. Unreliable interface between health and home/social care
7. Communities themselves under strain in a recession

Responses to the remaining 3 questions were put onto sets of cards which were processed during a workshop that involved everyone who was interviewed. This allowed a combined picture to emerge of our aspirations for a third horizon and thirteen promising pathways to follow in the second horizon.

Following on from this work, further thought was given to the tensions in values that are being expressed in H1 and H3.

In the light of these tensions we re-examined the H2 innovation pathways that we had identified at our workshop. We looked at how these pathways might enable us to get the best of both worlds (H1 and H3), whilst maintaining viability throughout. The 13 promising pathways that were identified at the workshop were reduced to six as follows:

1. **H3 as our strategic intent**: aligning long-term investments with this aspiration and bending resources towards the most promising pathways
2. **Evolve technology with a human face**
3. **Grow the workforce to support and participate in the new system**
4. **Grown up conversations** - about living and dying, about love, care and compassion, about human limits and human potential
5. **Focus on person/patient experience** as our most powerful learning tool
6. **Nurture community and relationships** recognising most recovery from illness and longer-term care take place at home, with family, friends and neighbours to help.
Three Horizons for Winter Care in Fife
Summary analysis of value tensions and promising pathways
Abdominal Aortic Aneurysm screening in Fife

NHS Fife is currently planning the introduction of a screening programme for abdominal aortic aneurysm (AAA) with implementation likely to occur during 2012. This is part of a national project to introduce AAA screening throughout Scotland based on both recommendations from the (UK) National Screening Committee and the Scottish AAA Screening Steering Group and on the success of pilots in both Scotland (NHS Highland and NHS Western Isles) and England (Chichester and Gloucester).

Men aged 65 years will be invited to screening and men aged over 65 will be able to refer themselves to be screened if they wish. In men aged less than 65 and in women, AAAs are relatively uncommon and screening in these groups has proven to be neither an effective measure for saving lives nor an efficient use of our limited healthcare budget.

What is an abdominal aortic aneurysm?
An AAA is a condition caused by weakening of the walls of the main artery in the abdomen, the aorta. This weakening can lead to a ballooning of the artery which may increase over time and, in rare cases, can rupture.

Who gets AAAs?
In Scotland around 5% of men aged 65-74 years have an AAA [equivalent to 747 men in Fife] many of whom will be unaware they have the condition. AAA is six times more common in men and more common as they get older, with the majority occurring in men aged over 65 years. Smoking, high blood pressure and a family history of AAA are other risk factors.

What are the consequences?
Rupture is more likely to occur if the AAA is larger than 5.4cm in diameter. In the event of a ruptured AAA approximately 50-85% of patients will die despite access to emergency surgery. An average of 284 men aged over 65 years die from AAA each year (2001-2005 data) with an estimated 20 of these deaths occurring in Fife men.

What can we do about it?
Non-invasive screening with an ultrasound scan can detect the presence or absence of an AAA. If present, the scan can also measure the diameter of the aneurysm. These scans are easily performed by trained technicians using portable equipment. One negative scan, in a man aged 65, will effectively rule out life-threatening AAA disease for the rest of his life.

If an AAA is detected on the scan, follow-up will depend on the measured diameter of the aneurysm. Men with smaller aneurysms will be invited back for subsequent surveillance scans on an annual basis. Men with medium sized aneurysms will be offered more frequent scans in order to monitor their AAA more closely. In both these groups,
surgery would not be offered as rupture of these aneurysms is less likely and the risks of surgical repair outweigh the risk of rupture.

In the case of large or rapidly growing aneurysms, the patient will be referred to our specialist vascular services for consideration of repair either via open abdominal surgery or via the blood vessels in the groin, this later procedure is known as endovascular aneurysm repair (EVAR). Such surgical interventions are not without their risks, with elective operative mortality in a large UK-based study of AAA screening being 5.8%.\(^1\) Mortality rates vary by centre and region of the country and rates for all centres in Scotland are not known.

NHS Western Isles and NHS Highland conducted a successful pilot of the AAA screening programme between 2001 and 2003 which was attended by 8,355 men. In these remote and rural areas, uptake of the screening programme was very good (89%) and mortality for those patients who received elective surgical AAA repair was low at 1.9%.

**Will screening make a difference?**
Estimates based on available evidence suggest that an established screening programme for AAA in men aged over 65 years would reduce the risk of AAA-related death by between 42% and 60%. This would equate to between 120 and 170 premature deaths prevented each year in Scotland [an estimated 8 to 12 of whom would be in Fife].

**What has been done so far?**
The National Services Division (NSD) are leading the project management of the implementation of this national screening programme with involvement from each of the NHS boards. NHS Fife is currently participating in a national screening coordinators group. This group has been established to develop and implement an AAA screening programme throughout Scotland. It is expected that our screening programme will be operated in partnership with NHS Tayside.

The planning process for AAA screening within NHS Fife will ensure that our ultrasound and vascular surgery services are well equipped to deal with the increased workload that this screening programme will produce. The evidence indicates that this investment will pay dividends by reducing the number of ruptured AAAs thus preventing both emergency AAA repairs (which tend to be more resource and workload intensive than elective repairs) and reducing the number of deaths from AAAs.

**References**

Dental and Oral Health

Following publication of the Scottish Executive’s 2005 Dental Action Plan a number of new national programmes were funded to improve oral health and modernise NHS dental services. In addition, a funding stream was made available to NHS Boards to develop local oral health improvement work. Work piloted in Fife has contributed to two national initiatives - the Childsmile programme and the Scottish Emergency Dental Service (SEDS).

Childsmile

This national programme is designed to improve childrens’ oral health overall and to address oral health inequalities. NHS Fife supported and co-ordinated one of two initial national demonstration projects and was the site of the initial clinical interventions in local nurseries and primary schools. The Childsmile programme has now moved to a roll-out phase with regional programme management and support provided through the dental public health team in NHS Fife. The team includes two full time research staff working as part of a wider Childsmile research network in three centres. Childsmile has also commissioned research from the Department of Health Psychology at St Andrews University thus building links between the NHS and local academic institutions.

Within Fife, the Childsmile programme has become well established in target nurseries and schools and will build on a range of other work to improve oral health amongst children. A key part of the clinical preventive programme is the twice yearly application of fluoride varnish to the teeth of children from age 3 years upwards in target settings. In the years since the programme commenced in 2006/07 just over 17000 fluoride varnish interventions have been undertaken in Fife. During 2010, Childsmile will be introduced into local dental practices in Fife. The intention is that by 2013, every child born in Fife (and Scotland) will have access to the Childsmile programme in dental practice from the first year of life onwards. This, together with the nursery and school programme will support the achievement of the new national annual performance (HEAT) target for NHS Boards that at least 60% of children aged 3 and 4 years in each SIMD quintile will have twice yearly fluoride varnish applications.

The evidence base for using fluoride varnish in this way is strong and will be re-inforced by new guidance from the Scottish Dental Clinical Effectiveness Programme published in April 2010. This should build on a strong foundation of daily toothbrushing with fluoride toothpaste. To encourage the development of a daily toothbrushing habit for children, 96% nurseries and 73% of target primary schools in Fife offer daily supervised brushing programmes. It is important that this rises to 100% participation during 2010 thereby giving all children equal opportunity to improve their oral health.
Emergency Dental Service

NHS Fife has developed and delivered an emergency dental service using trained dental triage nurses and telephone support software over the last 10 years. This service has formed the basis of a national project with NHS24 to develop the Scottish Emergency Dental Service (SEDS) programme. The SEDS/NHS24 service now covers over 90% of the population in Scotland. Within Fife, the comprehensive out-of-hours service is augmented by secondary specialist triage provided in partnership with the Dept of Oral and Maxillofacial Surgery - and this secondary level of triage was also successful in attracting national funding during 2009.

Attracting interest from elsewhere in the UK and Europe, the innovative SEDS/NHS24 service aims to provide a systematic way of assessing patients who contact NHS24 with dental problems out of hours. Those patients with the most urgent needs will have care offered in the out of hours period or within 24 hours - depending on their condition. The dental public health team in partnership with the Department of Health Psychology at the University of St Andrews were awarded a research grant in 2009 to undertake a pilot study on the effectiveness of the dental nurse triage process.

Oral Health Strategy

Oral Health Care Award

An Oral Health Strategy for Fife was published in 2008. The associated action plan included a range of work to improve oral health and increase access to local dental services. In addition to the focus on childrens’ oral health, the action plan saw the commencement of a programme to improve the oral health of older people in care home and hospital settings in Fife. There is evidence that older people in these settings have significantly poorer oral health - and that oral health may well deteriorate following admission to care. In order to address this, the Fife Oral Health Care Award was established in 2008 with Scottish Government funding. Eleven criteria for good oral health practice were agreed in consultation with local Care Homes - with an inspection process to ensure that awards were objectively assessed. Currently 60% of Fife Care Homes are participating in the project - with 23 having achieved the full award and 30 in progress. The award focuses on training of Care Home staff and will be complemented by an electronic training package in 2010.

Oral Cancer

The Strategy highlighted the incidence and morbidity of oral cancer. Although oral cancer is predominantly a disease of people over 50 years old there has been an increase in the number of young people in Scotland who are diagnosed with the condition. There is a strong association with tobacco use (including chewing tobacco) and
heavy use of alcohol. Most oral cancers are identified opportunistically by dentists or doctors in primary care and because most clinical staff will only see a few such cases in their professional lifetime there is a continual need to highlight the key signs both to clinical staff and patients. A lecture on oral cancer has therefore been introduced to the curriculum at the Bute Medical School in 2009 and the need for further public awareness raising will be reviewed in 2010. The key signs are:

- Mouth ulcers which do not heal within three weeks
- Red and white patches in the mouth
- Unusual lumps or swellings in the mouth

Older People and Palliative Care

Fife Framework for Services for Older People

A revised Framework was published in early 2007 providing a valuable guide to service developments and opportunities for older people across various Community Planning partners in the coming years. Six key outcomes for older people were agreed:

Fife Framework for Older People Services 2007

- **Safe**: older people should live safely and securely in their homes and communities
- **Mobile**: older people should enjoy the benefits, independence and freedom of accessible environments in all aspects of their daily lives and in their communities, including accessible and affordable passenger transport.
- **Accommodated**: older people should be supported to live as independently as possible and in accommodation suitable to their needs.
- **Active and Fulfilled**: older people should have the opportunities to access social contact and encouragement to participate in learning, paid work, volunteering opportunities, physical activity and the entitlements and income to ensure that they can enjoy social pursuits and club activities.
- **Involved and Informed**: older people should be involved in decisions which affect them, have the information they need to make informed choices on the services available to them and have their diversity respected.
- **Supported**: older people should have access to the highest attainable standards of relevant support services, especially health and social care, tailored to their individual circumstances. As these circumstances change, older people should be supported in their capacity to adapt to these changes and to make personal choices as far as practicable.
Joint Commissioning Strategy

During 2009, Fife Health and Social Care Partnership continued to work on the development of a Joint Commissioning Strategy for Community Care services for Older People with involvement from a wide range of stakeholders. Although many areas of work are already being progressed, this joint strategy is essential to ensure agreement across health and social care on how services should be developed and shaped to ensure they are fit for purpose.

Palliative Care

A national action plan for the cross-cutting issues of palliative care and end of life care was published in late 2008. The Palliative Care Group is currently implementing the Delivery Plan for Palliative care and End of Life Care in Fife - which now covers all conditions - whether malignant or not. There are a number of workstreams which are being taken forward nationally, such as the development of a public health/health promoting approach to death, dying and loss.

Active Ageing; Health Improvement and Health Promotion For Older People

A key theme of Fife’s Joint Health Improvement Plan is the health and wellbeing of older people, which is relevant to, and continues to be taken forward by many strategic and health improvement-related groups. As part of our aim to support and enable people to remain independent in their own homes it remains vital that we all (communities, services and people) work to ensure health and wellbeing is promoted and improved so people maximize their healthy life expectancy as they age.

Falls, Osteoporosis and Fracture Prevention

An action plan for the Falls, Osteoporosis, and Fracture Prevention Strategy is being implemented, under the aegis of the Bone Health and Falls Managed Care Network. Many actions are already progressed across the Partnership, under the coordination of the MCN Manager.

Intermediate Care

The findings of the Public Health needs assessment have been widely disseminated to local management units and CHPs in Fife and will be used to inform local developments. In particular the findings have been used to inform the development of Intermediate Care Demonstrator projects in Fife.
The following pyramids show how care and support across the older population would be most effectively shared. The width of the pyramids reflect the numbers of people.

![Pyramid Diagram](Image)


The two pyramids of care remind us:

1. that health promotion is the bedrock which is essential to maintain independence in the older population, and.
2. that people should not be inappropriately cared for at higher levels of the left hand pyramid than necessary. As well as being resource intensive, this approach will tend to reduce people’s potential for maintaining their own independence.

As part of Fife’s approach to health improvement, all Fife Partners should continue to seek opportunities to strengthen and facilitate active ageing, and seek opportunities to build links between generations.

Most health and care depends on an alliance of self care with support from appropriate levels of professional advice or informal care. As many conditions coexist, so in turn many services will need to be provided and supported by generalists (rather than specialists) in every long term condition. The appropriate role of specialists is at the highest levels in these pyramids when conditions or complexity are most intense.

For example with conditions such as dementia that will become increasingly prevalent as the population ages, it will be important that all health and social care staff are familiar with general aspects of managing patients with dementia so that we can maintain independence and quality of life.
Next Steps

Fife needs to continue to keep under review and respond to the needs of its older population, now and for the future years, particularly as they are both a great asset to our communities as well as being the main users of health and social care services. The older population is projected to continue rising in number and proportion in the coming two decades. Services and communities therefore need to continue supporting and enabling older people to remain independent in their own homes. Support to carers is also vital, many of whom are older themselves.

- To meet the needs of the older population now and in the coming years all our Health and Care Services should have a primary aim of maintaining and supporting independent living and maintaining quality of life.

- Successful outcomes for older people are only partly about effective management of acute illnesses or minimising mortality. Primarily, success should be equated with a maintenance of - or return to - prior levels of independence in the community. For parts of our health and care system this will require a steady shift of focus and culture in the coming years.

- There needs to be both an emphasis on supporting people with complex needs as well as a focus on prevention and self care. Supported self management as set out in the governments strategy (Better Health Better Care) helps improve quality of life, minimise pressure on the NHS and change the culture of health and care services.

Pharmaceutical Public Health

Medicines and pharmaceutical advice is required across a range of public health areas and this can be seen in the diversity of areas where we have made a contribution over the last year.

Health Protection

Pharmaceuticals are a key component of emergency planning and of immunisation programmes. The pharmaceutical public health team had an important role in the wider response to the H1N1 pandemic flu, not limited to incident management. As pharmaceuticals are key to many aspects of treating patients in a pandemic flu situation the work done with other key stakeholders and pharmacy colleagues both before and during the pandemic ensured that there were no supply issues and regularly updated prescribing advice was available.
Drug Safety

Although medicines are tested prior to marketing in the UK there are times when safety issues require drugs to be recalled in order to protect the public. The system to manage Drug Alerts is operated from within the Pharmaceutical Public Health Service. The following classifications are given to drug alerts:

- **Class 1**: action now (including out-of-hours) for defects which are potentially life-threatening or could cause serious risk to health
- **Class 2**: action within 48 hours for defects which could cause illness or mistreatment but are not Class 1
- **Class 3**: action within 5 days defects which may not pose a significant hazard to health but where a recall has been initiated for other reasons
- **Class 4**: caution in use where there is no threat to patients or no serious defect likely to impair product use or efficacy

In 2008 21 drug alerts were dealt with and in 2009 35 drug alerts were issued and dealt with.

Pharmacy Public Health Services

Community pharmacy is now well established as providers of public health services. The key services included within the core contract are the provision of healthy lifestyle advice, support and nicotine replacement for smoking cessation and sexual health services.

Smoking cessation support is provided via all community pharmacies in Fife who have seen over 1700 patients since September 2008. This is only one component of the NHS Fife smoking cessation service yet in 2009 pharmacy contributed nearly 30% of clients successfully followed up at one month (based on figures so far) in Fife. The pharmaceutical public health team have contributed to the development of a voucher scheme for the supply of nicotine replacement therapy via specialist services making access to therapy easier for patients.

Sexual health services are provided via community pharmacies allowing access to emergency hormonal contraception and in some areas, chlamydia testing and treatment.

Figures, for patients in NHS Fife, having a consultation in community pharmacy for emergency hormonal contraception for the first 6 months of 2009 can be seen in Table 1. They show what an important contribution the increased access to services from community pharmacy provides.
Improving Services for Health

Table 1. No of emergency hormonal contraception consultations in community pharmacy

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan-09</th>
<th>Feb-09</th>
<th>Mar-09</th>
<th>Apr-09</th>
<th>May-09</th>
<th>Jun-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of patients</td>
<td>350</td>
<td>377</td>
<td>363</td>
<td>396</td>
<td>497</td>
<td>404</td>
</tr>
</tbody>
</table>

For the chlamydia testing service 57 valid tests were carried out, 21% of those on males. The positive rate was 7%. And while figures for use of this service are not high, it provides an economical way of making access easier for the people of Fife.

Pharmaceutical Care

An important aspect of health policy is that of medicines policy. Ensuring that robust systems for managed entry of new drugs are in place in NHS Fife and supporting the work of the Area Drug and Therapeutics Committee (ADTC) are key elements of the workplan. The ADTC takes account of Scottish Medicines Consortium advice on new drugs and engages local clinicians in the decisions of how best to use new drugs alongside established therapies.

The SMC assessed 87 new medicines in 2008 and of these 27 were accepted for use, 31 accepted for restricted use and 29 not recommended for use in NHS Scotland. The appropriate procedures have been put in place to make sure that those medicines approved for use are available and used appropriately in NHS Fife and that those not approved are not available unless clinicians can show that there is an individual patient need. As there are new developments in entry of new drugs into use occurring NHS Fife will need to continue to develop its systems to ensure access to medicines for the population of Fife.

A bulletin is produced and distributed across NHS Fife after each ADTC meeting to ensure wide communication of its decisions.

Pharmaceutical Care Needs Assessment

In 2007 and 2008 a draft Pharmaceutical Care Services Plan was produced which provided a baseline needs assessment for pharmaceutical care services in Fife. The report describes (for each of Fife’s Community Health Partnerships) the range of pharmaceutical services an overview of which is given in table 1.
Table 2: Community Pharmacies in NHS Fife (September 2007)

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of community Pharmacies</th>
<th>Population (GRO 2005)</th>
<th>Population per community Pharmacy</th>
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<tbody>
<tr>
<td>NHS Fife</td>
<td>77</td>
<td>356740</td>
<td>4633</td>
</tr>
<tr>
<td>Dunfermline and West Fife</td>
<td>31</td>
<td>138792</td>
<td>4477</td>
</tr>
<tr>
<td>Glenrothes and North East Fife</td>
<td>25</td>
<td>122818</td>
<td>4913</td>
</tr>
<tr>
<td>Kirkcaldy and Levenmouth</td>
<td>21</td>
<td>95130</td>
<td>4530</td>
</tr>
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</table>

For the first time mapping was used to look at positioning in relation to GP surgeries, deprivation and drivetime (See Map A).

These methodologies will be further developed in 2010 when we undertake needs assessments for pharmaceutical palliative care services and pharmacy out of hours requirements.
Map A: NHS Fife Pharmacy Drivetime

Site Key

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
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<tbody>
<tr>
<td>+</td>
<td>Pharmacy</td>
</tr>
</tbody>
</table>

Average Speed (mph)

<table>
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<tr>
<th></th>
<th>U</th>
<th>R</th>
<th></th>
<th>U</th>
<th>R</th>
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<tbody>
<tr>
<td>Large Settlements</td>
<td></td>
<td></td>
<td>Medium Settlements</td>
<td></td>
<td></td>
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<tr>
<td>Small Settlements</td>
<td>10</td>
<td></td>
<td>Villages</td>
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<td>Motorways</td>
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<td>B Roads</td>
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<td>Minor Roads</td>
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<tr>
<td>Bridges</td>
<td>30</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Hand Washing Station Scottish Deer Centre
In 2008 the Health Protection Team made several significant advances in its infrastructure:

- A Public Health Incident Control Room was identified and equipped.
- HP Zone - a database for the capture and management of Health Protection events - was piloted and launched.
- The on call laptop system was updated - this has improved access to key information for decision making and recording actions outwith normal office hours.
- The Health Protection Manual was reviewed and updated and now contains hyperlinks to information held in local systems and web links to key sites.
- An ISDN line was established within the PH Department. This has greatly improved the quality of sound in radio interviews.
- Teleconferencing equipment was purchased and has been used extensively to ensure access to specialists within and outwith Fife during incidents and planning meetings.

Future plans include:

- Develop HP Zone to enable localisation of forms and guidance documents.
- Continue close working relationships with NHS Fife Microbiology and Infection Control.
- Investigate options for videoconferencing within Cameron House.
- Support the work undertaken by the NHS Fife Resilience Forum.

**Swine Flu**

There were three flu pandemics during the 20th Century, varying in severity from about the same as seasonal flu to resulting in the deaths of millions of people worldwide. NHS Fife, in common with the rest of the NHS in Scotland, has been preparing for an Influenza Pandemic for several years. These plans have been based on the worst case scenario - ie that a new strain of pandemic flu would spread easily, infect a large number of people - many of whom would suffer serious consequences including death.

Pandemic H1N1 flu was first noticed in Mexico in April 2009. It rapidly spread to other countries. Fortunately, the strain of virus was relatively mild and it arrived in the UK at a time of year (in the Spring) when flu viruses are less easily spread. NHS Fife activated its Pandemic Flu Plan and the Public Health department established an Incident Room to keep track of reported possible cases of H1N1 flu and ensure that the people involved were offered the investigations and treatment recommended by Government - the “Containment Phase”.
Governments across the UK moved from the “Containment Phase” to the “Treatment Phase” in June 2009 when the widespread spread of the virus to all parts of the UK became apparent. The “Treatment Phase” differed in that people with suspected H1N1 flu were offered treatment if their doctor felt it was necessary rather than having to wait for results of laboratory testing.

A H1N1 vaccine was made available in Scotland in October 2009 and to date around 50% of the population offered the vaccine have taken up the offer. The number of cases of H1N1 flu continues to decline.

Meningococcal Infection

During 2008 there were a total of 11 cases of meningococcal infection reported in Fife for initial investigation on clinical diagnosis. Meningococcus is one of the bacteria which can cause meningitis (swelling of the lining around the brain), septicaemia (blood poisoning) or both. Babies and young children are at higher risk from the disease. When a case of meningococcal infection is notified to the Health Protection Team antibiotics are offered to identified “close contacts” (usually household members) to kill the bacteria that can cause the disease and help stop the infection spreading.

A total of 50 people were identified as close contacts of the 11 notified clinical cases of meningococcal infection and required antibiotic prophylaxis. Letters and information leaflets about meningococcal meningitis were distributed to 3 educational establishments and 1 preschool facility. In addition 1 Fife resident was identified as a close contact of a meningococcal case from another NHS Board requiring antibiotic prophylaxis. Although meningococcal disease has been reported to cause outbreaks less than 3% of cases isolated in the UK are linked and all cases in Fife were sporadic.

Meningitis C vaccine has been available in the UK childhood immunisation programme since 1999 and following its introduction there had been a decline in the number of serogroup C meningococcal infections. Uptake of the Meningococcal C vaccine at 24 months is 96.2% in Fife. None of the laboratory confirmed cases in Fife were identified as having a Meningococcal Group C infection. Further typing on 3 of the laboratory confirmed cases identified 2 meningococcal Group B infections and one Group Y infection. Around 80% of laboratory confirmed cases of meningococcal infection are due to serogroup B.
Meningococcal cases reported to Health Protection Scotland by serotype 2002-08 (week 39)

Verotoxigenic Escherichia Coli (VTEC)

Verotoxigenic Escherichia coli (VTEC) can cause a range of symptoms from mild diarrhoea of short duration to severe diarrhoea with fever, abdominal pain and lack of energy. Escherichia coli O157 is the commonest serogroup found in the UK but reports of non O157 VTEC are increasing.

The infectious dose of VTEC appears to be very low. If the bug is swallowed, infection can occur between 1 to 14 days later, usually 3-4 days. This makes it difficult when trying to identify a source of infection as co-primary cases may have different incubation periods. Young children and the elderly are at a higher risk of suffering from the severe forms of the disease and urgent medical treatment is required. VTEC infection is diagnosed by detecting the bug in the stool by laboratory testing. This may done locally at Fife Area Laboratory or at the Reference Laboratory in Lothian.

There were 12 sporadic cases of VTEC in Fife, 2 separate family outbreaks (one involving 3 family members and the other 4) and 2 linked cases. Both the family outbreaks and 2 of the 12 sporadic cases were acquired in other parts of the UK. 2 of the remaining 10 sporadic cases were acquired abroad.

In addition there were 2 cases of non O157 VTEC. Ages ranged from 9 months to 82 years of age.
No source was identified in any of the primary cases but all were exposed to an environment potentially contaminated by animal excreta which is a known risk factor for infection.

**Immunisation**

Uptake rates for primary immunisation in Fife are very encouraging with over 95% of children having received their primary immunisation for Diphtheria, Tetanus, Pertussis (whooping cough), Polio, Haemophilus Influenzae Type B (HiB) and Meningococcal C (MenC) by 24 months. The updated rates for 1 dose of MMR at 24 months is 91% and by 6 years is 95% with 90% of 6 year olds having received 2 doses of MMR.

**Human Papilloma Virus (HPV)**

Human papilloma virus causes 99% of cervical cancers and it is estimated that immunisation will reduce the number of cases of cervical cancer by up to 77%. In Scotland cervical cancer claims around 100 lives every year.

In September 2008 implementation of Human Papilloma Virus (HPV) immunisation to protect girls between the ages of 12 and 18 against developing cervical cancer commenced in Scotland. Girls who were pupils in their 2nd year of secondary school and those in their 5th and 6th year, were invited to receive a 3 dose schedule of HPV vaccine. Girls aged 18 and under but not in school were also invited to receive HPV immunisation at various clinics in 2009. Provisional uptake rates as at February 2009 were 90.6%.

A catch-up campaign will continue through 2009 and 2010 to ensure the initial cohort of girls in the identified age group at the start of the programme will have been offered HPV immunisation. Thereafter HPV will become part of the routine school based immunisation programme for girls in their second year of secondary school.

**iGAS**

Group A streptococcal (GAS) infections are caused by Streptococcus pyogenes, a bacterium commonly found on the skin or in the upper respiratory tract (nose & throat). An uncommon manifestation of the infection is invasive Group A Streptococcal Infection (iGAS) causing severe illness and occasionally death. Therefore, early recognition & prompt medical action can be life-saving.
In recent years there has been a re-emergence of Group A streptococcal infections including iGAS. Within NHS Fife during 2008 there were a total of 19 cases of iGAS. Cases have ranged from bacteraemia to severe necrotising fasciitis and/or toxic shock syndrome (TSS). Due to the severity of the infection, close contacts are identified and given information on iGAS. Any close contacts with sign and symptoms of a GAS infection are encouraged to seek prompt medical treatment. As of yet, no secondary cases of iGAS infections have occurred in Fife.

Tuberculosis (TB)

TB service incorporates the:

- management of TB cases and contact tracing as per guidance,
- new entrant screening and follow up,
- and the BCG Service.

There were 28 new TB cases notified in 2008 in Fife of which, 15 were Atypical Mycobacterium. The remainder were 8 pulmonary and 5 non-pulmonary cases. There were 150 new entrants from high risk countries - 84 of these required follow up by the TB Service.

Weekly paediatric BCG Clinics are undertaken at the Victoria Hospital, Kirkcaldy. 217 children were vaccinated in 2008. The BCG school catchup programme is ongoing with 69 school children being vaccinated in 2008. Six BCG’s were carried out as a result of contact tracing.

Environmental Health

Introduction

The environment in which we live has a significant effect on our health. These effects range from the harmful (contamination of land, air or water) to beneficial (access to greenspace, working with the land). The NHS in Fife can make a significant contribution to improving the environment by taking action to reduce waste production, water consumption and CO2 emissions (by reducing heat loss, electricity usage, travel). It is committed to doing this across all sectors though the adoption of the Carbon Management Programme. A working group has been established to address the challenges faced by extravagant use of power in health care premises across Fife.

Although much Health Protection work in recent years has focussed on investigating and controlling harmful elements in our environment (radiation, chemicals), work is now being progressed to protect health by improving the environment. Although still in the early stage, the organisation is reviewing the use of NHS land for biodiversity.
### Environmental Investigations

There were a similar number of environmental investigations in 2008 compared with 2007.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Incident</th>
<th>Actions/Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological</td>
<td>Freedom from infection request</td>
<td>Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Unexplained rash in school group</td>
<td>Investigation and Health Protection advice</td>
</tr>
<tr>
<td>Chemical</td>
<td>Fuel Dispute, Grangemouth</td>
<td>Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Methil recycling facilities investigation</td>
<td>Investigation and Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Mercury and crematoriums query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Waste management of batteries query</td>
<td>Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Surface coal mine query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Coal transport query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Mosmorran health updates</td>
<td>Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Power station health query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Nickel content in jewellery query</td>
<td>Investigation and Health Protection advice</td>
</tr>
<tr>
<td>Radiation</td>
<td>Query non-ionising radiation and health</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Tetra mast query</td>
<td>Response following assessment</td>
</tr>
<tr>
<td></td>
<td>FOI cancer cluster query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Breast cancer query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td></td>
<td>Radioactive waste query</td>
<td>Response following review of reports</td>
</tr>
<tr>
<td>Water</td>
<td>Blue green algae incidents</td>
<td>Notification, public signs, updating guidelines &amp; leaflet</td>
</tr>
<tr>
<td></td>
<td>Legionella investigations</td>
<td>Investigating cases and any associated links</td>
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<td></td>
<td>Water contamination private water supplies x 3</td>
<td>Investigation and Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Water contamination sewage</td>
<td>Investigation and Health Protection advice</td>
</tr>
<tr>
<td></td>
<td>Access to clean water for hand-washing on petting farm</td>
<td>Investigation and Health Protection advice</td>
</tr>
</tbody>
</table>
Health Protection

Water

Legionella

In 2008 there were 4 cases of legionellosis in Fife compared with 7 cases in 2007.

Following recommendations from a Legionella Outbreak in West Fife in 2005, the Health Protection Team were involved in the development of national Guidelines on Management of Legionella Outbreaks & Clusters in the Community. These will be published following enactment of the Public Health etc (Scotland) Act 2008. Local practice has been updated in line with this guidance.

Incident Preparation

The Health Protection Team and on-call Consultants joined partners from Scottish Water, Fife Council and neighbouring Health Boards at a water incident exercise at Glenfarg Water Treatment works early in the year. This exercise was very successful in testing knowledge and skills in the management of a variety of water contamination incidents.

Emergency Planning

Work Undertaken in 2008

Exercises

NHS Fife contributed to the Royal Dockyard Rosyth annual live play exercise designed to test its capability to handle a nuclear waste accident. NHS Fife’s aim was to test its response to the emergency and the call out the Medical Incident Officer, the handling and decontamination of casualties contaminated with nuclear waste and the follow up hospital procedures. All of these challenges were met.

A live play exercise was held at the Defence Storage and Distribution Agency, Crombie to test its response to an accident involving the carriage of incendiaries. NHS Fife’s involvement included a practice of the Major Emergency callout procedures and cascade of that information within the organisation. The opportunity was taken to practice the importance of liaison between the MIO and other emergency services. The aims of the exercise were met.
The Annual RAF Leuchars Open Day provided the opportunity to practice the roles of the Medical Incident Officer and multi agency Emergency Control Centre as preparation for a real incident. This tested the major emergency response arrangements of NHS Fife and partner agencies.

A table top exercise was attended at Exxon-Mobil at Mossmorran the aim of which was to test the arrangements for an incident at the COMAH site. The NHS Fife plans were not exercised but the opportunity taken to demonstrate to a multi agency forum the role of the NHS should such an unlikely incident occur.

The emergency plans for all 10 NHS Fife hospitals include arrangements should there be a failure in the supply of clean water. These plans have been reviewed in consultation with Estates and submitted to Scottish Water and the licensed provider, Business Stream.

A table top exercise was held at the Rothes Halls, Glenrothes to test the arrangements within the Public Health Incident Plan. It was attended by council and NHS employees from Tayside, Forth Valley, Lothian and Fife.

Planning

The ‘Major Emergency Response’ plan was adopted by the Board. The plan is published on the NHS Fife intranet and NHS Fife Web Page. Plans for decontamination of casualties before admission to healthcare premises, ‘smallpox’ ‘armed police firearms officers in healthcare premises’, bombs procedures and other documents are continually the subject of review and exercise.

Training

A presentation was given to senior police officers at the Scottish Police College on the role and response of a medical incident officer and the Scottish Ambulance Service. This was part of a training day which included a live exercise in which the NHS played a live role.

Conclusion

The actions outlined above are designed to test the arrangements required by the Board to ensure its capability to provide an effective response to a major emergency.
National Developments

Public Health etc. (Scotland) Act 2008

The Public Health etc. (Scotland) Act 2008 was approved. This included a review of the notifiable diseases and included a new group of notifications - “exposure to health risk state”. This accommodates new illnesses or conditions which cannot yet be identified but which may require action to protect public health. Guidance is being developed to define these and make recommendations on the notification process.

Risk Communication

The Health Protection Team contributed to the development of *Guidelines on Good Practice for Risk Communication* sponsored by the Health Protection Network. These guidelines provide public agencies with information on risk perception, language, nature of the message in communicating health risks to the public.
5 Department Structure
Overall direction for the Department is set by the Director of Public Health. Work streams are then allocated to teams led by a Consultant in Public Health.

The Director of Public Health provides professional leadership and management of the department. He leads a range of key strategic planning groups ensuring there is a multiagency approach to population health.

As well as providing expert public health advice and leadership, Dr Coyle ensures we deliver equitable services across the whole population. He ensures that there are robust arrangements in place for information and research governance across the full range of local NHS organisations.
Many members of the public health department are involved in different aspects of service re-design. As Deputy Director of Public Health, Dr Hannah’s role has been to build stronger links with re-design work within acute and community care services. In particular, Dr Hannah has worked on building more resilient systems to cope with winter pressures using the IFF Three Horizon model.

Dr Hannah also contributes to the Health Protection Function within the Public Health Department, producing a quarterly newsletter for GPs and ensures the TB Programme is implemented.

Dr Roworth leads a small team providing public health input and expertise across a range of strategic groups including Fife Alcohol partnership, Fife Drug and Alcohol Team, Mental Health Strategic Implementation Group and Choose Life.

The team carried out a recent review of Fife’s Cervical Screening programme to identify ways to improve uptake and contributed towards the development of the National Bowel Screening Programme. The team produces three yearly breast screening and annual cervical screening reports.

Dr Roworth is also an examiner for the Faculty of Public Health Part A Membership examination, setting questions and marking papers.
Graham Ball provides the strategic lead for oral health improvement and dental services for NHS Fife. This includes providing professional advice to the Board on dentistry. He is also the strategic lead for food and health including obesity. He chairs the Fife-wide multi-agency strategy groups for Oral Health and Food and Health which work as part of the Fife Health and Wellbeing Alliance.

Teaching and training responsibilities include responsibility for organising and helping to deliver the public health medicine course at the Bute Medical School at the University of St Andrews and as lead trainer for speciality training in dental public health. Nationally he has wider responsibilities for undergraduate and postgraduate dental public health teaching at the University of Glasgow and as training programme director for dental public health with NHS Education Scotland. As one of two Directors of the national Childsmile Programme he leads a small team in Fife which supports the national programme by providing regional management and evaluation. The regional programme manager and the two research and evaluation staff also work as part of a wider management and evaluation network supporting Childsmile across Scotland. Graham Ball is also the national lead for the Scottish Emergency Dental Service which is delivered in partnership with NHS24.
### Women, Children and Sexual Health

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorna Watson, Consultant in Public Health</td>
<td><a href="mailto:lwatson@nhs.net">lwatson@nhs.net</a></td>
</tr>
<tr>
<td>Wendy Simpson, Public Health Scientist</td>
<td><a href="mailto:w.simpson@nhs.net">w.simpson@nhs.net</a></td>
</tr>
<tr>
<td>Elsie Makachiya, Sexual Health Development Officer (Young People)</td>
<td><a href="mailto:elsiemakachiya@nhs.net">elsiemakachiya@nhs.net</a></td>
</tr>
<tr>
<td>Nicholas Putnam, Health Improvement Practitioner Specialist</td>
<td><a href="mailto:nick.putnam@nhs.net">nick.putnam@nhs.net</a></td>
</tr>
<tr>
<td>Natalie Wilson, Secretary</td>
<td><a href="mailto:natalie.wilson@nhs.net">natalie.wilson@nhs.net</a></td>
</tr>
</tbody>
</table>

Dr Watson provides expert guidance on women’s health/assisted conception, child health and sexual health in the NHS and partner agencies. For women’s health/assisted conception this involves giving public health advice in relation to maternity services, domestic and sexual abuse and access to level III infertility treatment.

Public Health leads on the Fife multi-agency Sexual Health Action Plan which is in the process of being updated in line with the new Government Outcomes for sexual health. A day’s conference was held to involve local stakeholders attended by over seventy people. A sexual health development officer for young people has also been appointed for a year to support developing consistent high quality drop-in services for young people across Fife and Fairer Fife funding has been obtained to pilot work to reduce teenage pregnancy and reach more vulnerable young people. This includes work with clients with addictions, and programmes for young people in areas of deprivation who have greater life challenges. Dr Watson is also lead clinician for sexual health in Fife.

In relation to children, there is input to key multi-agency groups including the Children’s Services Group and Corporate Parent Board, and activity covers a range of topics including breastfeeding, early years, child protection, health services and health improvement for vulnerable groups such as looked after children (LAC). A pilot of health psychology input is underway for LAC, based upon needs assessment work.

Wendy Simpson provides public health expertise on child and adolescent mental health and wellbeing, located within the Playfield Institute. The Institute has successfully bid for a government grant to develop a works portal on mental health improvement for those working with children and young people. This relates to the government’s policy and action plan ‘Towards a Mentally Flourishing Scotland’.
## Older People & Palliative Care

**Health Intelligence**

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**Older People and Palliative Care**

Dr Gordon McLaren, Mhairi Gilmour and Chris Clark provide a population perspective and advice on the needs of older people in Fife at a strategic level in NHS Fife and with Fife Partnership. Recent work includes an Intermediate Care Needs Assessment which helped support the successful bid for Intermediate Care Demonstrator Project in Fife and an evaluation of the Falls Response Service in Fife, which later won a COSLA Bronze award. Gordon McLaren is also working closely with Fife Council and other colleagues to finalise a Commissioning Strategy for Older People, and also works closely on palliative care issues. He led a population needs assessment and co-organised workshops on non-palliative care which helped Fife develop its 2009 action plan in response to the national strategy.

**Health Intelligence**

Dr Gordon McLaren, Clare Campbell and Mukesh Dhariwal work closely with Bryan Archibald from Information Services and colleagues in Fife Council to strengthen health and wellbeing information and its uses in Fife. This involves working closely with other public health colleagues and supporting the development of the KnowFife Dataset. Recent initiatives include the strengthening of health survey information to meet our needs, the continued development of local profiles (such as the later life profiles), support for modelling the progress of the recent Swine Flu pandemic in Fife and carrying out a study of the Information Function in NHS Fife. The team are expert at the analysis and interpretation of health and population data and are happy to discuss requests for information from across NHS Fife and Fife Partnership staff. They convene a health intelligence group/network to share good practice relating to information about health and wellbeing across Fife Partnership.
The pharmaceutical public health team ensure leadership and support for pharmacy in delivering on the public health agenda. It also provides advice on pharmaceutical issues to the public health department. The Consultant in Pharmaceutical Public Health works with the Clinical Effectiveness Pharmacist and the Public Health Pharmacist in the following areas of work.

There was a high requirement for pharmaceutical input to pandemic flu planning in 2009 but planning for the pharmaceutical aspects of emergencies is a core part of the team’s business, as is pharmaceutical advice on immunisation.

A variety of public health services are now delivered through community pharmacies such as smoking cessation services and sexual health services including emergency hormonal contraception and Chlamydia testing and treatment. The team provide input into the strategic direction and monitoring of these services.

The introduction of new medicines and the safe use of medicines is paramount for patients. The team lead on the NHS Fife policy on the managed entry of new drugs into practice, including the Fife Joint Formulary and on the work of the Area Drug and Therapeutics Committee.

The team are developing methodology for assessment of pharmaceutical care needs of the population. This was initiated by working on a draft Pharmaceutical Care Services Plan for NHS Fife and is being further developed in a community pharmacy palliative care needs assessment and a community pharmacy out of hours provision needs assessment.

Finally the team aim to provide leadership and help development of pharmaceutical public health expertise nationally through work with NHS Education for Scotland, Scottish Medicines Consortium and other national groups.
The aim of the Health Protection Team (HPT) is to protect the health and wellbeing of the population of Fife. The HPT works to prevent and control the spread of infectious disease, reduce the adverse effects of chemical hazards, poisons and radiation, and prepare for potential or emerging threats to health. Protecting people from potential environmental hazards, including the contamination of the land, air and water, is an area over the past few years where there is increasing public concern about the possible impact on health. This has become an important element of the HPT’s work.

The HPT works closely with colleagues in Fife Council and other agencies to investigate all incidents and/or outbreaks where there is an actual or potential risk to human health. Risk assessments and literature reviews are carried out, meetings with individuals, communities, public and private agencies may be required before the HPT can comment on possible health risks and how these can be minimised.

The department continues to make best use of the opportunities provided in exercises to train and develop those personnel that would form the front line response teams in a major emergency. Over the 12 months covering this report, NHS Fife has made full use of these opportunities by participating in both live play and table top exercises.
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<thead>
<tr>
<th>Department Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Improvement</strong></td>
</tr>
<tr>
<td><strong>Health Inequalities</strong></td>
</tr>
<tr>
<td><strong>Long Term Conditions</strong></td>
</tr>
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Health improvement and the narrowing of health inequalities are directed by national and Fife Community Plan strategic themes and objectives. The Fife Joint Health Improvement Plan 2007-10 (JHIP) provides the structure within which the multiagency Health & Wellbeing Alliance directs its work while the more recent Fairer Fife Framework sets the agenda for tackling inequality, deprivation and the social determinants of health and wellbeing. Increasingly the drivers arising out of the three social frameworks: Equally Well (health inequalities), The Early Years Framework (early years and early intervention), and Achieving Our Potential (poverty and income inequality) provide the direction for our community planning response to inequality and wellbeing at a population level.

Dr Neil Hamlet and Jo-Anne Valentine provide public health expertise to a wide variety of strategic and operational partnership groups relating to the social determinants of health as well as NHS-led topics such as Keep Well, Healthy Working Lives, Health Promoting Health Service, and the Health & Homelessness Group. Dr Hamlet chairs the Fife Equally Well test site activity in Templehall which has a joint community safety and health inequalities approach. Dr Hamlet provides a consultant link to the Glenrothes & North East Fife CHP.

Vivienne Brown is the Health Improvement Adviser for Fife Council and Partnership Co-ordinator for the Health & Wellbeing Alliance. She reports jointly to the Executive Director of Community Services in the Council and to the Director of Public Health. Although not line managed within the public health department her work closely intersects with that of this team. Close links also exist with Health Promotion and the 3 CHP-based health improvement teams. Wendy McCartney, NHS Community Safety Officer, provides input to all NHS related aspects of the community safety theme of the Fife Community Plan as well as a liaison role between Fife Constabulary and NHS Fife.

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Peter Donnelly is Professor of Public Health Medicine at the University of St Andrews. Since his appointment towards the end of 2008 he has built research collaborations with various members of the Fife Public Health team. This includes work on the Templehall Equally Well demonstration site where a full time PhD student and additional intervention money have flowed from academic/service collaboration. His two main threads of research are in violence; in which he leads an international project on violence reduction in low and middle income countries for the WHO, working with partners in South Africa and Lithuania. He also leads the evaluation of a major gang member rehabilitation project in Glasgow. His second major area of work is in working with politicians and policy makers on practical measures to reduce health inequalities improve access to health care and make health services more responsive and accountable. Activity in this area involves work within the United States with the Milbank Memorial Fund and in Scotland on evaluating the introduction of elected members to NHS Boards. He and his post doctoral research fellow Dr Damien Williams currently head a team of six doctoral students and work closely with NHS Fife colleagues in teaching and supervising medical undergraduate and MSc students. Their most recent grant award is to enable them to explore setting up a long term cohort study of young men imprisoned in Polmont young offender’s institution.

Since 2007 Helen Colhoun is Professor of Public Health Medicine at the University of Dundee and Honorary Consultant in PHM at NHS Fife. Her research focuses on diabetes and its complications and encompasses epidemiological studies that harness the strength of Scotland’s health informatics system, investigations of drug safety in diabetes and clinical trials. Her most recent grants are for a European wide study of diabetes complications (from the EU Innovative Medicines Initiative Programme) and, with NHS Fife Diabetes colleagues, a grant from CSO to create a large bioresource from patients with type 1 diabetes in Scotland. She is a member of the NHS Fife Research Steering Group and provides research design and analysis support to those working on diabetes related projects. She provides academic trainer support to trainees. Her NHS policy contributions include providing public health input to the NHS Fife Diabetes Managed Clinical Network and chairing the Scottish Public Health Network Type 2 Diabetes Health Needs Assessment that is reviewing policy and recommendations on screening for diabetes in Scotland.