

# Director of Public Health Annual Report 2016



**Working together to achieve the healthiest  
life possible for everyone in Ayrshire and Arran**



# Foreword

I am delighted to present my 2016 report on the health of the people of Ayrshire and Arran. The interesting period of political history has continued since my last report with the referendum on the European Union following so closely behind the referendum on Scottish independence. In addition, the financial challenge for public services has become more acute in the wake of global recession. Along with the financial and workforce challenges we now face, however, come new opportunities to try and test different ways to organise and provide services and work with people in new and exciting ways. Our new Health and Social Care Partnerships are now well established and beginning to reach out and develop closer relationships with the communities they serve; locality arrangements are in place, 'community connector' projects are being tried and 'asset based approaches' are being developed. Changes are happening within primary care too, with new clusters of GP practices being formed and quality leads being identified. Strategic cohesion is being maintained by the efforts of all parts of Ayrshire and Arran's health and care system (acute care, primary care, community health and social care). Wider partnerships with all Community Planning Partners continue to be vital, particularly in the current economic climate, so that all partner organisations can collaborate on the most productive and efficient way to work together with our population to improve health and wellbeing.

In this report, I provide an overview of the health of the people of Ayrshire and Arran using the most recently available data. I also report on what we are doing to try to prevent health problems from developing in the first place (primary prevention); early detection of disease (for example through screening programmes); preventing or slowing the progress of disease once it has developed (secondary prevention) and reducing the impact that disease and disability have on people's health and wellbeing (tertiary prevention). The health status section describes trends in the main causes of poor wellbeing, illness and death. Life expectancy is an overall indicator of how healthy our population is and it continues to improve for both men and women in all parts of Ayrshire and Arran. The decrease in smoking, and better recognition and treatment of risk factors for circulatory disease, has reduced this as the main cause of death. Although cancer is becoming the main cause of death as people survive to older ages, new cancer treatments have also meant that many cancers are now able to be treated more like chronic illnesses.

I have previously identified our top four priorities for improving population health as ATOM (Alcohol, Tobacco, Obesity and Mental Health & Wellbeing). Updates are provided on progress achieved through our strategies to address these priorities. Although there are improvements to note, progress is slow for issues where more intensive individual help or cultural change is required to support people to adopt healthier behaviours and therefore I recommend that these ATOM topics remain as our top priorities.

## Foreword continued...

I want to make particular mention of alcohol as data on trends indicate we have seen the peak of alcohol related deaths and admissions and we might expect to see further falls in these rates. However alcohol should remain a priority as our rates are still high and it is still causing harm through physical illness, including cancers, and impact on mental health, violence, abuse and social and emotional well being in individuals, families and communities. The UK Chief Medical Officers have recently published updated guidance on low risk drinking. This guidance now says **“to keep health risks from alcohol to a low level it is safest not to drink more than 14 units a week on a regular basis”**. The advice for women who are pregnant or think they could become pregnant is that **the safest approach is not to drink alcohol at all**. Further details on this advice can be obtained from <https://www.gov.uk/government/consultations/health-risks-from-alcohol-new-guidelines>.

As I discussed in my last report, although rates of smoking continue to reduce gradually nationally and locally, rates in Ayrshire and Arran are among the highest in Scotland, particularly for women smoking during pregnancy. We need to increase our efforts to reduce these rates.

Obesity and diabetes are still on the increase and we need a much stronger drive to ensure people, particularly parents, have the information and support they need to choose healthier diets and increase physical activity; but we also need action by government, employers and manufacturers to develop our environments, including workplaces, and food supply to make healthy choices the easy choice.

Mental health and wellbeing is our fourth priority for improving population health and it is encouraging that there is now a much more open attitude in society to talking about mental health issues and providing support to people who require it. Suicide rates are the lowest they have been for decades although loneliness and social isolation continue as important issues to address. Locally in Ayrshire and Arran we are seeing lots of change and innovation in our mental health services. We now have a well developed ‘recovery’ rather than a ‘maintenance’ approach to support people with addictions and care in the community and minimising any hospital stays for mental health problems is usual practice.

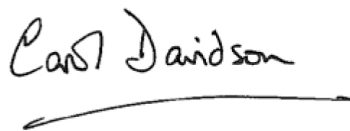
In my 2013/14 report, I called for an increased focus on children and young people’s health and I would like to emphasise that again. We could see significant improvements in the health of future generations within a relatively short timescale of five to fifteen years if we can reduce smoking and alcohol consumption in pregnancy; reduce parental smoking; increase knowledge, understanding and support for breastfeeding, healthy diets and increased physical activity in families with young children; and increase early intervention and support for families in relation to housing, finance, safety, parenting and reducing social isolation. I know that those working with

## Foreword continued...

children and young families are working hard on these issues and they need support and encouragement to make the visible difference we would all like to see.

Although the preceding paragraphs describe the priority of health topics and behaviours we need to keep working on, that does not diminish the crucial nature of the work we all need to continue on the social and economic determinants of health and inequalities through our local Community Planning Partnerships. The importance of politics and national policy change for improving health and reducing inequalities is also clear, and behind that is the power and influence of the views of people. On many issues, society's views have to change before there is a political will to introduce legislation that has clear benefits for health, such as drink driving and smoking legislation; and sometimes political drive and the introduction of legislation leads to a change in societal views such as with the seat belt law. We know that income, power and resources (such as education) are the main determinants of inequality in society and that inequality in these determinants leads to inequalities in health. So in order to improve health and reduce inequalities in health, in addition to taking action at an individual level in terms of our own health behaviours and health and care staff adopting inequalities sensitive practice and policies, we can also influence and use our democratic political system to achieve change. Together, through a balance of legislation, policy change and social movements, we can make greater and faster improvements in health that will benefit everyone.

I would like to acknowledge the contribution of all those who have been involved in the production of this report, but would particularly like to thank colleagues in health, social care and Community Planning Partnerships for working with our population to achieve 'the healthiest life possible for everyone in Ayrshire and Arran.

A handwritten signature in black ink that reads "Carol Davidson".

*Dr Carol Davidson  
Director of Public Health  
NHS Ayrshire & Arran  
August 2016*

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## Section one • Population profile

### Chapter 1 • Health of the People in Ayrshire and Arran

This section of the Director of Public Health Report provides an overview of the population and main health issues in Ayrshire and Arran and in the three Health and Social Care Partnership (H&SCP) areas that lie within it. The Health and Social Care Partnerships (H&SCPs) formally came in to being in April 2015, as a result they are a focus for this section of the report. Later in this section, more detailed data is provided on a range of health issues, through a series of tables and graphs and some commentary around these. Because of space constraints in this report, the amount of detailed data provided is necessarily limited; more information can be obtained by contacting the author of this section of the report.

The main emphasis of the information provided is on numbers and rates of birth, numbers and rates of death, deaths in the first year of life, immunisations, population projections, life expectancy, hospital admissions and the main causes of death. However there are also references to available information on smoking, alcohol, benefits, employment, and other factors that influence health in a number of ways. The data are laid out in a way that facilitates comparison between the Health and Social Care Partnerships (H&SCPs) where possible and some comparison with Ayrshire and Arran and with Scotland. This is intended to assist with understanding health issues and to inform planning and decision-making at a number of levels.

#### Health of the population of Ayrshire and Arran

National Records for Scotland (NRS) estimated the 2015 mid-year population of NHS Ayrshire & Arran to be 370,590. Of the three Health and Social Care Partnership areas in Ayrshire and Arran, East Ayrshire accounts for 33 per cent (122,060) of the total population, North Ayrshire 37 per cent (136,130) and South Ayrshire 30 per cent (112,400). Population projections in Ayrshire and Arran for 2015 to 2025 shows that males aged 80 years and over are projected to increase by 49 per cent and females aged 80 years and over by 31 per cent. The largest projected decrease is for both males and females aged between 40 and 49 and this has potential implications for the number of formal and informal carers available in the future.

Overall life expectancy in Ayrshire and Arran for both men and women has continued to increase and is similar to the Scottish average. In the last decade average male life expectancy in Ayrshire and Arran increased from 73.7 years to 76.8 years. For females during the same decade, average life expectancy increased from 79.0 years to 80.6 years.

There were 3,593 live births in the year ending March 2015. Ayrshire and Arran has a higher birth rate at 55.4 per 1000 women aged 15 to 44 compared to the Scotland rate of 51.9 per 1000 women. There were 4,644



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deaths in Ayrshire and Arran in 2015. The three major causes of mortality (cancer, heart disease and stroke) accounted for 57 percent of all deaths in Ayrshire and Arran during 2014. Ayrshire and Arran has slightly higher rates of premature mortality (deaths under the age of 75) than Scotland.

What follows is a description of some of the key health issues in the East, North and South Ayrshire H&SCPs, which is based on the population health indicators used by the Scottish Public Health Observatory (ScotPHO). For many of these indicators, information will also be available at locality level, which can be obtained from the author of this section.

### Health of the population of East Ayrshire

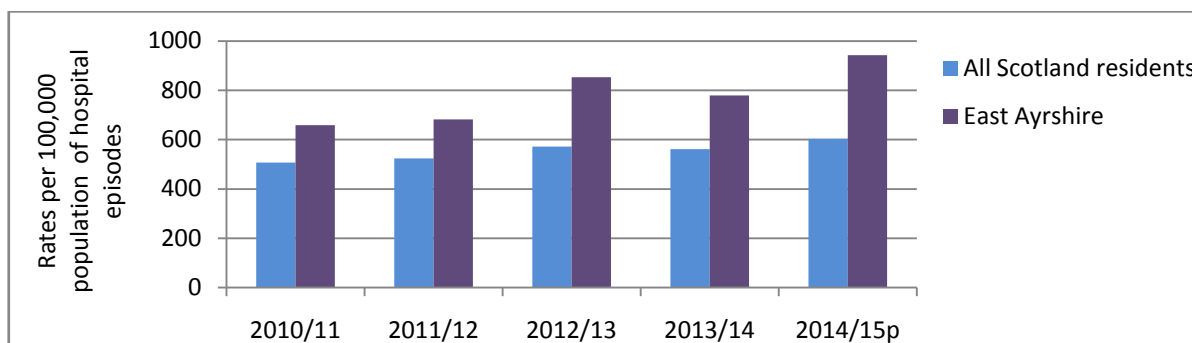
Overall life expectancy in East Ayrshire for both men and women has continued to increase and is similar to the Scottish average. In the last decade average male life expectancy in East Ayrshire increased from 73.5 years to 75.9 years. For females during the same decade, life expectancy increased from 78.4 years to 79.7 years. The following are some key points about health and related issues in East Ayrshire:

- the rate of early deaths from coronary heart disease (under 75 years) in East Ayrshire is currently above the Scottish average but overall has continued to decrease from 129 per 100,000 population in 2002-04 to 67 per 100,000 in 2013-15
- the rate of patients hospitalised with coronary heart disease in East Ayrshire has also decreased over the last ten years but is still above the Scottish average
- early deaths from cancer (under 75 years) in East Ayrshire are similar to the Scottish average and show a decline over the decade but less so when compared to coronary heart disease
- the rates of patients registered with cancer are similar to the Scottish average and have remained steady over the last decade
- the number of deaths from alcohol conditions is small relative to cancer and CHD and therefore a 5-year average annual figure is used to measure it. In East Ayrshire the rates peaked at 28 per 100,000 population for 2006-10 and have gradually declined to 24 per 100,000 for 2009-13
- in East Ayrshire the rates of alcohol related hospital stays are significantly higher than the Scottish average. These were highest in 2007-08 at 1,087 per 100,000 population, but they have decreased to 801 per 100,000 for 2013-14
- the estimated smoking attributable deaths in East Ayrshire are 427 per 100,000 people, considerably higher than the Scottish average rate of 367.

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- East Ayrshire has the highest rate in Scotland of patients hospitalised with chronic obstructive pulmonary disease (COPD). Figure 1 presents trend data from 2010/11 to 2014/15 comparing East Ayrshire rates with Scotland rates.

**Figure 1:** Rate per 100,000 population of hospital episodes for COPD in East Ayrshire compared to Scotland



Source: <http://www.isdscotland.org/Health-Topics/Hospital-Care/Diagnoses/>

- adults claiming incapacity benefits/severe disability allowance/employment and support allowance in East Ayrshire is considerably higher than the Scottish average and is showing a gradual downward trend each year since 2009
- the proportion of the working age population in East Ayrshire claiming out of work benefits in 2015 was 14 per cent compared to the Scottish average of 11 per cent

### Early Years

- immunisation uptake at 24 months in East Ayrshire was 99.4 per cent in 2014/15, the highest uptake in Scotland – this refers to the 5 in 1 vaccine (Diphtheria, tetanus, pertussis, haemophilus influenza B, and polio)
- in 2012, 15.3 per cent of children in Scotland were living in poverty and in East Ayrshire the figure was 19.4 per cent
- the rate of children looked after by East Ayrshire local authority is 18 per 1000 people aged 0-18 years, the Scottish average is 14 per 1000

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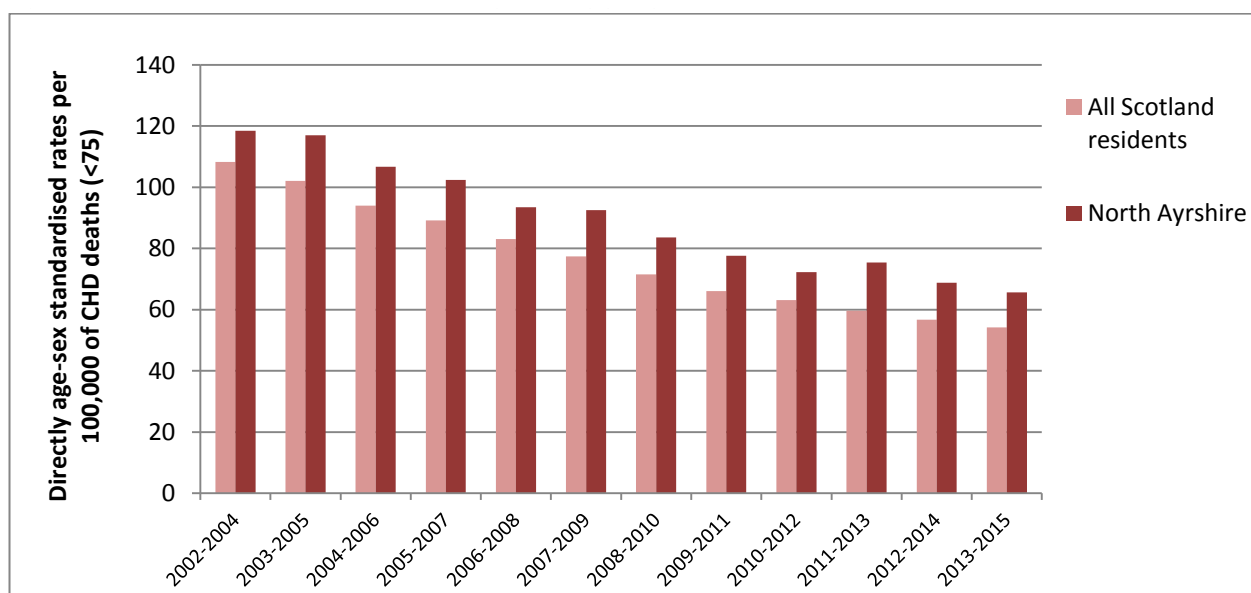
### Health of the population of North Ayrshire

Overall life expectancy in North Ayrshire for both men and women has continued to increase and is similar to the Scottish average. In the last decade male life expectancy in North Ayrshire increased from 73.2 years to 76.5 years. For females during the same decade, average life expectancy increased from 79.1 years to 81.0 years. The following are some key points about health and related issues in North Ayrshire:

- the rate of early deaths from coronary heart disease (under 75 years) in North Ayrshire is higher than the Scottish average, but overall has decreased from 118 per 100,000 population in 2002-04 to 66 per 100,000 in 2013-15. Figure 2 shows three-year aggregated age and sex standardised rates of premature deaths (under 75 years) from coronary heart disease in North Ayrshire compared to Scotland from 2002-04 up to 2013-15
- the rate of patients hospitalised with coronary heart disease has gradually decreased over the last ten years but is still above the Scottish average
- early deaths from cancer (under 75 years) in North Ayrshire are similar to the Scottish average and show a decline over the decade but less so when compared to coronary heart disease
- the rates of patients registered with cancer are similar to the Scottish average and have remained steady over the last decade
- the number of deaths from alcohol conditions is small relative to cancer and CHD and therefore a 5-year average annual figure is used to measure it. In North Ayrshire the rates peaked at 33 per 100,000 population for 2002-06 and have gradually declined to 23 per 100,000 for 2009-13
- in North Ayrshire the rates of alcohol related hospital stays are significantly higher than the Scottish average. These were highest in 2007-08 at 1,166 per 100,000 population, decreasing to 923 per 100,000 for 2013-14
- the estimated smoking attributable deaths in North Ayrshire are 422 per 100,000 people, considerably higher than the Scottish average rate of 367
- North Ayrshire has the third highest rate in Scotland for patients hospitalised with chronic obstructive pulmonary disease (COPD)
- the proportion of adults claiming incapacity benefits/severe disability allowance/employment and support allowance in North Ayrshire is considerably higher than the Scottish average, but is showing a gradual downward trend each year since 2009
- the proportion of the working age population of North Ayrshire that is claiming out of work benefits is 16 per cent compared to the Scottish average of 11 per cent

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**Figure 2:** Rate per 100,000 population of early deaths from CHD (< 75 years) in North Ayrshire compared to Scotland (3-year aggregates)



Primary Source – National Records of Scotland (NRS)

### Early Years

- immunisation uptake at 24 months in North Ayrshire is 98.7 per cent for the 5 in 1 vaccine (Diphtheria, tetanus, pertussis, haemophilus influenza B, and polio)
- in 2012, 15.3 per cent of children in Scotland were living in poverty and in North Ayrshire the figure was 21.5 per cent.
- the rate of children looked after by North Ayrshire local authority is 22 per 1000 population aged 0-18 years, the Scottish average is 14 per 1000.

### Health of the population of South Ayrshire

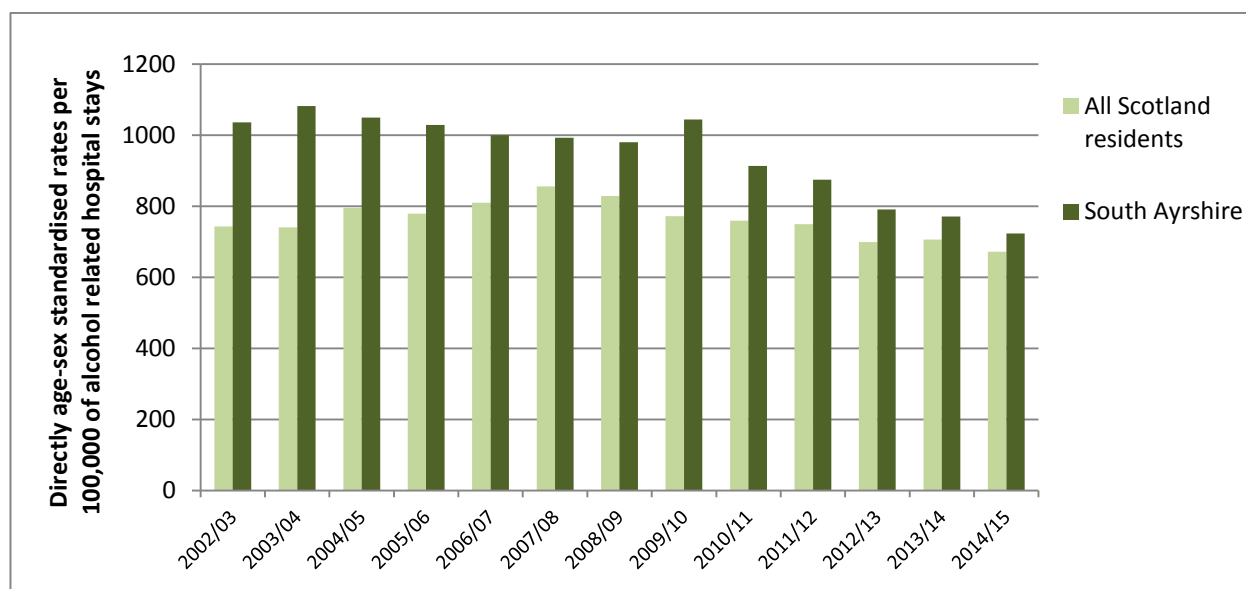
Overall life expectancy in South Ayrshire for both men and women has continued to increase, male life expectancy is above the Scottish average and female life expectancy is similar to it. In the last decade male life expectancy in South Ayrshire increased from 74.4 years to 78.2 years. For females during the same decade, average life expectancy increased from 79.6 years to 81.0 years. The following are some key points about health and related issues in South Ayrshire:

- the rate of early deaths from coronary heart disease (under 75 years) in South Ayrshire is similar to the Scottish average and has continued to decrease from 105 per 100,000 population in 2002-04 to 54 per 100,000 in 2013-15

## Section one • Population profile

- the rate of patients hospitalised with coronary heart disease has also decreased over the last ten years in South Ayrshire but is still above the Scottish average
- early deaths from cancer (under 75 years) in South Ayrshire are similar to the Scottish average and show a decline over the decade but less so when compared to coronary heart disease
- the rates of patients registered with cancer are similar to the Scottish average and have remained steady over the last decade
- the number of deaths from alcohol conditions is small relative to cancer and CHD and therefore a 5-year average annual figure is used to measure it. In South Ayrshire the rates peaked at 27 per 100,000 population for 2002-06 and have gradually declined to 21 per 100,000 for 2009-13
- in South Ayrshire the rates of alcohol related hospital stays are slightly higher than the Scottish average. These were highest in 2009-10 at 1,041 per 100,000 population and have decreased to 773 per 100,000 for 2013-14. Figure 3 shows the trend in rates of alcohol related hospital stays in South Ayrshire compared to Scotland from 2002/03 up to 2014/15

**Figure 3:** Rates per 100,000 population of alcohol related hospital stays in South Ayrshire compared to Scotland



Primary Source - ISD Scotland (SMR01, Linked Database)

- the estimated smoking attributable deaths in South Ayrshire are similar to the Scottish average
- the rate of patients hospitalised with chronic obstructive pulmonary disease (COPD) in South Ayrshire is similar to the Scottish average and has remained stable over the last decade

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- the rate of adults claiming incapacity benefits/severe disability allowance/employment and support allowance overall in South Ayrshire is lower than the Scottish average and is showing a gradual downward trend each year since 2009.
- The proportion of the working age population in South Ayrshire that is claiming out of work benefits is 11.9 per cent, similar to the Scottish average rate of 11.0 per cent

### Early Years

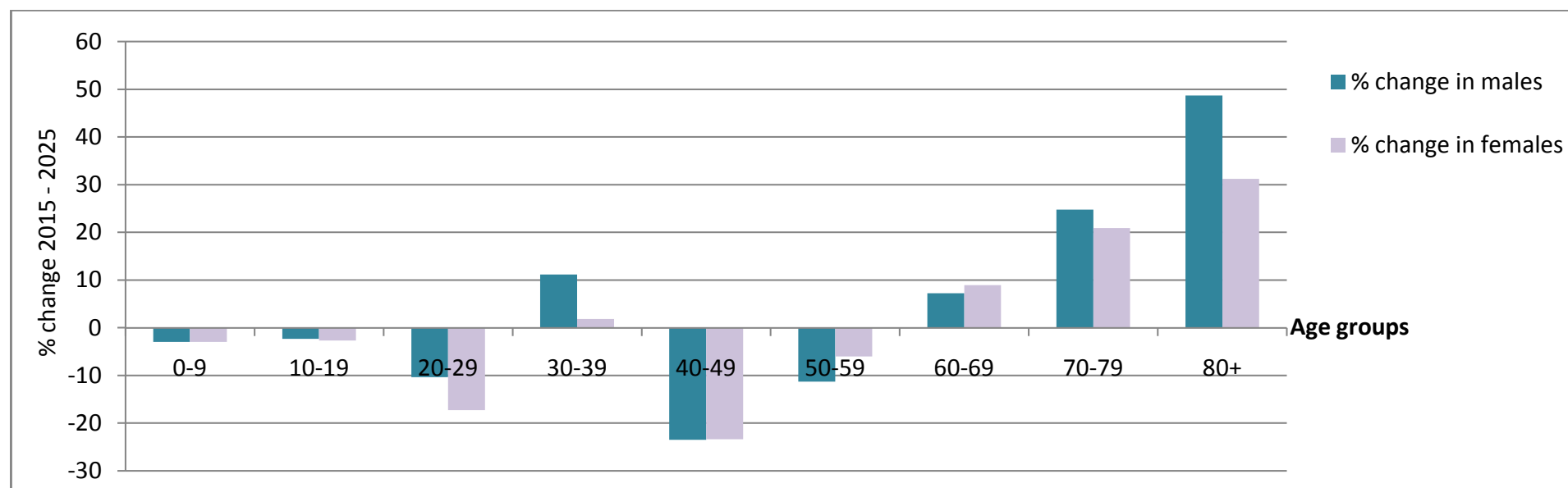
- immunisation uptake at 24 months in South Ayrshire was 99 per cent in 2014/15, the second highest uptake after East Ayrshire in Scotland – this relates to the 5 in 1 vaccine (Diphtheria, tetanus, pertussis, haemophilus influenza B, and polio)
- in 2012, 15.3 per cent of children in Scotland were living in poverty and in South Ayrshire the figure was 15.4 per cent
- the rate of children looked after by South Ayrshire local authority is 15 per 1000 people aged 0-18 years, similar to the Scottish average rate of 14 per 1000.

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### Population projections for males and females in Ayrshire and Arran between 2015 and 2025 (2012 based)

Figure 4 shows that males aged 80 years and over are projected to increase by 49 per cent and females aged 80 years and over by 31 per cent in Ayrshire and Arran. The largest projected decrease is for both males and females aged between 40 and 49 and this has implications for the number of formal and informal carers that may be available in the future (dependency ratio). Table 1 provides projected changes in the population for all those aged 75 years and over between 2015 and 2025. Ayrshire and Arran and each of the H&SCPs have a higher percentage increase in the period than Scotland as a whole, with North Ayrshire having the largest increase.

**Figure 4:** Percentage change in projected population by age and sex between 2015 and 2025 Ayrshire and Arran



Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections>

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**Table 1:** Population projections 2015 to 2025, all persons over 75 years of age in Ayrshire and Arran

	2015 population >75 years	2025 population >75 years	Number change	Percentage change
Scotland	443,241	588,913	145,672	33 per cent
East Ayrshire	10,330	14,051	3,721	36 per cent
North Ayrshire	12,637	17,565	4,928	39 per cent
South Ayrshire	12,205	16,330	4,125	34 per cent
Ayrshire and Arran	35,172	47,946	12,774	36 per cent

Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections>

### Childhood Immunisations (up to 24 months of age) in Ayrshire and Arran

Currently children are immunised against diphtheria, tetanus, pertussis (whooping cough), polio, and haemophilus influenzae type b (Hib) combined in a '5 in 1 vaccine'. They also receive pneumococcal conjugate vaccine (PCV) and meningococcal group C vaccine (MenC) in the first year of life. Booster doses of Hib/MenC and PCV are given in the second year of life, along with a primary course of measles, mumps and rubella vaccination (MMR) around the age of 13 months.

The national target for uptake of childhood immunisation is for 95 per cent of children to complete a primary course of immunisation by the age of 24 months. In 2014-15 uptake rates in NHS Ayrshire & Arran remained consistently high, exceeding the 95 per cent target and also were above the Scottish average, while the increase in uptake of the first dose of MMR vaccine at 24 months to its highest level of 97 per cent in 2013-14, has been maintained (Table 2).



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**Table 2:** Annual immunisation rates ( per cent) at age 24 months for 2009/10 to 2014/15; NHS Ayrshire & Arran (and Scotland figure in brackets).

Year	DTP/Hib/Polio	Men C*	PCV	MMR 1	Hib/MenC booster	PCV Booster
2015	99 (98)	99 (97)	99 (97)	97 (95)	97 (95)	97 (95)
2014	99 (98)	98 (96)	98 (97)	97 (96)	98 (96)	98 (96)
2013	99 (98)	98 (96)	98 (97)	96 (95)	97 (96)	97 (96)
2012	99 (98)	98 (96)	98 (97)	95 (94)	97 (95)	96 (95)
2011	99 (98)	98 (96)	98 (97)	94 (93)	96 (94)	94 (94)
2010	99 (98)	98 (97)	98 (97)	94 (94)	95 (94)	94 (93)

Figures in brackets are for Scotland during the same time period (Source: ISD Scotland)

Uptake of immunisations in children aged 24 months in East, North and South Ayrshire are above target and the Scottish average with the exception of MMR uptake in North Ayrshire which is just below the 95 per cent target (Table 3).

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**Table 3:** Immunisation uptake rates (per cent) at age 24 months, 2014-15, by H&SCP

Area	DTP/Hib/Polio	MenC	PCV	MMR1	Hib/MenC Booster	PCV Booster
Scotland	98.1 (98.2)	97.1 (96.0)	97.1(96.9)	95.4(95.6)	95.4(95.7)	95.4(95.5)
East Ayrshire	99.5 (99.6)	99.7 (98.7)	98.9(99.0)	98.5(97.9)	98.5(98.2)	98.2(98.1)
North Ayrshire	98.2 (98.3)	98.3 (97.6)	97.9(97.7)	94.8(96.6)	95.9(97.1)	95.2(97.4)
South Ayrshire	99.3 (98.9)	99.0 (97.8)	98.9(98.0)	96.5(96.5)	97.7(97.3)	97.4(97.5)
NHS A&A	98.9 (99.0)	98.9 (98.0)	98.5(98.3)	97.0(97.0)	97.3(97.6)	96.8(97.7)

Source: ISD Scotland. Figures in brackets are for 2013-14

### Perinatal and infant mortality

Stillbirths and deaths in the first year of life are thankfully rare and the rate varies considerably from year to year. Therefore table 4 presents 4-year average rates for each of the categories of perinatal and infant mortality along with the total number of deaths. Perinatal deaths occur in the first week of life, neonatal deaths in the first 28 days of life and infant deaths occur before the first birthday of the child. The stillbirth rate in Ayrshire and Arran is higher than the Scotland rate but the Ayrshire and Arran rates for perinatal deaths (excluding stillbirths) and for infant deaths are similar to the Scottish rate. East Ayrshire has higher rates across all categories and South Ayrshire has higher rates than North Ayrshire for all except stillbirths.

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**Table 4:** Estimated stillbirths, perinatal, neonatal and infant deaths, numbers and rates (4-year averages) for Scotland, Ayrshire and Arran and East, North and South Ayrshire, 2012-2015

	4-Year totals and averages							
	Stillbirths <sup>a</sup>	Average rate per 1000 total births	Perinatal deaths <sup>b</sup>	Average rate per 1000 total births	Neonatal deaths <sup>c</sup>	Average rate per 1000 live births	Infant deaths <sup>d</sup>	Average rate per 1000 live births
	Total Number		Total Number		Total Number		Total Number	
Scotland	948	4.2	1332	5.9	528	2.3	785	3.5
East Ayrshire	34	6.4	46	8.6	18	3.4	25	4.7
North Ayrshire	32	6.1	37	7.0	-	1.3	12	2.3
South Ayrshire	23	5.6	34	8.4	13	3.2	14	3.5
Ayrshire & Arran	89	6.1	117	8.0	38	2.6	51	3.5

Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/births-deaths-and-other-vital-events-preliminary-annual-figures/archive>

a. child born after the 24th week of gestation and did not breathe or show any sign of life

b. stillbirths and deaths in the first week of life

c. refers to all deaths in the first four weeks of life

d. refers to all deaths in the first year of life.

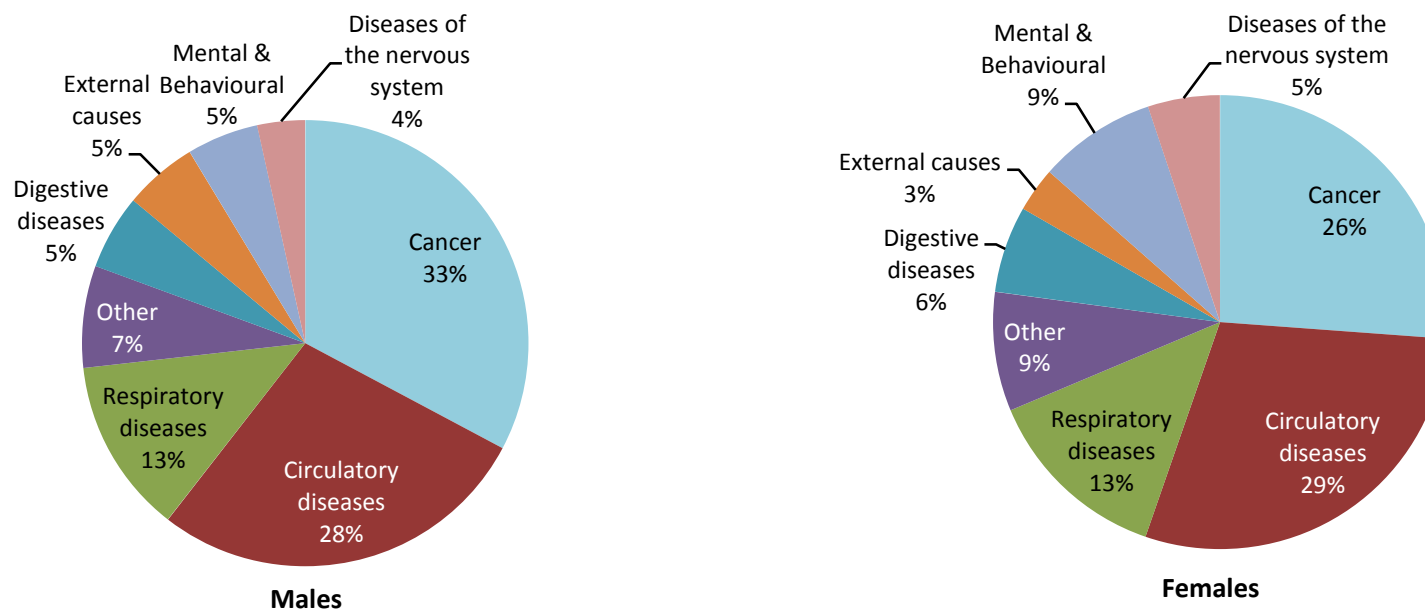
## Section one • Population profile

### Main causes of death in adults

The three major causes of adult mortality (cancer, heart disease and stroke) accounted for 57 percent of all deaths in Ayrshire and Arran during 2014. There were 1,273 deaths from cancer accounting for 29 per cent of all deaths, and heart disease and stroke combined accounted for a further 28 per cent of all deaths in Ayrshire and Arran in 2014.

Using broad classifications of the main causes of death, diseases of the circulatory system account for the largest number of deaths in women (671, males 568) and cancer was the main cause of death for men (671, females 602). Respiratory disease was the third highest cause of death for males and females (260 and 307 respectively). There were more female than male deaths from mental and behavioural causes (193 and 106 respectively) and more men died from external causes (accidents and violence) compared to women (109 and 73 respectively) as shown in Figure 5.

**Figure 5:** Main causes of death in males and females, all ages, NHS Ayrshire & Arran, 2014



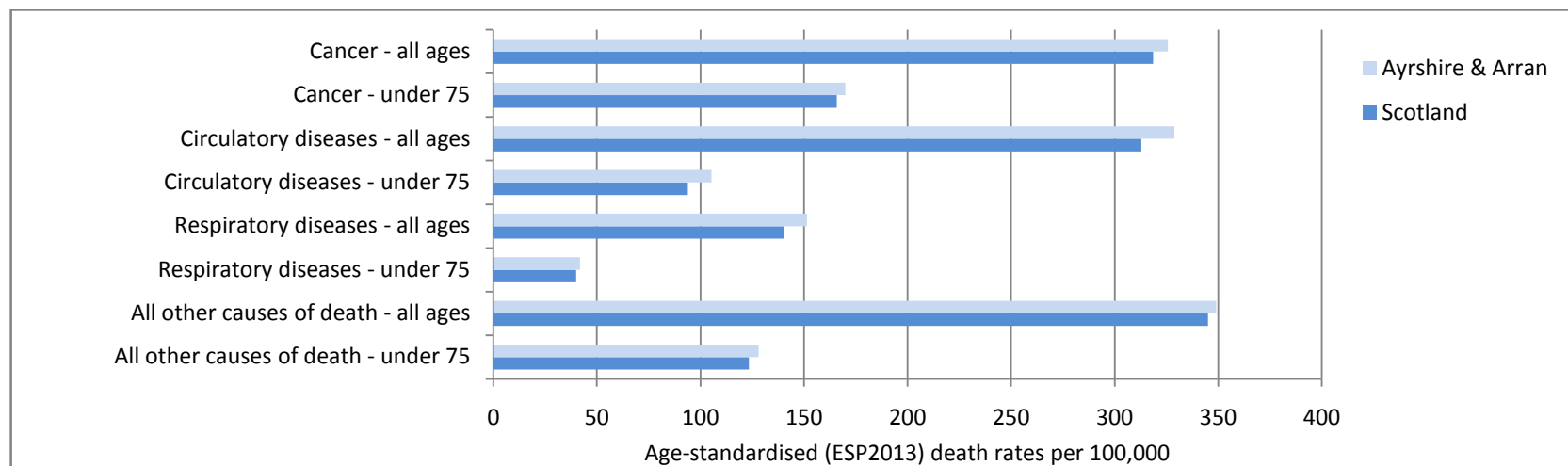
Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths>

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### Premature mortality

Premature mortality is defined as death from all causes under the age of 75 and it is considered to be an important overall indicator of health in the population. Figure 6 shows that overall mortality rates and premature mortality rates in Ayrshire and Arran are similar to Scotland for all the main causes of death (cancer, circulatory diseases and respiratory diseases). Lifestyle issues such as smoking, drug and alcohol misuse, poor mental wellbeing and obesity all increase the risks for the main causes of mortality.

**Figure 6:** Premature (under 75s) age-standardised death rates compared to all ages, for cancer, circulatory and respiratory disease, Scotland and NHS Ayrshire & Arran, 2014



Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/age-standardised-death-rates-calculated-using-the-esp>

Please note - The 'age-standardised' death rates presented here were calculated using the 2013 European Standard Population (ESP2013), and are not directly comparable to rates calculated prior to 2014. Also the data for specific causes of death for the NHS Board should be used with caution, particularly the figures for under 75s, or for areas which have relatively small populations, or for some specific causes of death. This is because, if the underlying numbers of deaths are relatively small, they and the calculated death rates may be affected by relatively large percentage year-to-year fluctuations. More information about this is available from the [Fluctuations in, and possible unreliability of death statistics](#) page on the NRS website.

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Table 5 shows that for the commonest cause of death in Ayrshire and Arran (cancer), 49 per cent of all mortality is premature, occurring under the age of 75 years. For mortality from circulatory disease and respiratory disease, 31 per cent and 27 per cent respectively is premature.

**Table 5:** Numbers and percentages of deaths from specified causes for NHS Ayrshire & Arran 2014

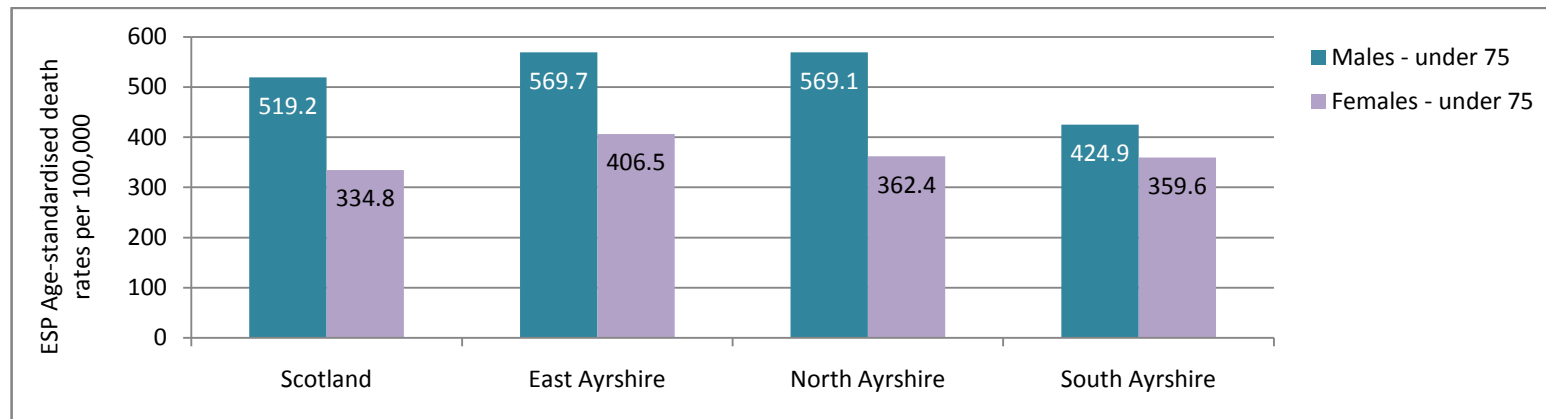
	All ages	Under 75 years of age	Percentage of premature deaths
Cancer	1273	630	49.5
Circulatory diseases	1239	387	31.2
Respiratory diseases	567	154	27.2
All other causes of death	1303	450	34.5
All causes of death	4382	1621	37.0

Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/age-standardised-death-rates-calculated-using-the-esp>

Age-standardised death rates adjust the number of deaths for the age profile of the population – you would expect more deaths in an older population. Figure 7 shows that age-standardised death rates are noticeably higher in males compared to females. However women in East Ayrshire have a particularly high age-standardised death rate compared with women in North and South Ayrshire and compared with women in Scotland – this will be investigated further within the Public Health Department.

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**Figure 7:** Age standardised death rates under 75 years (all causes) for males and females in Scotland compared to East, North and South Ayrshire for 2014



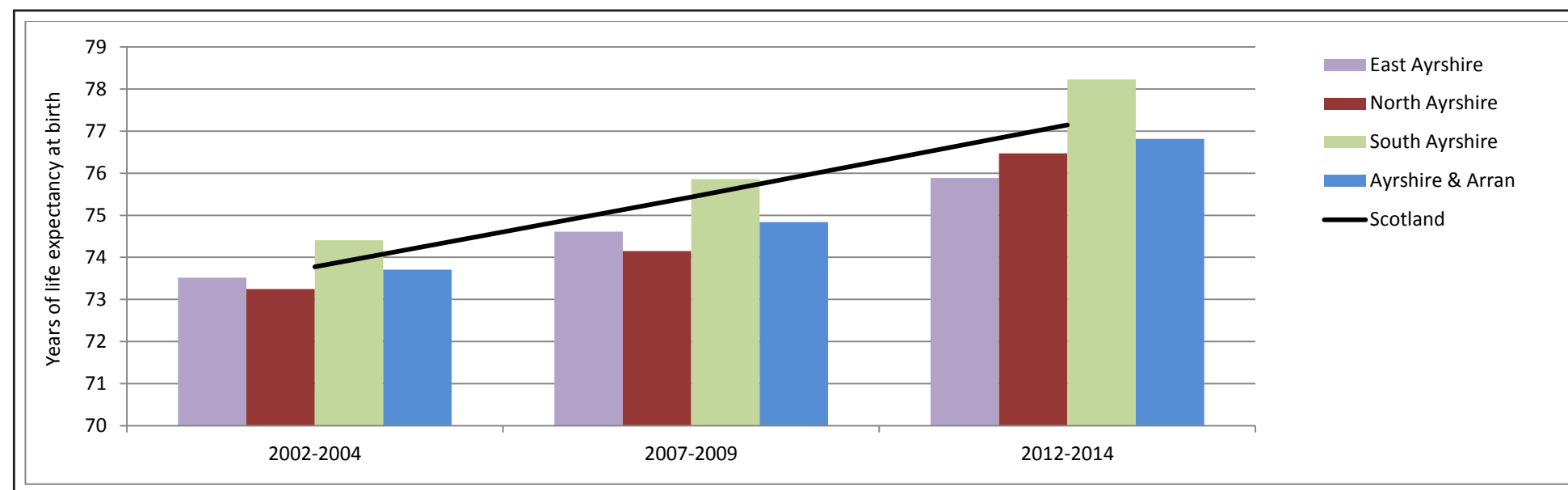
Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/age-standardised-death-rates-calculated-using-the-esp>

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### Life expectancy at birth

Life expectancy at birth is the mean number of years a baby born today can expect to live if the current age and sex specific mortality rates are applied throughout the baby's life. It should not be used as a predictor of individual length of life but more to compare health across populations and within populations over time. Figures 8 and 9 show that for men and women life expectancy has increased noticeably between 2002-04 and 2012-14 in Ayrshire and Arran, in each Health and Social Care Partnership, and in Scotland. However life expectancy in Ayrshire and Arran still lags behind Scotland and East Ayrshire lags behind North and South Ayrshire for both men and women.

**Figure 8:** Life expectancy at birth in Scotland, 2002-04 to 2012-14, by East, North and South Ayrshire councils and NHS Ayrshire & Arran (males)

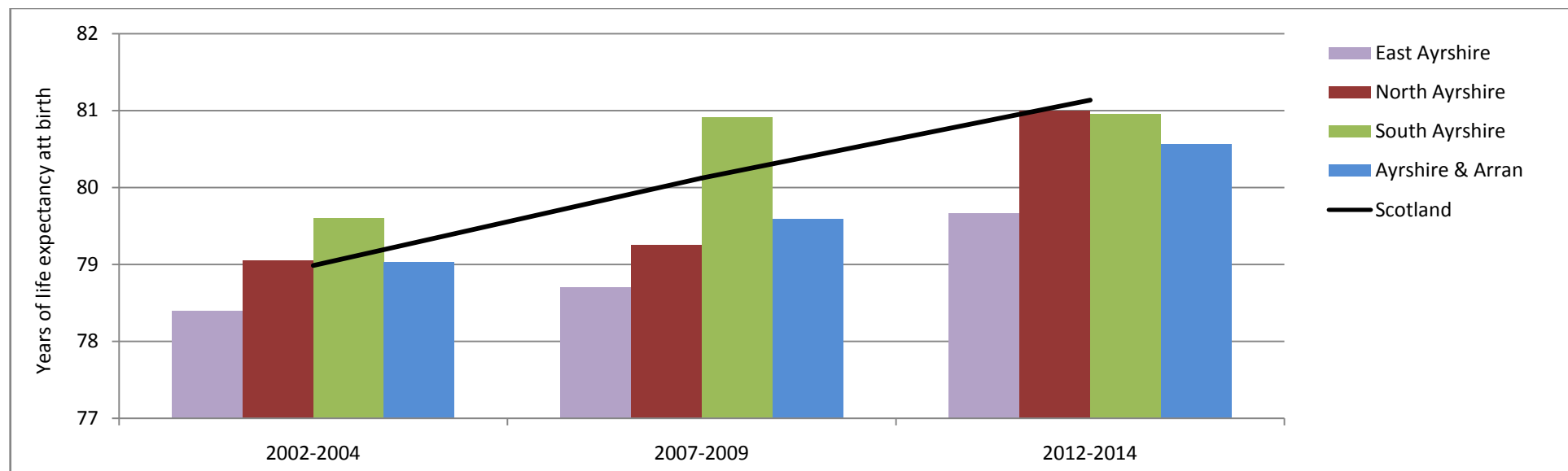


Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/life-expectancy>



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**Figure 9:** Life expectancy at birth in Scotland, 2002-04 to 2012-14, by East, North and South Ayrshire councils and NHS Ayrshire & Arran (females)



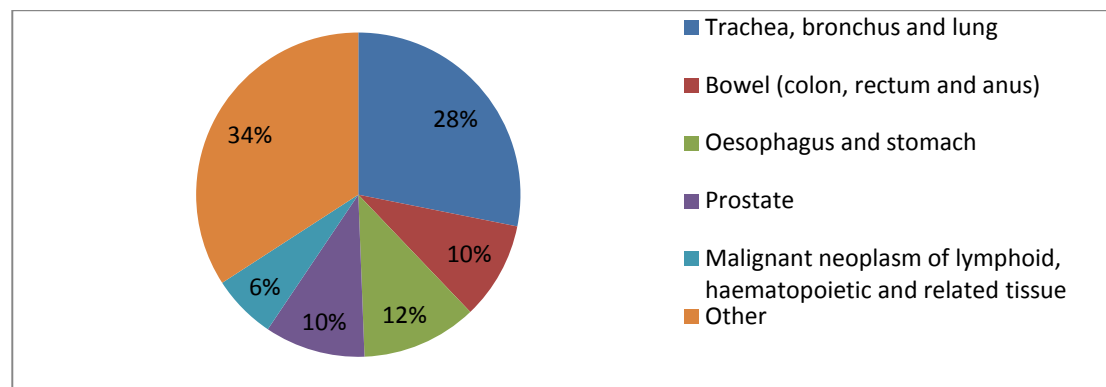
Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/life-expectancy>

### Cancer

The types of cancer with the largest numbers of deaths in Ayrshire and Arran in 2014 included cancers of the trachea, bronchus and lung (368 deaths), bowel cancer (118 deaths), cancers of the oesophagus and stomach (120 deaths), breast cancer (68 deaths), prostate cancer (67 deaths) and cancers of the lymphoid haematopoietic and related tissue (81 deaths). More detail on the main types of cancer deaths in males and females in Ayrshire and Arran are provided in Figure 10 and 11.

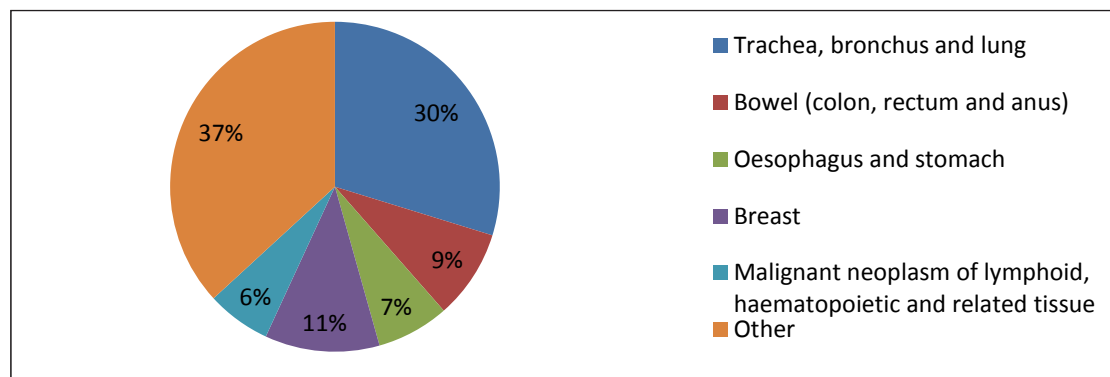
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**Figure 10:** Male cancer deaths in Ayrshire and Arran, 2014



Among males, the largest single cause of cancer in Ayrshire and Arran is of the trachea, bronchus and lung accounting for over a quarter of all cancer deaths in 2014. Cancer of the oesophagus and stomach is the second most common type of cancer death in men (Figure 10).

**Figure 11:** Female cancer deaths in Ayrshire and Arran, 2014



Among females the largest single cause of cancer in Ayrshire and Arran is of the trachea, bronchus and lung accounting for almost a third of all cancer deaths in 2014. Cancer of the breast was the second most common single cause of cancer deaths in women (Figure 11).

Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2014/section-6-deaths-causes>

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### Chapter 2 • Update on Priority Areas of Work from previous Director of Public Health (DPH) Report

#### Update on Alcohol

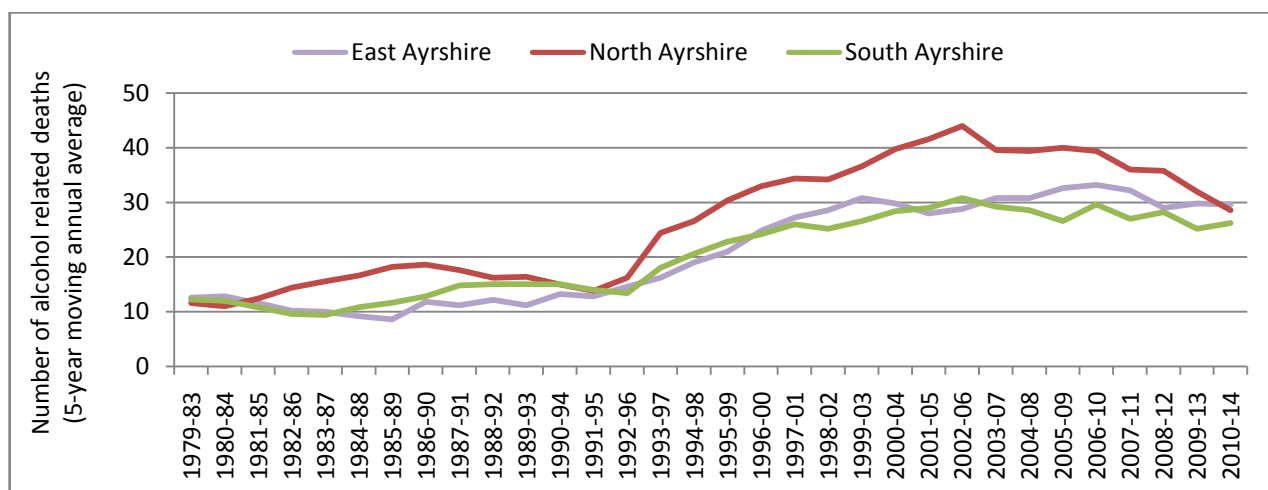
##### Overview

Alcohol continues to cause significant harm to people across Scotland. On average 22 people in Scotland die every week from alcohol related causes<sup>1</sup>. The Scottish Health Survey report for 2014 noted that there has been little change in consumption of alcohol across the population<sup>2</sup>. 41 per cent of men reported drinking more than the recommended 3-4 units on their heaviest drinking day in the past week, a reduction from 45 per cent in 2003. A third (33 per cent) of women drank more than their recommended 2-3 daily units, down from 37 per cent in 2003. Therefore the 2013 and 2014 figures are not significantly different.

##### Alcohol related deaths

Since the last DPH report was produced for 2013/14, there has been a continuation of a downward trend in alcohol-related deaths across Scotland. Analysis at national level has found that most of the increase and then gradual decline in deaths, affected men living in the most deprived areas of Scotland<sup>1</sup>. The pattern of increasing death rates followed by a gradual fall is also seen across East, North and South Ayrshire (Figure 12). While encouraging, it is worth noting that the number of alcohol related deaths reported remains significantly higher than reported in the early 1980's across both Scotland and Ayrshire<sup>1</sup>.

**Figure 12:** Alcohol-related deaths East, North and South Ayrshire, 1979-83 to 2010-14



Source: <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/deaths/alcohol-related-deaths>

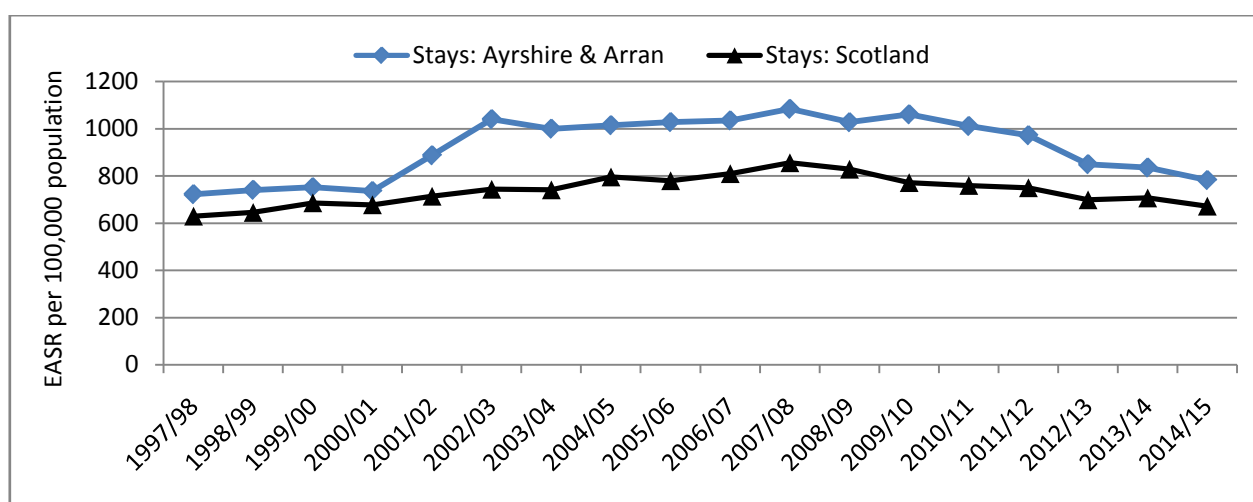
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### Hospitalisation rates because of alcohol

Standardised admission rates for alcohol related hospital admissions show a similar pattern in Ayrshire to the rest of Scotland. Although hospitalisation rates have declined since 2008/09, the rate of decline has slowed in recent years. Alcohol admission rates have remained higher in Ayrshire in comparison to Scotland as a whole.

Across Scotland in 2014/15, alcohol-related stays in general hospitals were nearly eight times more frequent for individuals living in the most deprived areas compared to the least deprived areas<sup>1</sup>.

**Figure 13:** Alcohol related General Acute hospital stays (SMR01) for NHS Ayrshire & Arran; 1997/98 to 2014/15



Source: <https://www.isdscotland.org/Health-Topics/Drugs-and-Alcohol-Misuse/Publications/2015-10-13/2015-10-13-ARHS2014-15-Report.pdf>

### Learning from national analysis

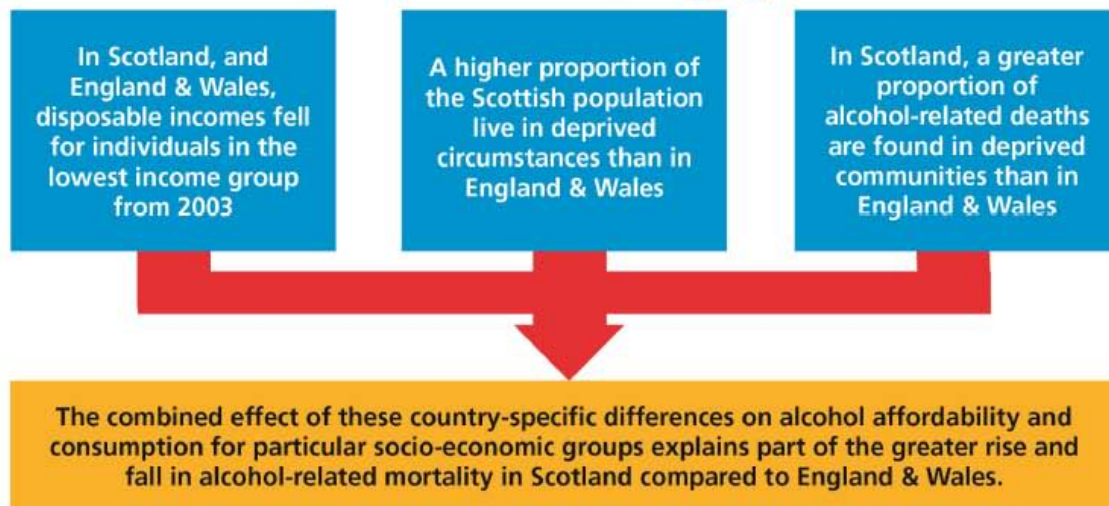
The recently published report “Monitoring and Evaluating Scotland’s Alcohol strategy”, considered the likely impact of Scotland’s strategic approach to alcohol<sup>1</sup>. Most of the data on trends in alcohol mortality and hospitalisation rates pre-date implementation of the above strategy. Therefore in the strategy, possible external factors were reviewed, which could explain the rise and fall in mortality rates in recent years, leading to the conclusions contained in the following extract:

*“Two factors external to the strategy were considered to have made a contribution to the mortality trends: falling disposable income (and hence alcohol affordability) for people living in the most deprived areas, and a vulnerable cohort responsible for a wave of alcohol-related mortality, that increased in the 1990s and decreased from the mid-2000s as the cohort aged and died.”*

## Monitoring and Evaluating Scotland's Alcohol Strategy: External Factors

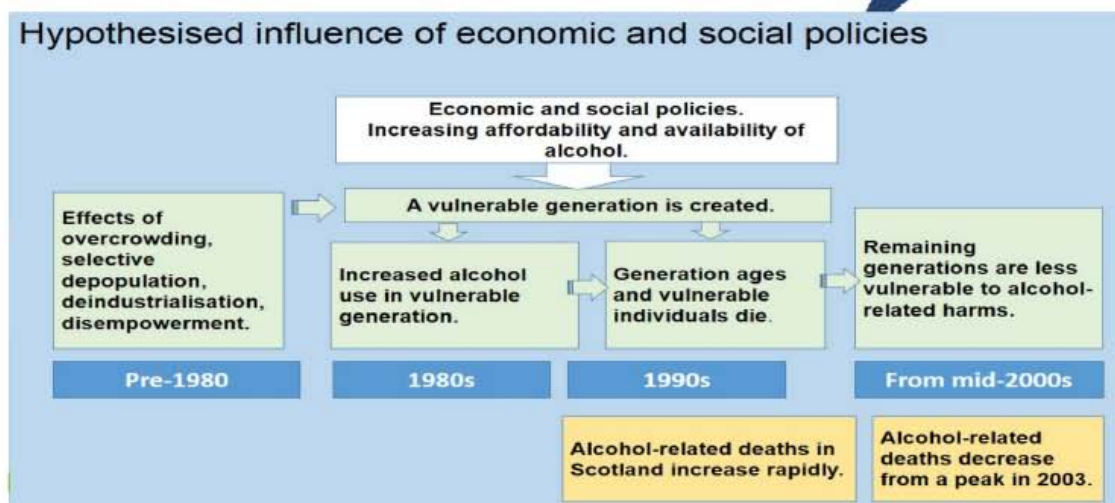
Trends in mortality in Scotland are different to our nearest neighbours, England & Wales. These differences occurred before Scotland's alcohol strategy. Two plausible explanations were identified. There may be others.

### 1. Combined effect of deprivation and changing income



### 2. A vulnerable generation

A vulnerable generation, mostly of working-class men living in the most deprived areas, emerged from the 1980s. This vulnerable generation experienced high levels of alcohol-related harms. Peak levels of alcohol-related deaths tailed off after this generation aged and died.



The full report can be found at [www.healthscotland.com/MESAS](http://www.healthscotland.com/MESAS)  
For more information contact: [nhs.healthscotland-MESAS@nhs.net](mailto:nhs.healthscotland-MESAS@nhs.net)



The report recommends that Scottish Government should continue to focus efforts on implementing evidence based interventions to reduce alcohol related harm. Among the most important factors are those influencing price, availability and exposure to marketing.

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### Key points

- there has been little evidence of change in the drinking patterns among the wider population in recent years
- although there has been a downward trend in alcohol related deaths and hospitalisations since around 2008/9, both remain significantly higher than they were in the 1980's
- at national level, Scottish Government has announced that there will be a refresh of the national alcohol strategy
- minimum Unit pricing has not yet been implemented. This has significant potential to reduce alcohol consumption, particularly amongst those who drink most heavily

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#### References

1. Monitoring and Evaluating Scotland's Alcohol Strategy Final Report. NHS Health Scotland. Published March 2016. <http://www.healthscotland.com/scotlands-health/evaluation/planning/MESAS/Publications.aspx>
2. The Scottish Health Survey 2014: Vol 1. National Statistics Publication. <http://www.gov.scot/Topics/Statistics/Browse/Health/scottish-health-survey>

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### Update on Tobacco

In line with the recommendations contained in the previous DPH Report in 2013/14, work on tobacco control has been progressing in partnership across a number of agencies, including the NHS, Local Authorities, Health and Social Care Partnerships, Fire and Police Services. A report on the 2012-2015 Tobacco Control Action Plan is now available [http://athena/publichealth/Documents/201215TCS Full Report and Action Plan 201518.pdf](http://athena/publichealth/Documents/201215TCS%20Full%20Report%20and%20Action%20Plan%20201518.pdf)

An example of this partnership working is an event which took place in North Ayrshire when one of the Fresh Air-shire team spent time providing smoking related advice and support to young people in the area. They worked alongside Police, Trading Standards and Youth Workers. The aim was to weave the health message into initiatives to address the use of illicit cigarettes and cigarettes being purchased by or for those under 18. This initiative received a very positive response from partners.

Members of the Tobacco Control Strategy Group have contributed to consultations on tobacco control related issues e.g. smoking in cars containing children. In this way we have endeavoured to influence national policy and legislation.

Health and Social Care Partnerships offer an opportunity for both health and social care staff to raise the issue of smoking and signpost people to appropriate services, and we are currently working with the partnerships to ensure that they have the correct training and resources to allow them to take this forward.

Within the three main aspects of the strategy: prevention, cessation and protection, a great deal of work has been progressing. In respect to preventing children and young people from taking up smoking, we have introduced a programme called “Assist” which involves training students to be peer supporters within schools. In respect to cessation, we continue to offer clinics in primary care, communities, prison, hospitals, and in some pharmacies, always seeking to target these services to areas of greatest need. A significant amount of work has also been undertaken within maternity services to reduce the number of pregnant women who smoke. Finally in respect to protection, the NHS smoke-free grounds policy has now been in place for a year and compliance has been generally good.

Work at both local and national levels requires to continue at pace, if we are to reach the agreed target of less than 5 per cent prevalence by 2034.

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### Key points:

- work on tobacco control has been progressing in partnership across a number of agencies
- a significant amount of work has been undertaken within maternity services to reduce the number of pregnant women who smoke
- the NHS smoke-free grounds policy has been in place since 2015 and compliance has been good
- the ambition across Scotland is to reduce smoking prevalence to less than 5 per cent by 2034

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## Section one • Population profile

### Update on Healthy Weight

In line with the recommendations contained in the previous DPH Report in 2013/14, an Ayrshire Healthy Weight Strategy has been developed by representatives from NHS Ayrshire & Arran, the three local authorities and the North Ayrshire Public Partnership Forum. The vision for the Healthy Weight strategy is to achieve ‘the healthiest weight possible for everyone in Ayrshire and Arran’. Its aim is to halt the rise in the levels of overweight and obesity among children and adults by 2024, and ultimately reduce them.

The strategy has been developed in two phases. The first phase has focused on obesity and the second on addressing issues related to underweight. It is a 10 year strategy with an initial three year action plan. Over the first three years, actions contained in the action plan focus on those where the NHS and local authorities have direct control.

2015/16 was the second year of the initial three year action plan. During the year, good progress has been made on actions such as:

- local authorities are providing incentive schemes for children and young people through cashless school meals systems; for adults as part of exercise on referral programmes; and for older people as part of the Invigor8 falls prevention programme
- training is available to staff in a range of settings on food for good health and physical activity
- information on healthy eating and physical activity for parents is provided on the CARIS (Childcare and Recreation Information Service) website
- there are now over 100 premises signed up to the ‘Breastfeed Happily Here’ scheme demonstrating their support to women who wish to breastfeed while visiting the respective businesses
- the National Healthy Living Award has been implemented in the majority of community planning partner’s workplaces, where appropriate. Over 100 local convenience stores are taking part in the Scottish Grocer’s Federation Healthy Living programme



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- cycling action plans are being implemented in each area and the development of an Active Travel Strategy is being developed by Ayrshire Roads Alliance
- child and adult weight management programmes continue to be delivered throughout Ayrshire
- the JumpStart Choices, school based healthy living programme, was delivered to over 1500 school pupils during 2015/16.



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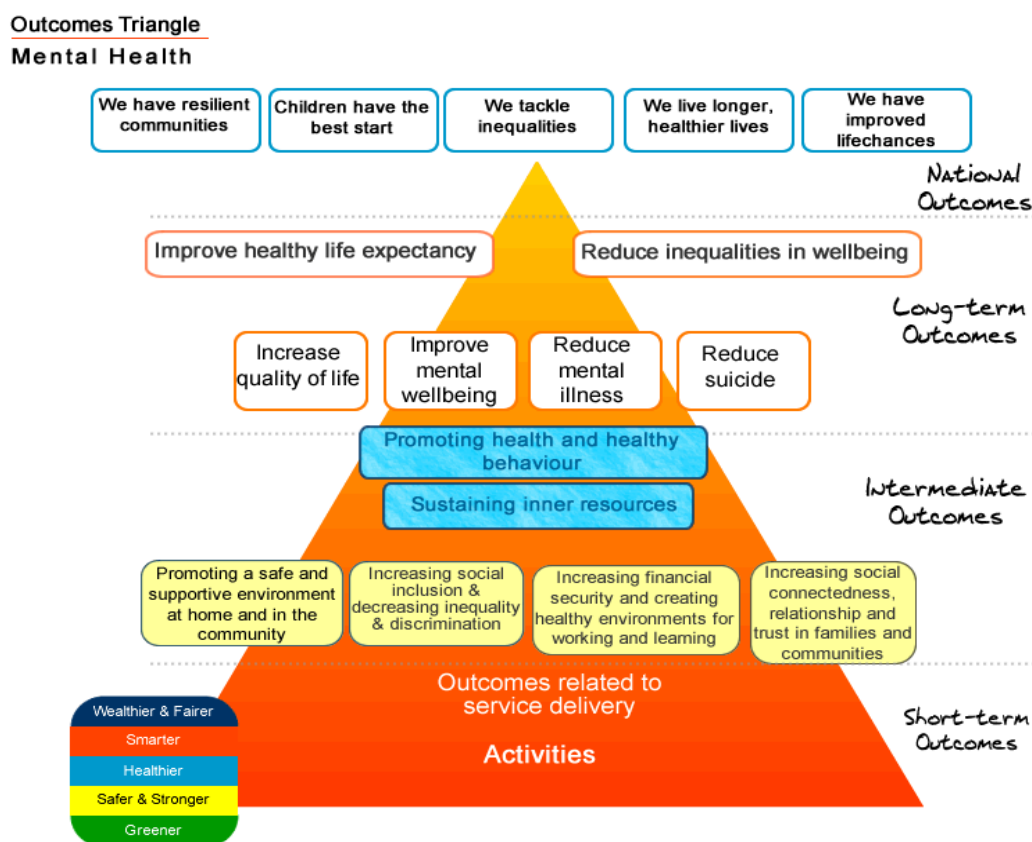
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### Update on Population Mental Health

The Mental Health and Wellbeing Strategy for Ayrshire and Arran 2015-2027 (Mental Health and Wellbeing Strategy 2015-27) recognises that decreasing social isolation, developing and nurturing inner resources and having a sense of meaning and purpose are all fundamental to sustaining good mental health.

NHS Health Scotland has described how all this fits together (Figure 14, below). The strategy focuses on the achievement of the intermediate outcomes (six boxes in the lower section of the triangle).

Figure 14



One route to addressing some of these issues is to increase community connections and activity. The mental health strategy has an underpinning, evidence-based outcomes framework, which, along with research from other areas, such as Go Well gave confidence that this approach merited exploration. This framework also underpins the rationale for the Theory of Change that supports the asset-based approach to community development that is described in the next chapter. Working together, Community Planning partners developed a proposal which was submitted successfully to NHS endowments funds.

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## Section two • Health Improvement

The following five chapters relate to Health Improvement.

### Chapter 3 An asset-based approach to community development: AHEAD project

The factors which influence health and wellbeing largely sit outwith the traditional remit of the health system. Asset-based approaches demand partnership working so that contributing circumstances such as education, living and working conditions, and the wider environment can be influenced. Thus it is crucial that this work is clearly positioned within Community Planning Partnerships and the developing health and social care agenda.

Working in an asset based approach allows communities (and communities of interest) to:

- Identify what their priorities are for action and control the development of that activity
- Work together, to get to know each other and to understand each other better. This leads to an increase in social cohesion and a reduction in social isolation. It is generally well known that there is a significant risk of increased morbidity amongst isolated people, particularly elderly people, and communities working together can contribute to reducing isolation

This approach has been identified as creating and developing “health assets” which are the resources that individuals, groups, communities and

There is growing evidence which confirms the contribution the asset based approach has to improving health and wellbeing both at individual level and community level<sup>1</sup>

populations have (for example, knowledge, skills and capacities), which can be harnessed in the ways described above to protect against the consequences of life and used to promote health and wellbeing. These assets exist at individual level (e.g. resilience) as well as at community level (e.g. social, economic and environmental factors that influence health and wellbeing).

So, with funding from NHS Endowment Funds, community planning partners in Ayrshire and Arran have embarked on a four year programme (until March 2018) to implement asset based approaches to improving health and wellbeing. Such an approach is consistent with both the national social policy context and the strategic priorities of local Community Planning Partners and the NHS Board.

Work started in April 2014 with the employment of (initially) four Community Builders (now seven part-time Community Builders). Working with partners, areas for activity were identified in North and South Ayrshire: Dalmilling,

## Section two • Health Improvement

Wallacetown and Lochside in South Ayrshire and Fullarton, Harbourside and Castlepark in North Ayrshire. East Ayrshire, as part of the Vibrant Communities approach, has an allocation from the AHEAD (Ayrshire Asset Development) funding stream to facilitate capacity development in asset-based working.

The role of the Community Builders is to identify individual community connectors who are residents within the local areas and who know the communities well. The community connectors help engage people and identify what assets can be used in their communities.

Partners are supporting the implementation of this programme. The programme is led by the Department of Public Health; operational management of the Community Builders and their associated activity is the responsibility of the respective Local Authority. A third sector organisation (Access to Employment) is the employing organisation for the staff. Learning from the initiative, combined with an evaluation, has been commissioned and Social Marketing Gateway is undertaking that work. The Glasgow Centre for Population Health provides an advisory role and Scottish Government (which part funds the evaluation) is a key source of support. An “end of first year” report has been produced. ([Learning from the AHEAD Project in Ayrshire Report](#)).

Asset based work in the various communities is going well. The Community Builders (CBs) are becoming well established in their environments and are being accepted as part of the fabric of the community. It has taken time for the CBs to be accepted and the pace is inevitably slow as local communities develop trust with the CBs. The CBs provide monthly updates about activity, which is varied, ranging from sports based activity, to garden maintenance, to sprucing up the local area, to the creation of community gardens to arts and crafts based activity. All age groups are engaged.

There are also a number of organised events where the CBs link with other professionals in the area, or where they host a community “asset mapping” session. The CBs are working with a wide range of agencies: libraries, schools, Department of Work and Pensions, faith communities, parks/leisure, community safety, community learning and development and many third sector agencies.

One of the most important pieces of learning that has been identified by the evaluation team thus far and shared with those working in AHEAD is that this work can only go at the pace that it takes to build trust. It simply cannot be rushed; trying to force the pace results in initiatives that are CB led, not community led, and which may lack community commitment. These initiatives are not so successful.

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At the half-way point in the work, much has been achieved in relation to the short-term outcomes in the Theory of Change. However, at this point, some work needs to be progressed to consider how the Health & Social Care Partnerships (HSCPs) can tap into this approach. The models of delivery are very different and further exploration is needed to find ways to reduce the gap between the approaches.

At the same time, many new posts are being created within the HSCPs that work in a similar way to the CBs, so there is hope that there is potential for future developments.

### Key Points and Recommendations

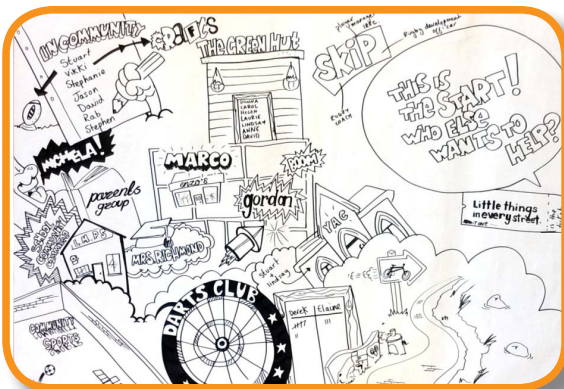
- public sector agencies could further explore the potential to adopt asset based approaches in localities to help the move towards more co-produced services in communities

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An asset map made with local artist Tragic O'Hara, Cormac Russell and a few residents – discussing who makes a good life for kids in Fullarton.



Coast watch annual beach clean organised by a local community group.

## Section two • Health Improvement

### Chapter 4 Health Issues in the Community

#### Introduction

Health Issues in the Community (HIIC), is a training programme aimed at increasing community capacity and community participation, whilst establishing and consolidating community development approaches to tackling inequalities in health. The programme was developed in partnership between Health Scotland and the Community Health Exchange (CHEX) and is split into two parts: – Health and Society and Ideas into Action. HIIC aims to raise awareness and increase understanding of the social model of health; health inequalities, and how community development approaches can help reduce these inequalities.

#### Activity

In collaboration with South Ayrshire Council’s Community Learning and Development team, a Health Issues in the Community course was delivered for the first time within a secondary school setting in Ayrshire and Arran. The programme was offered to Girvan Academy in response to the school’s desire to enhance subject options available to senior pupils as the school looks to promote wider achievement. A request for contributions from partners was sent out through the South Carrick Learning Community Partnership (LCP), at which NHS Ayrshire & Arran is represented by a Health Improvement Officer.

The delivery of the HIIC course at Girvan Academy was included within the South Carrick LCP’s improvement plan. These plans are aligned to South Ayrshire’s Single Outcome Agreement, with this work incorporated under the ‘Supporting our Children and Families’ priority. The intermediate outcome of this priority is ‘more children and young people are successful learners and achieve more widely’. The course is also closely linked to Curriculum for Excellence, and has been mapped to the relevant experiences and outcomes of the health and wellbeing, social studies and languages curriculum areas.

Ahead of the course, a presentation was delivered at the senior-school assembly before interested pupils were invited to take part in a taster session to gain further insight into the content of HIIC. From this, five pupils elected to participate in the course.

The Part 1 course – Health and Society – comprises eight units:

- What Health Means to Me
- Different Ways of Thinking about Health
- Poverty, Inequality and Health

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- Different Experiences, Common Problems
- Power and Participation
- Community Development and Health
- The Group Project
- Reflection and Review of Learning

The units are delivered using a variety of different learning methods with the aim of developing the participants' understanding of the range of factors that affect their health as an individual and the health of their community, before exploring how these issues can be tackled through community development approaches.

The course is accredited at SCQF Level 6, and all five pupils put themselves forward for accreditation as they were keen to add to their portfolio of qualifications with a view to their post-school options. To achieve this, pupils were required to complete learning logs for each unit, a written assignment, and full participation in the group project. The group presented their project to the school's senior management team and community learning and development staff, demonstrating what they had learned and how they could use that knowledge to influence key health issues within their community. At the time of writing, all four portfolios that were submitted and marked have passed, with the final portfolio still to be assessed.

As part of their submission for accreditation, pupils are required to complete a self-evaluation. All five pupils reported that following their participation they:

- had a better understanding of the health issues that affect their community
- felt more able to influence factors affecting their health

One pupil also made note of how much more confident they were following their participation, particularly in relation to the group project, whilst another commented how much they enjoyed the different style of learning – remarking that it allowed them to contribute their ideas effectively.

Feedback from Girvan Academy supported the pupils' comments, stating that they found the content and relaxed learning style interesting and enjoyable. The staff member also remarked how impressed both they and their colleagues were at the group's presentations, which formed part of the pupil's portfolios. Following the success of this course, Girvan Academy has requested a further delivery in the 2016/17 school session.



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### Some quotes from participants

*“I loved every moment of the class and wouldn’t hesitate to recommend it - I already have several times. I learned more than I expected to and it has changed my perception of my community and those within it, for the better.” Pupil 1*

*“I really enjoyed the HIIC course it helped me gain my unconditional for college as I put it into my personal statement. I would highly recommend the course to future students as it’s an easy structure to follow with interesting topics.” Pupil 2*

### Key Points

Health Issues in the Community is a training course that equips participants with knowledge of the social model of health, health inequalities, power and participation and community development approaches to health.



- the course was delivered within a secondary school in Ayrshire and Arran for the first time and all five participants have submitted portfolios for accreditation. Four pupils have received a pass at SCQF Level 6, with one portfolio still to be assessed
- there was a self-reported increase in the participant’s knowledge and understanding, as well as some of the group noting that their confidence had also increased
- the pupils responded to the content and style of learning very well, whilst the delivery would not have been possible without the collaborative working between Health Improvement, Community Learning and Development and Girvan Academy
- Girvan Academy has requested the programme is delivered again in the next school session and it has been agreed that South Ayrshire’s Community Learning and Development team will lead this delivery with support from Health Improvement.

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## Section two • Health Improvement

### Chapter 5 Gender Based Violence

The term “Gender Based Violence” (GBV) is an umbrella term which includes, but is not limited to, domestic abuse, rape and sexual assault, childhood sexual abuse, sexual harassment, stalking, commercial sexual exploitation, female genital mutilation, forced marriage and so-called ‘honour’ crimes.

The term is unfamiliar to many people. ‘Gender’ refers to the attitudes and behaviour that society expects of men and women. Despite great progress, many inequalities still exist between the sexes. A fundamental inequality is the level of fear and harm experienced mainly by women and perpetrated mainly by men. The United Nations defines gender-based violence as:

*violence that is directed against a woman because she is a woman, or violence that affects women disproportionately. It includes acts that inflict physical, mental or sexual harm or suffering, threats of such acts, coercion and other deprivations of liberty<sup>1</sup>.*

Using this term also helps to make the connections between the different forms of abuse, particularly since many women experience more than one type of violence.

Domestic abuse affects between 1 in 3 and 1 in 5 women over the course of their lives (although not all women are equally at risk).<sup>1</sup>

In 2014-15, there were 59,882 incidents of domestic abuse recorded by the police in Scotland, an increase of 2.5 per cent from 2013-14.

Incidents of domestic abuse recorded by the police in Scotland with a female victim and a male perpetrator

represented 79 per cent of all incidents of domestic abuse in 2014-15, where gender information was recorded. The 26-30 years old age group has the highest incident rate per 100,000 population for both victims (2,615 incidents recorded per 100,000 population) and perpetrators (2,766 incidents recorded per 100,000 population)<sup>2</sup>.

#### What is domestic abuse?

Domestic abuse is abuse perpetrated by partners or ex-partners and it can include physical abuse (assault and physical attack involving a range of behaviours), sexual abuse (acts which degrade and humiliate and are perpetrated against the victim’s will, including rape) and mental and emotional abuse (such as threats, verbal abuse, withholding money and other types of controlling behaviour such as isolation from family and friends). It is characterised by a pattern of coercive control which escalates in frequency and severity over time. It can be actual or threatened violence

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and can happen occasionally or often. It can begin at any time, in new relationships and after many years. Pregnancy is often a trigger point.

### Causes of domestic abuse

Many people believe that domestic abuse is caused by poverty, alcohol misuse or witnessing abuse as a child. Although each of these can be contributing factors, they are not the sole or primary causes of domestic abuse. Domestic abuse occurs in every social class and across boundaries of age, ethnicity, disability and religion. Alcohol is involved in about half the incidents of domestic abuse<sup>3</sup>.

### Who is at risk of gender-based violence?

Being female is the key risk factor for gender-based violence<sup>4</sup>. While no woman is immune from it, not all women are equally at risk. Factors such as age, financial dependence, poverty, disability, homelessness, and insecure immigration status can heighten women's vulnerability to abuse or entrap them further in it. Young women are at high risk of all forms of abuse, yet often this can be overlooked or minimised, particularly in their teenage years.

Whilst men are at much less risk from gender-based violence, some men are abused in similar ways by other men and, sometimes, by women.

### Impact of abuse

The NHS spends more time dealing with the impact of abuse against women than almost any other agency. Physical and sexual abuse have direct health consequences and are risk factors for a wide range of long-term health problems.

More women suffer rape or attempted rape than have a stroke each year, and the level of domestic abuse in the population exceeds that of diabetes by many times<sup>5</sup>

### Policy Context

“Equally Safe, Scotland’s strategy for Preventing Violence Against Women and Girls”<sup>6</sup> was refreshed in February 2016. It provides a framework and standard for policy, interventions, and service design in Scotland. The overall aim of the strategy is to prevent and eradicate violence against women and girls, creating a strong and flourishing Scotland where all individuals are equally safe and respected and where women and girls live free from such abuse - and the attitudes that help perpetuate it.

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### Routine Enquiry

Within the context outlined above and given the prevalence of abuse, its adverse health impacts and the reluctance of survivors to disclose without direct questioning because of the stigma surrounding abuse, the NHS has been asked to undertake Routine Enquiry (RE).

RE is “asking direct questions in relation to abuse of a specified population group when they present to a service. This can be at a particular point in their use of a service, or on all occasions at which they present. It does not matter whether there are any signs or indications of abuse”<sup>7</sup>.

The aim of RE is to support diagnosis and assessment of patients to ensure early, appropriate intervention and care. A disclosure of abuse also means that the therapeutic intervention will be more meaningful and will be specific for that individual.

RE of domestic abuse is applicable to all women accessing particular services (and men in some services). Research suggests that RE by trained staff during pregnancy can increase disclosures by three-fold and that the act of disclosure can reduce children’s experience of violence and lessen its impact<sup>8</sup>.



### Activity

There are three active Violence Against Women (VaW) Partnerships in Ayrshire, all of which report to the Community Safety strand of the respective Community Planning Partnership. There is also a multi-agency group, which sits within the South West Scotland Community Justice Authority. NHS Ayrshire & Arran also has an internal steering group, principally to progress RE, but it also addresses other forms of violence against women and ensures that NHS A&A fulfils its role in this regard as an employer. The three VaW partnerships are represented on this group and there is close partnership working.

There is a three year action plan for GBV which specifically identifies activity that the NHS needs to undertake: this ranges from capacity building for front-line staff, to data and intelligence gathering, developing guidance for NHS staff on issues such as human trafficking or female genital mutilation (FGM) to working with education on issues such as healthy relationships and FGM.

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### Key points and Recommendations

- gender based violence continues to be a significant issue in the lives of many women in Ayrshire
- the impact on victim's physical and mental health is considerable and can have life-long consequences
- many front-line NHS staff are routinely asking about people's experience of abuse with a view to providing more appropriate support and therapeutic interventions
- partnership working is essential to progress all four strands of Equally Safe, the Scottish strategy for gender-based violence.
- as the NHS deals with the impact of abuse more than any other agency, NHS staff should continue to implement and roll-out Routine Enquiry of abuse and respond appropriately to disclosures of abuse
- the three Violence Against Women partnerships in Ayrshire, alongside the NHS, should further develop close working relationships to progress Equally Safe in Ayrshire

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### Chapter 6 Health in the Workplace

#### Introduction

It is well recognised and documented that being in good employment is good for employees' health and mental wellbeing. The workplace is also an ideal setting to reach a wide range of people who may not usually be accessible through the normal healthcare routes, for example, men who don't routinely access health services. People from various backgrounds with a range of health needs can be found in workplaces across Ayrshire and Arran and the Healthy Working Lives agenda aims to support people of working age to live healthier, more productive and more content lives.

#### Policy context

The importance of being in 'good' employment is also highlighted within the "Marmot Review of Health Inequalities (2010)". The need for employers to provide a working environment that helps to promote and protect their employees' physical health, safety and psychological wellbeing is key to motivating and retaining their workforce. This can be achieved through the following examples; ensuring employees receive a living wage, employees feeling that they have control over aspects of decision making relating to their employment, working within a safe and protective environment and employees being supported during times of sickness or ill health.

NHS Health Scotland's "Good Work for All" (2015) briefing paper also discusses the importance of 'good' work which helps in reducing health inequalities within the local population and wider community through social and financial benefits. In tackling the widening gap between individuals with the best and worst health, it is crucial that employers ensure their workforce have equal access to policies and practices that support good health, therefore ensuring all benefit from 'good' work. The Healthy Working Lives Team support employers in developing and implementing a range of workplace policies and procedures to ensure the health, safety and wellbeing of employees.

#### Activity

NHS Ayrshire & Arran's Workplace Team provides free and confidential advice to employers of local companies and businesses and is responsible for delivering the Healthy Working Lives Award programme. The principal purpose of Healthy Working Lives is to work with employers to help them to better protect and promote the health, safety and wellbeing of their employees. These deliver positive business outcomes for employers and

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for the economy as a whole, and maximise the contribution of employers to tackling inequality and improving the health and wellbeing of the local population.

There are three levels to Healthy Working Lives awards programme - Bronze, Silver and Gold: with each level offering particular challenges to participating organisations. The Award Programme supports employers and employees to develop health promotion and safety themes in the workplace in a practical, logical way that is beneficial to all.

In 2016, across Ayrshire and Arran, more than 63 companies and businesses are involved with the Healthy Working Lives programme. 35 workplaces within Ayrshire have achieved a Healthy Working Lives Award at either Bronze, Silver or Gold level, with a further 28 registered workplaces currently working towards the Bronze award. This has resulted in over 40,000 employees working in safer and healthier workplaces. For NHS Boards, the Chief Executive's Letter CEL 01 (2012) states that Boards should continue to work to attain Healthy Working Lives Awards for all acute services, working towards the Gold Award. The local Workplace Team is currently supporting NHS Ayrshire & Arran to progress through the Healthy Working Lives award programme.



Photograph of Healthy Working Lives Award winners - 2015/16:

Left to right

Amy Govan (VOCA); Joanne Hanley (VOCA); Jan McCulloch (Barns Medical Practice); Aileen Emerson (Belmont Academy); Jane McKie (East Ayrshire Council); and David Doran (East Ayrshire Council).

The Workplace Team also provide a wide range of training opportunities to workplace managers and their employees to raise their knowledge and skills in topics such as mental health and wellbeing in the workplace, drugs and alcohol policy support for workplaces, supporting staff attendance and risk assessment. In 2015/16, the Workplace Team provided training to 108 employers (242 employees) in Ayrshire and Arran.



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The Workplace Team works with local Ayrshire and Arran partners including the Chamber of Commerce, Business Gateway and The Ayrshire Hospice. These joint partnerships contribute to the important work of closing the health inequality gap for the local workforce within the local population.

### Key points and Recommendations

- Ayrshire and Arran employers are aware of the range of support, advice and services offered by the Healthy Working Lives Team; 809 Ayrshire and Arran employers have accessed services in 2015/16
- within Ayrshire, 35 workplaces currently have a Healthy Working Lives Award at either Bronze, Silver or Gold level, covering over 40,000 employees across Ayrshire and Arran
- supporting the reduction of health inequalities in the local workforce population through improved and supportive working conditions, environment and culture. For example in 2015/16 three local employers were supported in undertaking stress risk assessments
- improving the healthy life expectancy of the local workforce population through education, training and awareness raising campaigns; with 242 employees trained in 2015/16
- support in developing policies and practices to protect and improve the physical, emotional and mental health and wellbeing of the local workforce population. 24 policies were supported and reviewed in 2015/16
- contributing to positive long-term employer and employee behaviour changes, creating a healthier and safer and more productive workforce through a structured and supportive framework adaptable to an employer's needs
- the Healthy Working Lives Team should continue to facilitate capacity building within Ayrshire and Arran workplaces to increase their health improvement knowledge and activity via a suite of nationally developed training opportunities

Logic Model - Logic Model link – <http://www.healthscotland.com/uploads/documents/21378-HWLStrategicLogicModel.pdf>

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### Chapter 7 Health Promoting Care Homes

Scotland has an ageing population, with the number of over 75's set to increase by over 25 per cent in the next 10 years<sup>1</sup>. Healthy ageing is of great importance whether living at home or in a care home setting. "Scottish Government, Reshaping Care for Older People - A Programme for Change 2011-2021"<sup>2</sup> states that:

*"Older people in Scotland are valued as an asset, their voices are heard and older people are supported to enjoy full and positive lives in their own home or in a homely setting."*<sup>2</sup>

A care home is a place where individuals can reside, either permanently or for a fixed period and have their needs met by trained staff. Care homes are inspected and regulated by the Care Inspectorate to ensure that appropriate standards are being met<sup>3</sup>. One way of demonstrating effective care and health promotion activity within a care home is through use of the Health Promoting Care Home (HPCH) Framework.

The framework was developed by a multi agency partnership group from NHS Ayrshire & Arran, Scottish Care, third sector, care homes and the three local authorities - North, South and East Ayrshire. It was developed to ensure the residents and their families can participate and have greater choice in improving health. Care home managers identify a HPCH Co-ordinator who co-ordinates all the health promoting activity within the care home and will be the key contact with partner organisations. Action plans are created to build on good practice and identify gaps relating to health promoting activity within care homes. A toolkit was developed to accompany the framework containing relevant information, contacts and support.

Care Homes are guided through the use of the framework by NHS Ayrshire & Arran's Health Improvement staff. The HPCH co-ordinators are invited to quarterly learning forums with an input from a range of organisations and this allows the opportunity to share knowledge and practice. The HPCH co-ordinators provide valuable feedback on topics they would like to see included in future forums.

The framework developed using a multi-agency approach and aims to provide a structure from which health promotion activity can be directed. The objectives are to:

- build on good practice and identify areas for development in relation to health
- highlight areas where successful health promotion activity has taken place and share this with other service providers

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- encourage consideration of health in its widest context.
- help secure the best possible outcomes for people living in care homes
- encourage the involvement of families, residents and carers in health improvement activities
- focus on prevention by recognising the sources of health, not just disease or illness
- promotes the importance of staff health and wellbeing

A certificate is provided for display to demonstrate the care home is participating in the framework.

### Results and Outcomes

- Following a successful six month pilot, the framework was rolled out to care homes across Ayrshire and Arran
- 33 homes are participating in the framework
- Positive anecdotal feedback has been received from care home managers, staff, residents and families



### Conclusion

Care homes can use the framework as a tool to identify areas for development, to highlight successful health promotion activity and to share good practice with other service providers. Overall, the HPCH framework supports care homes to evidence the successful work that is happening within their care home, and is used to provide evidence to the Care Inspectorate. Anecdotally, care homes have reflected positively on the impact of the Framework for their residents.

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### Key points and Recommendations

- healthy ageing is of great importance whether living at home or in a care home setting
- the Health Promoting Care Home Framework provides care homes with structure and direction for health promoting activity
- health improvement staff should raise awareness of the HPCH Framework, linking with partners, carrying out guidance sessions, supporting learning forums and reviewing the toolkit to ensure information remains relevant and up to date

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## Section three • Health Protection

The following four chapters relate to Health Protection.

### **Chapter 8 Update on Protecting the Health of the Population**

The Public Health etc (Scotland) Act 2008 requires NHS Boards to protect their populations from communicable diseases, contamination or other hazards which constitute a risk to health. The NHS Ayrshire & Arran Health Protection Team (HPT) works collaboratively across the NHS and other statutory and voluntary agencies, to prevent and control communicable diseases and environmental hazards.

The team deals with a wide range of communicable diseases and environmental risks, both in hours and out-of hours. This includes managing outbreaks of disease and other incidents which threaten the health of the public, and responding to individual cases of communicable disease which have wider implications for the community. Preparedness for a range of eventualities is important, so the team participates in exercises to rehearse responses to a range of health threats, including terrorist activity and natural major incidents of various types. The most recent national exercise involved responding to an imported animal case of rabies.

The Health Protection Team receives infectious disease notifications, reports and enquiries from a number of sources including microbiology laboratories, GPs, Environmental Health Officers, schools, care homes, nurseries and hospital wards. The following table provides a summary of the cases notified during 2015-16.

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**Table 6** - Notifiable diseases and infections within Ayrshire and Arran (1st April 2015-31st March 2016)

Infection/disease notified	2015-2016
Campylobacter	345
Cryptosporidium	62
E.coli O157 and other VTECs	27
Giardia	10
Haemophilus Influenzae type B (Hib)	0
Hepatitis A	1
Hepatitis B	10
Invasive Group A Streptococcal Infection	14
Legionella	2
Measles	2
Meningococcal Infection	11
Mumps	16
Pertussis	40
Rubella	0
Salmonella	54
Shigella	2
Tuberculosis	16
<b>Total</b>	<b>613</b>

In 2015/16, the team was involved in managing 51 outbreaks of infection within Ayrshire and Arran. Of these, 86 per cent were outbreaks of gastrointestinal infections and the rest were single outbreaks of pseudomonas, chickenpox, scabies, respiratory tract infection and Hepatitis C. Most gastrointestinal outbreaks were caused by norovirus (93 per cent), with two outbreaks of E-coli O157, two outbreaks of clostridium perfringens, and one of astrovirus. Most of the outbreaks occurred in care homes and hospital wards. Six school outbreaks and two nursery outbreaks were reported. Two were household outbreaks and the remaining nine included a hotel, restaurants, and day care centres.

During the same period, 2015/16, 111 situations were managed by the Health Protection Team. Situations include a wide range of issues requiring public health management and monitoring over an extended period of time. These often involve environmental issues such as problems with drinking water quality. Public Health is routinely notified of breaches affecting drinking water quality, and will provide any necessary health advice. Other situations notified included a chemical spillage, concerns about a biomass boiler, and an 'outbreak' of rhabdomyolysis.

### Patient notification exercise: infection control breaches in local dental practice

A large patient notification exercise was undertaken following alleged infection control breaches in an East Ayrshire dental practice. An incident management team (IMT), including experts from Health Protection Scotland (HPS) was convened to examine the alleged breaches and assess any risk to patients. Control measures were put in place and 5,100 patients were informed by letter that risk of infection was very low and testing was not recommended. In response to this notification exercise more serious allegations about the practice emerged from another source. A further risk assessment was carried out using this new information. Patients had to be contacted again and blood borne virus (BBV) testing was offered as a precaution. A patient helpline was set up. Approximately 2,250 BBV tests were carried out. No Human Immunodeficiency Virus (HIV) or Hepatitis B cases were identified. Less than five new cases of Hepatitis C were identified. There is no evidence indicating that a dental patient who underwent BBV testing as part of the patient notification exercise acquired a BBV in the dental practice. However, BBV transmission within the dental practice cannot be ruled out given that only half of the practice patients were tested. The IMT informed the General Dental Council (GDC) of all allegations and findings. The GDC held a hearing resulting in the dentist and practice manager both being struck off. Public Health contacted the Chief Dental Officer for Scotland to share concerns about these breaches not being picked up during announced practice inspections. Scottish health boards have recently been given new powers to conduct unannounced inspections of dental practices if they have concerns. Lessons learned from this incident are being disseminated throughout Scotland in an effort to prevent future incidents of this sort.

#### Key points

- the NHS Ayrshire & Arran Health Protection Team, located in the Public Health Department, works collaboratively across the NHS and other agencies to prevent and control key threats to health
- between April 2015 and March 2016 the Health Protection Team dealt with over 600 individual disease notifications, 51 outbreaks, and 111 incidents
- Public Health respond to a range of threats to health, including infection control breaches affecting the local community

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### Chapter 9 Meningitis and Septicaemia

Meningococcal infection, despite now being relatively rare, still causes a great deal of public anxiety, particularly among parents of young children. This is evident from the overwhelming response to a recent petition to make Men B vaccine much more widely available for children.

Meningococcal infection is a spectrum of disease caused by the *Neisseria Meningitidis* bacterium. Infection may present as meningitis, septicaemia or both. Meningococcal infection is the most common cause of bacterial meningitis in the UK. In 2015/16 there were seven separate (unrelated) confirmed cases of meningococcal infection in Ayrshire and Arran. There have been no outbreaks locally in recent years.

Meningococcal infection is of public health importance for four reasons:

1. severity of disease with a 10 per cent case fatality rate and 15 per cent of cases experience serious complications including deafness, loss of limbs and convulsions
2. intensity of public anxiety associated with meningococcal disease. Although the disease is now relatively rare, it can be very serious and primarily affects babies, children and teenagers
3. ability of the disease to occur among small clusters of people (where everybody in the cluster becomes ill). Since the introduction of Men C vaccine, clusters and outbreaks are far less common. However, the potential for clusters of disease remains
4. available vaccines only cover some of the 12 sub-types of meningococcal disease including *Meningococcus* A, B, C, W and Y.

For prevention of sporadic cases of meningococcal infection, vaccination is the only option. Early identification and treatment leads to better outcomes and prognosis, so public awareness of the signs and symptoms is important as is early detection and treatment by clinicians.

Common early symptoms of meningococcal infection include fever (sometimes with cold hands and feet), headache, neck stiffness, sensitivity to bright light, vomiting and muscle pain. Presentation can vary but typically illness progresses rapidly.

#### Public Health response to a case

Meningococcal infection is spread from person-to-person via droplet secretion during prolonged and close contact (usually within a household



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or closed setting). Infectivity is low so public health action focuses mostly on contacts within the household setting and any intimate contacts (sexual partners/kissing partners). The aim of antibiotic prophylaxis to close contacts is twofold:

- 1) to eradicate carriage within the close group of contacts, one of whom is likely to be the source of the infection, in order to prevent further spread of disease
- 2) to prevent further cases or reduce the severity of infection within this close group, where some people may already have picked up the infection

Close contacts must be made aware of the signs and symptoms of meningococcal infection and the importance of seeking medical advice promptly. Risk of secondary cases occurring is highest among close contacts.

### Epidemiology of meningococcal disease

The epidemiology of meningococcal disease has changed markedly in the UK in recent years. During the 1990s there was a significant increase in number of cases. The increase was mainly due to clusters of Meningococcus C infection. Meningitis C is now increasingly rare due to the success of the Men C vaccination programme. Now most cases of meningococcal infection are sporadic, with the occasional cluster in closed settings (eg.military, nursery). The age groups most commonly affected are around five months of age and teenagers. Vaccinations target these age groups who are deemed to be most 'at risk'. Worldwide, there is much geographical variation. Outbreaks of infection sometimes occur among people making the Hajj pilgrimage to Mecca. Travel vaccination is sometimes required to endemic areas, including the 'meningitis belt' in Africa.

### Introduction of Meningitis B vaccine

The introduction of Men B vaccine into the UK childhood immunisation schedule in May 2015 has caused some controversy, with a petition calling for age of eligibility to be extended. The aim of the programme is to provide direct protection against invasive Men B disease. The vaccine will help to prevent cases of Men B in those at highest risk. The rationale for vaccinating children at the ages selected i.e. infants aged five months and younger at the start of the programme on 1st May 2015 is as follows:

1. the need to prevent Men B disease in infants and young children
2. the need to achieve protection by five months of age, before the age of highest risk

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3. the need to ensure children are protected into their second year of life

The age groups most at risk of Men B are those aged five months old, followed by one and two year olds.

As a result of routine vaccination in Scotland now including Meningococcus sub-types ACW135Y and B, it is anticipated that a significant reduction in cases caused by these subgroups will occur.

### Key Points

- Meningococcal disease can present as meningitis, septicaemia, or both and the illness often progresses rapidly with a 10 per cent case fatality rate and a 15 per cent chance of a serious complication
- the total number of new cases of meningococcal disease arising each year has declined substantially since the 1990's, largely due to the increased availability of vaccines. Only seven confirmed cases were notified in Ayrshire and Arran in 2015/16.
- timely public health action to identify, advise and offer antibiotic prophylaxis to contacts of a case is important to prevent its onward transmission within closed groups (usually household contacts).

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Meningococcal Rash Glass Test

Source: Meningitis Now

### Chapter 10 Progress Towards Improving Sexual Health

NHS Ayrshire & Arran has been implementing a five year sexual health strategy (2011-16). The vision for this strategy was 'Working together to promote well-being in sexual health and deliver excellence in the services we provide.'

The strategic priorities are to:

- increase the awareness and knowledge of the factors that affect sexual health and wellbeing
- reduce the levels of unplanned teenage pregnancies
- increase the uptake of screening opportunities for sexually transmitted infections
- increase the uptake of testing for sexually transmitted infections.

The first Sexual Health and Blood Borne Virus (BBV) Framework was published by the Scottish Government in 2011 and updated in August 2015. The Framework brought together policy on sexual health and wellbeing, HIV and viral hepatitis for the first time. Intended outcomes include a reduction in new BBVs, sexually transmitted infections and unintended pregnancies; a reduction in the health inequalities gap in sexual health and BBV; and longer healthier lives for those affected by BBVs.

#### What did the strategy deliver?

Some of the achievements of the local strategy are outlined in this chapter.

#### Training and public awareness

During the past year (2015/16) a total of 25 specific training sessions were offered within the sexual health training brochure with an uptake of 19 sessions being delivered to 118 multi-agency participants. In addition, 22 bespoke training sessions were delivered to a total of 436 multi-agency participants including vulnerable groups. The training on offer is available to anyone working, living or studying within Ayrshire and Arran, free of charge, with the overall aim to increase the knowledge and skills of attendees on sexual health and wellbeing. This includes general awareness on sexually transmitted infections and the sexual health needs of distinct population groups eg. learning disabilities.

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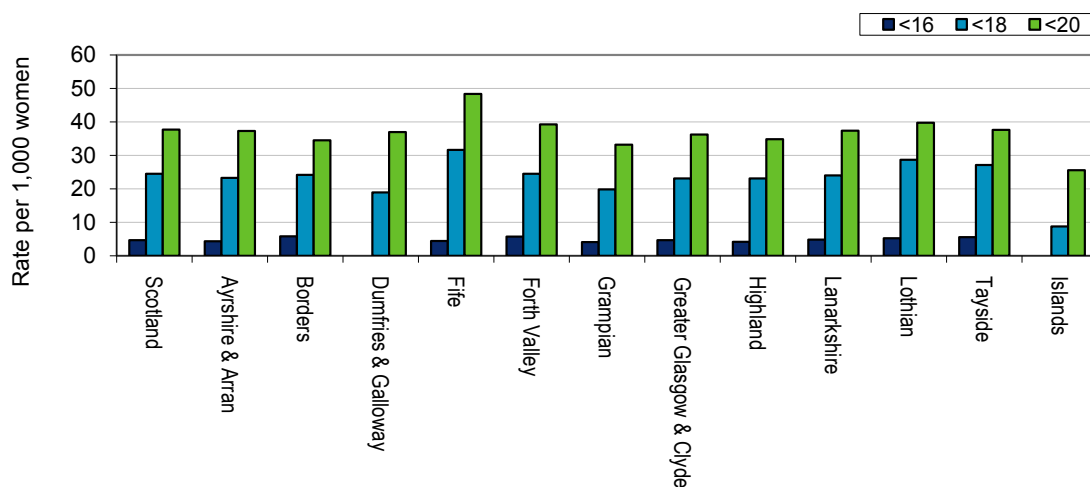
### Targeted STI prevention work

Young people (particularly women) aged less than 25 are the age group most at risk of being diagnosed with a sexually transmitted infection (STI). In 2013, 77 per cent of genital chlamydia and 72 per cent of gonorrhoea diagnoses in women were in those aged under 25. The sexual health improvement team target young people across our local community where they meet to socialise. The sexual health improvement team attend health events in workplaces, colleges, HMP Kilmarnock and the University of the West of Scotland (and freshers fairs at further education establishments). During the last year a total of 25 health events within 18 different venues across Ayrshire and Arran were attended, with a total of 1331 individual interactions achieved.

### Teenage Pregnancies

Between 2000 and 2012, Ayrshire and Arran experienced a decline in teenage pregnancy rates, as did Scotland as a whole. There were 664 deliveries in the under 20 age group within NHS Ayrshire & Arran during 2000, reducing to 505 in 2012. There is a significant inequalities component to teenage pregnancy. 252 teenage deliveries took place in the 20 per cent most deprived areas and 29 in the least deprived areas. The Sexual Health Improvement Team recently consulted with a variety of young people on teenage pregnancy, the findings of which have contributed to the development of a new Teenage Pregnancy Action Plan. Figure 15 illustrates how NHS Ayrshire & Arran had a slightly lower teenage pregnancy rate than the Scottish average in 2013.

**Figure 15:** Teenage pregnancies by NHS Board of residence, 2013



Source: NRS registered births and stillbirths & Notifications (to the Chief Medical Officer for Scotland) of abortions performed under the Abortion Act 1967.

<16 yrs includes all pregnancies in women aged under 16. the rate is calculated using the female population aged 13-15.

<18 yrs includes all pregnancies in women aged under 18. the rate is calculated using the female population aged 15-17.

<20 yrs includes all pregnancies in women aged under 20. the rate is calculated using the female population aged 15-19.

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### Contraception

The sexual health improvement team actively promotes long acting reversible contraceptive (LARC), complementing the work of sexual health services and primary care. The number and rate per 1,000 women (15-49) of the contraceptive implant prescribed in primary care by NHS Ayrshire & Arran continues to increase. The prescription rate increased from 29.2 per 1,000 women (2013/14) to 31.1 per 1,000 women (2014/15). The CCard (NHS Ayrshire & Arran's free condom scheme) has been in operation since 2007 and during that time over a million condoms have been distributed to the public. Shayr.com, NHS Ayrshire & Arran's public facing sexual health website, provides a wealth of information on how to access sexual health services and also provides up to date information on all areas of sexual health. Access to [www.shayr.com](http://www.shayr.com) from local authority venues such as schools has improved and the site can now be accessed from all schools and local authority premises throughout Ayrshire and Arran. The site use continues to increase with 33,719 users visiting the site 49,048 times.

Community pharmacists within NHS Ayrshire & Arran continue to demonstrate commitment to developing their role in supporting good sexual health by providing Emergency Hormonal Contraceptive (EHC) where appropriate, to women aged 13 years and above. Community pharmacists have also been providing postal dual chlamydia and gonorrhoea testing kits to those at risk, providing treatment and signposting to services as required.

### Gay Men's service

NHS Ayrshire & Arran commission a dedicated gay men's service, providing one to one support, outreach support for men who frequent public sex environments, as well as internet outreach. This is a valuable service to prevent the spread of disease among men who have sex with men and who do not access specialist sexual health services. The service also provides free condoms by post to men who have sex with men.

### Lesbian, Gay, Bisexual & Transgender issues

NHS Ayrshire & Arran is committed to equality and diversity and achieved the Lesbian, Gay, Bisexual & Transgender (LGBT) Charter Foundation Award in February 2016. This Charter helps organisations meet their legislative obligations in the context of LGBT equality. By displaying the LGBT Charter of



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Rights it sends a positive message to LGBT people that they are included, valued, supported and will be treated fairly when they access services. The sexual health improvement team support the pan-Ayrshire multi-agency LGBT development group, which aims to improve the lives and experiences of LGBT people living, working or studying across Ayrshire. This is achieved by ensuring that Ayrshire has a more confident and skilled workforce who are better equipped to meet the needs of LGBT people.

### Key points and Recommendations

- teenage pregnancy rates in Ayrshire and Arran have reduced in recent years
- Public Health continues to work with partners to raise awareness of the risks of sexually transmitted infections with young people
- a new Teenage Pregnancy Action Plan is being implemented
- work is ongoing to reduce the stigma of those who identify as LGBT.

It is recommended that NHS Ayrshire & Arran further develops partnership working with the Local Authorities, Health and Social Care Partnerships, and the voluntary sector to build on achievements to date and aim for better sexual health outcomes for the people of Ayrshire and Arran.

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### Chapter 11 Public Health Screening Programmes

#### Introduction

The UK National Screening Committee defines screening as:

*“...a process of identifying apparently healthy people who may be at increased risk of a disease or condition. They can then be offered information, further tests and appropriate treatment to reduce their risk and/or any complications arising from the disease or condition.”*

#### Cancer screening

Cancer is most common in older people because advancing age is a major risk factor. As our older population continues to grow, there will be an increase in the incidence of cancer in Scotland. It is vital that cancer prevention work continues to prevent cancers from developing in the first place. Half of all cancers are preventable with changes to lifestyle including not smoking, reducing alcohol consumption, healthy eating, physical activity and avoiding exposure to carcinogens.

#### Inequalities and cancer

Late detection of cancer is much more of a problem among particular population groups, and there are vast health inequalities in cancer detection and survival. In Ayrshire and Arran, as well as across Scotland, the following inequalities exist:

- bowel screening uptake is low among men living in the most deprived areas (particularly working age men)
- women defaulting from cervical screening in Ayrshire and Arran are more likely to live in more deprived areas
- younger women who have received an abnormal smear are less likely to attend for follow-up than those in older age groups.
- Women living in deprived areas are less likely to respond to an invitation for breast screening and more likely to have breast cancer detected later.

The public health team uses a range of methods to engage with local communities and to help raise awareness of the importance of cancer screening among those with lowest uptake. Examples include promoting the bowel screening message to men at local football matches and the bookies offices, and to men and women through social clubs, local companies and other venues.

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### New developments in bowel screening

Two key developments in bowel screening during 2017 will be:

- the launch of the Faecal Immunochemical Test (FIT) test. This test only requires screening participants to provide one stool sample, compared to the three samples required with current FOB (Faecal Occult Blood) test. In pilot studies, the FIT test led to an increase in screening uptake of 5 per cent in absolute terms (almost 10 per cent in relative terms). The increased uptake was proportionately greater in areas of deprivation, where screening uptake is traditionally lower
- the launch of new bowel screening standards, which place an even greater emphasis on the quality of the colonoscopy service that is provided to those that are screen-positive. Quality of colonoscopy is critical to the overall effectiveness of the bowel screening programme.

### Changes to the cervical screening programme

There will be significant changes to eligibility for cervical screening from June 2016. All women in Scotland between the ages of 20 and 60 years are currently routinely invited for a cervical screening test every three years. From June 2016, the age-range of eligible women will change to 25-64 years plus 364 days. The frequency of cervical screening will continue to be every three years for women aged 25 to 50 years old, but will change to be every five years for women age 50 to 64 years plus 364 days. Any young woman (under 25 years) already in the screening programme will continue to be invited for screening on a three yearly basis regardless of age.



Since 2008, all 12-13 year old girls in Scotland have been offered routine vaccination against Human Papilloma Virus (HPV). The vaccine offers protection against the two types of HPV that cause 75 per cent of cases of cervical cancer. The HPV vaccine also protects against other types of HPV that cause about 90 per cent of genital wart cases. Women who have undergone HPV immunisation will still need to attend for cervical screening as these two interventions together will minimise the chance of cervical cancer developing.



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A decision is awaited from the Scottish Government on the plan to introduce HPV testing as the primary cervical screening tool. This will mean using different approaches to screen women depending on their HPV status. This change will most likely result in the concentration of cytology services in a smaller number of centres. The uncertain timescale for this decision is causing significant workforce challenges for the local programme.

### Developments in the breast screening programme

The breast screening programme is subject to ongoing developments and improvements. Since June 2015, all units have been equipped with digital mammography equipment. Nationally, there is ongoing development of the new IT system. In response to ongoing debate about the effectiveness of breast screening, a UK independent breast screening review was initiated in October 2011. This reported in October 2012. In response to its findings, a new leaflet was developed nationally in order to help women understand the potential benefits and risks of breast screening. The aim is to enable women to make a fully informed decision about participation.



Pressures resulting from a greater number of women eligible for screening, staff shortages, training and the introduction of digital screening units have impacted on the ability of the service to screen women timeously every three years. The service is addressing this through offering extended screening days and maximising appointment availability.

### Circulatory screening programmes

#### Abdominal Aortic Aneurysm Screening

Abdominal Aortic Aneurysm Screening (AAA screening) launched in Ayrshire and Arran in 2013. The programme offers a one-off ultrasound scan to all men after their 65th birthday in order to measure the size of the aorta (a critical blood vessel that comes down from the heart to deliver blood all around the body). In older men the aorta sometimes ‘balloons’ out into an aneurysm. Depending on its size, this increases the risk of rupture of the aorta, which carries a 50 per cent risk of death.

On screening, over 95 per cent of 65 year old men are expected to have a normal size aorta and will be discharged from the programme after one scan. The other men enter a programme of regular measurements of their aorta. If it increases beyond 5.4cm in diameter, the man will be referred to

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vascular surgery to be considered for treatment. The aims of the screening programme are to reduce the number of men that have an aortic rupture and to increase the proportion of aorta repairs that are carried out electively (in a planned way) against those carried out as emergencies.

The uptake rates for AAA screening in the first year of the programme in Ayrshire and Arran were over 86 per cent, which is well above the level that was initially expected. Up to June 2015 a total of 12 men had been referred to vascular surgery from screening, and 8 of these have had a surgical procedure carried out. The numbers of men detected with aneurysms and referred on to vascular surgery in Ayrshire and Arran have been much lower than was initially expected. This has also been the case across Scotland and is thought to be related to a decline in the overall occurrence of aneurysms, linked to the fall in smoking rates in the population over the last 20-30 years.

### Diabetic Retinopathy Screening

The Diabetic Retinopathy Screening (DRS) programme has been in operation in Ayrshire and Arran since 1st August 2006. Diabetes presents a serious health challenge for Ayrshire and Arran, with 22,231 people known to be diagnosed with diabetes as at the end of 2014. Diabetic retinopathy represents a serious risk for people with diabetes, and may lead to blindness if it remains undetected and untreated. The DRS programme offers annual digital retinal screening to all individuals diagnosed with diabetes who are over the age of 12 years. In Ayrshire, the programme is delivered through accredited community optometrists, allowing people to be screened closer to home and often by their own optometrist. Uptake has historically been very good, exceeding the national target of 80 per cent. In 2014/15 and 2015/16, uptake in Ayrshire and Arran dropped very slightly to 78.3 per cent and 78.9 per cent respectively, reflecting the national trend.

### Developments in Diabetic Retinopathy Screening

Further work is underway locally to examine population groups or areas with poorer uptake, and a targeted campaign will be planned accordingly. This campaign may be tied in with the anticipated national communication campaign regarding the expected change from annual to biennial screening for some low-risk patients. Other developments include the integration of a new screening technique (optical coherence tomography) into the screening pathway, which it is hoped will reduce the number of unnecessary referrals to ophthalmology. Work is underway to better match provision of screening locations with the need for screening.

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**Table 7:** Public Health Screening Programmes in Ayrshire and Arran (cancer and circulatory)

Screening Programme	Target population	Time frame	Uptake	Outcomes
<b>Cancer</b>				
Cervical screening	All eligible women in Ayrshire and Arran aged 20 to 60 years	2013-14	80.2 per cent uptake	15 cases of invasive carcinoma 486 referrals for colposcopy
Bowel screening	All adults in Ayrshire and Arran aged 50 to 74 years	1/11/12 to 31/10/14	57.5 per cent	2.2 per cent positivity rate; 96 people had screen detected colorectal cancers
Breast screening	All eligible women in Ayrshire and Arran aged 50 to 70 years. Women aged over 70 can self refer	2013-14	Women invited 18,638 Women who attended 13,756 (73.8 per cent)	118 Women referred for breast surgery. The cancer detection rate in 2014 was 8.6 cancers per 1000 women screened.
<b>Circulatory</b>				
Diabetic retinopathy screening	People over the age of 12 with diabetes	1/4/14 to 31/3/15	78.3 per cent	3.4 per cent of those screened require referral to an ophthalmologist, of which approximately one third do not require treatment.
Abdominal aortic aneurysm (AAA) screening	Offered to all men in their 65th year. Men over this age can self refer	1/6/13 to 31/04/2014	86.2 per cent	75 men under surveillance. 8 men have had surgical procedures carried out (up to June 2015).

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### Key points

- inequalities are evident in uptake of screening programmes. The Public Health Department strives to reduce such inequalities where possible
- screening programmes are constantly being developed and evaluated to ensure they are effective and evidence-informed.

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## Section four • Improving Health Services and Disease Prevention

The following four chapters relate to improving health services and disease prevention.

### Chapter 12 Oral health in children

#### Introduction

Good oral health is a key part of overall health and wellbeing. Dental Public Health seeks to place oral health improvement in a wider arena of health improvement by using the “common risk factor” approach. The key messages of limiting intake of sugar, as well as reducing tobacco and alcohol use, have broader health benefits too. There have been recent significant improvements in the oral health of children, but dental extraction still remains as a common reason for admission of a child to hospital. Dental decay causes pain and suffering, leading to loss of sleep and time off school.

#### Policy context

The *Scottish Dental Action Plan (2005)* provided significant investment and initiated the Childsmile Programme. Locally, NHS Ayrshire & Arran has an Oral Health Strategy (2013-23) and action plan, which include activities for children. The recently published *Outcomes Framework from Scottish Government (2016)* gives new targets for oral health. Other legislation, such as the *Children and Young People’s Act, Scotland (2014)* will impact on activity. Dental decay can become established at an early age, and may be used as an indicator of “concern”. There have been several pilots within NHS Ayrshire & Arran dental services looking at this issue.

#### Activities

The main oral health improvement activities for children are delivered through the Childsmile Programme (nationally directed) and the Oral Health Promotion (OHP) team, whose activity is determined locally by the Oral Health Strategy. The Childsmile Programme is evaluated nationally and has several components:

- The Core Programme
  - every child provided with dental pack containing toothbrush and fluoride toothpaste
  - every three and four year old child attending nursery offered free, daily, supervised tooth brushing
  - supervised tooth brushing also offered to Primary 1 and Primary 2 children in targeted schools

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- Childsmile School and Nursery Programme
  - children in the most deprived areas are offered biannual fluoride varnish application at primary school and nursery
- Childsmile Practice Programme
  - Health Visitor reinforces key oral health messages, including the benefit of child registration at a local dentist
  - for the most vulnerable families, a Dental Health Support Worker provides home support, preventive advice and assistance in attending dentist.

The OHP Team delivers school-based programmes for older children in primary and secondary schools, including “Search for a Smile” and “Gleam – Embrace!”. The team has won several awards for their innovative approach.

The Childsmile and OHP Teams are based with the Public Dental Services in East Ayrshire Health and Social Care Partnership (HSCP), the Lead Partnership for Primary Care, and they maintain their links with Public Health through the Consultant in Dental Public Health. Targets for oral health improvement in Primary one children are included in the HSCP and Community Planning Partnership plans. The National Dental Inspection Programme collects information on Primary one and Primary seven children on alternate years and gives data for the whole of Ayrshire and Arran, as well as East, North and South Ayrshire separately.

The detailed inspections on random samples of Primary one and Primary seven children provide estimates of the prevalence and burden of dental decay in the population. The oral health of children in Primary one indicates the effectiveness of pre-school preventive programmes including home care, diet, parenting, Childsmile interventions and uptake of dental services.

Table 8 shows that all areas in Ayrshire and Arran now exceed the national standard of 60 per cent of children in P1 with no obvious decay experience. However, the new target to achieve 76 per cent free from decay by 2022 will be a challenge.

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**Table 8** Percentage of children in Primary 1 with no obvious decay

Location	Year					
	2004	2006	2008	2010	2012	2014
Scotland	50.7	54.1	57.7	64.0	67.0	68.2
East Ayrshire	-	45.8	61.4	64.1	69.2	63.9
North Ayrshire	-	44.5	60.2	56.4	62.8	68.4
South Ayrshire	-	62.0	79.3	68.8	64.1	66.8
Ayrshire and Arran	53.3	50.9	63.1	62.7	65.5	66.3

Source: <http://www.isdscotland.org/Health-Topics/Dental-Care/Publications/2014-10-28/2014-10-28-NDIP-Report.pdf>

Table 9 indicates that while the majority of children in Primary one had no obvious decay, for those children with obvious decay experience, the level of decay experience could be high.

**Table 9** Obvious decay experience in Primary 1 children in 2014, by area

Location	per cent of children with no obvious decay	Mean number of teeth with obvious decay	
		Primary 1 children whole population	Primary 1 children with obvious decay
East Ayrshire	63.9	1.4	4.0
North Ayrshire	68.4	1.1	3.6
South Ayrshire	66.8	1.4	3.7

Source: <http://www.isdscotland.org/Health-Topics/Dental-Care/Publications/2014-10-28/2014-10-28-NDIP-Report.pdf>

Data are available for the prevalence of no obvious decay in Primary seven children (Table 10) and for the burden of disease (Table 11). Again, there is a new and challenging target to achieve 90 per cent free from decay by 2022.

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**Table 10** Percentage of children in Primary 7 with no obvious decay

Location	Year					
	2005	2007	2009	2011	2013	2015
Scotland	52.9	59.1	63.6	69.3	72.8	75.3
East Ayrshire	56.4	63.9	69.9	77.6	81.0	75.4
North Ayrshire	48.0	61.7	67.7	69.7	77.4	81.4
South Ayrshire	59.3	65.2	72.4	82.0	84.2	82.5
Ayrshire and Arran	54.0	63.5	70.4	76.3	80.2	80.0

Source: <http://isdscotland.org/Health-Topics/Dental-Care/Publications/2015-10-27/2015-10-27-NDIP-Report.pdf>

**Table 11** Obvious decay experience in Primary 7 children in 2015, by area

Location	per cent of children with no obvious decay	Mean number of teeth with obvious decay	
		Primary 7 children whole population	Primary 7 children with obvious decay
East Ayrshire	75.4	0.5	2.1
North Ayrshire	81.4	0.4	2.0
South Ayrshire	82.5	0.3	1.9

Source: <http://isdscotland.org/Health-Topics/Dental-Care/Publications/2015-10-27/2015-10-27-NDIP-Report.pdf>

While there have been significant improvements in children's oral health, these appear to be slowing. Current oral health activity may have reached the limit of what it can achieve and additional measures will be required to achieve further improvements. There is evidence at a national level that there have been reductions in oral health inequalities, but data are not available locally. Targeted activities will be required to address the continuing oral health disparities.



### Key points and Recommendations

- good oral health is of key importance to overall general health
- oral health improvement programmes have been shown to reduce inequalities in oral health
- there have been significant improvements in the oral health of children over recent years, but there are still challenges remaining for a “hard-to-reach” group of children
- the previous rapid progress shown has slowed and additional targeted activities are now needed to address the continuing oral health disparities.
- actions focussed on improving oral health should continue in order to maintain the achievements so far, with additional activities targeted at those in hard-to-reach groups in order to make further improvements

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### Chapter 13 Reducing Hospital Admissions in Children

A rapid needs assessment aimed to identify the key actions required to reduce serious adverse events from taking place in childhood. This chapter gives a brief summary of the findings relating to avoidable admissions - a full report, with full referencing is available on request.

The objectives were to:

- Quantify avoidable admissions
- Identify models of care (1): review of systematic reviews on models of care for preventing/avoiding/reducing hospital admissions

#### Quantifying Avoidable Admissions

There were 10,434 admissions of children and young people resident in Ayrshire and Arran to hospital in 2013/14. 62 per cent of these admissions were for periods of less than 12 hours, reflecting good practice in observing children. Socioeconomic deprivation and young age of the child were the main drivers of admission rates.

The primary analysis of avoidable emergency admissions to hospital focused on Ambulatory Care Sensitive Conditions (ACSC) as identified by Purdy et al (2009)<sup>1</sup> based on ACSC coding used in NHS England and a review of international literature on ACSCs.

Table 12 shows that 41.4 per cent of emergency conditions were amenable to management in primary or ambulatory care. The five most common groups of ACSC admissions were: ENT, dehydration or gastrointestinal conditions, asthma, constipation and dyspepsia.

**Table 12:** All child emergency admissions and ACSC admissions for NHS Ayrshire & Arran residents aged 0-19, attending hospital in 2013/14 (source SMR01).

	All emergency admissions	ACSC admissions
Number of admissions	6838	2834
Percentage of emergency admissions	100 per cent	41.4 per cent
Number of patients	5113	2236
Number of bed days	9487	3363
Percentage of admissions with 0 bed days	51.6 per cent	54 per cent

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Table 13 shows that children admitted for ear, nose and throat problems were the most common of the ACSC conditions, closely followed by dehydration and gastro-intestinal conditions.

**Table 13:** Most common ACSC diagnoses for children and young people

	Number of admissions with these diagnoses	per cent ACSC admissions	Number of admissions with this in primary position	per cent of all emergency admissions
ENT	767	27	660	11
Dehydration and Gastrointestinal	699	25	575	10
Asthma	394	14	170	6
Constipation	198	7	123	3
Dyspepsia & perforated ulcer	187	7	120	3

### Reducing the most common causes for emergency department attendance

- Ear, nose and throat

Interventions with evidence of effectiveness included pneumococcal immunisation <sup>2,3</sup>. In addition, senior medical specialist review in the emergency room <sup>4</sup>, as well as the use of short stay observation arrangements were of value.



- Dehydration and Gastroenteritis

Rotavirus vaccine has contributed to a significant reduction in the incidence of rotavirus gastroenteritis and the significant reduction in emergency hospital admissions <sup>5,6,7</sup>. (This was introduced as a national immunisation programme for all babies in Scotland born after 1st May 2013). Breastfeeding was shown to significantly reduce hospital admissions from gastrointestinal and respiratory infections in infants aged under one year. Antiemetics are useful in the emergency department to reduce vomiting, allow oral rehydration as opposed to intravenous rehydration and reduce avoidable admissions. There is no evidence that education programmes or primary care follow-up soon after emergency department visits for gastroenteritis are associated with a lower rate of subsequent visits <sup>8</sup>.

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- Asthma

Well-designed asthma education programmes that foster continuity, target socio-economically deprived parents and children and enhance self-management and the management of an exacerbation may reduce the need for hospital care <sup>9</sup>. Continuity of care, smoke free homes and cars, early identification of allergies and not being overweight are all important in reducing avoidable admissions in children with asthma <sup>10, 11</sup>.

- Constipation and Dyspepsia

Hospital use may be avoidable if primary care interventions are offered early and thereafter maintained. These include dietary interventions, laxative therapy, cow's-milk-free diet, probiotic yogurt, water intake, lifestyle modifications, not being overweight and increased physical activity. All of these increased the likelihood of constipation being managed in the community <sup>12,13,14</sup>. There was little literature relating to dyspepsia. Several studies found that the identification and eradication of *Helicobacter pylori* in children presenting with non-ulcer dyspepsia demonstrated long term improvements <sup>15</sup>.

### Key points

- 41.4 per cent of emergency conditions were amenable to management in primary or ambulatory care
- socioeconomic deprivation was a significant driver of the rate Ambulatory Care Sensitive Conditions
- the five most common groups of ACSC admissions were ENT, dehydration or gastrointestinal conditions, asthma, constipation and dyspepsia
- interventions with evidence of effectiveness to reduce ENT admissions include pneumococcal immunisation and senior medical specialist review in the emergency room
- rotavirus vaccine has contributed to a significant reduction in the incidence of rotavirus gastroenteritis and the significant reduction in emergency hospital admissions
- well-designed asthma education programmes that foster continuity, target socio-economically deprived parents and children and enhance self-management and the management of an exacerbation may reduce the need for hospital care
- hospital use for constipation may be avoidable if primary care interventions are offered early and thereafter maintained; these include dietary interventions, laxative therapy, and lifestyle changes etc.

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### Chapter 14 Reducing Hospital Admissions in Adults

A rapid Joint Strategic Needs Assessment was carried out by the Public Health Department in 2014. The aim was to support East, North and South Ayrshire Health and Social Care Partnerships with evidence based information that had the potential to reduce emergency hospital admissions. The objectives were to:

- Quantify avoidable admissions
- Identify models of care <sup>(1)</sup>: review of systematic reviews on models of care for preventing/avoiding/reducing hospital admissions
- Identify models of care <sup>(2)</sup>: focused literature search for condition-specific admission-avoidance models of care for top five Ambulatory Care Sensitive Condition (ACSC) diagnoses.

#### Quantifying Avoidable Hospital Admissions

The primary analysis of avoidable emergency admissions to hospital focused on Ambulatory Care Sensitive Conditions (ACSC) as identified by Purdy et al (2009)<sup>1</sup> based on ACSC coding used in NHS England and a review of international literature on ACSCs. This definition incorporates 36 categories of conditions for which admission could be avoided by interventions in primary, community or social care.

**Table 14:** Top five ACSC categories (1st position), number of emergency admissions in Ayrshire and Arran residents during 2013/14, of all ages\*

	Frequency	Percentage of all emergency admissions	Percentage of all ACSCs
Angina	4,174	8.6 per cent	24 per cent
Urinary Tract Infection (UTI)/pyelonephritis	1,759	3.6 per cent	10 per cent
Chronic Obstructive Pulmonary Disease (COPD)	1,652	3.4 per cent	9 per cent
Dehydration / gastroenteritis	1,295	3.0 per cent	7 per cent
Influenza/pneumonia	1,092	2.3 per cent	6 per cent

\*frequency of top five ACSC differed in children and young people (<19 years)

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### Summary of the Evidence for models of care to prevent avoidable hospital admissions

There is evidence that a number of interventions are successful in reducing avoidable admissions, including:

- interventions at Accident and Emergency: review by senior clinician and GP-led assessment units for urgent referrals from community GPs <sup>2,3</sup>
- integrated clinical care programmes for heart failure, chronic obstructive pulmonary disease (COPD), asthma and diabetes, and exercise-based rehabilitation for coronary heart disease (CHD) and COPD <sup>4</sup>,
- case management for heart failure <sup>5</sup>,
- home visits (plus telephone support) for heart failure patients; pregnant women with hypertension and/or diabetes, and inpatients with mental health conditions <sup>5</sup>,
- self-management, including practitioner review, in asthma and COPD patients <sup>5,6</sup>,
- specialist clinics for heart failure patients <sup>5,6</sup>,
- assertive community treatment for patients with mental health conditions<sup>7</sup>,
- Managed Clinical Networks (MCN) in patients with angina and diabetes; and
- tele-related health care in older people and in people with heart failure, CHD, hypertension and diabetes <sup>8</sup>.



The evidence to date is inconclusive with respect to two models of care which are relevant to HSCPs. Evidence on the impact of hospital at home and horizontal integrated care on emergency admissions is emergent, complex and as yet inconclusive:

- a Cochrane review of admission avoidance hospital at home found a non significant increase in admissions compared to inpatient hospital care. Systematic reviews have found that, for specific patients and particular conditions, hospital at home has varying degrees of success in reducing admissions or readmissions. However, hospital at home may be achieving other important patient outcomes <sup>9</sup>
- a comprehensive evaluation of 16 heterogeneous pilots of health and social care integration initiatives in England did not provide evidence that



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horizontal integration reduces emergency admissions. It may not have been realistic to expect such outcomes to emerge in the short term<sup>10</sup>.

The literature review highlighted several key points for consideration in developing models of care locally. These include:

### Key points

- more than 70 per cent of avoidable admissions are significantly associated with measures of deprivation, so interventions must reflect this
- as most avoidable admissions are due to a range of factors, no single model or intervention will be effective in reducing admission rates, therefore a whole-systems approach will be required
- there is a clear need to develop robust evaluation, both local and national if possible, when introducing any new models of care without a robust evidence base.

A full list of interventions, including those that were not shown to affect admissions and those as yet unproven, is available in the full report – this can be obtained by contacting the chapter author

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### Chapter 15 Greening the NHS Ayrshire & Arran Estate

#### The Contribution of Greenspace and Natural Environments to Public Health and Wellbeing

There is growing evidence demonstrating the positive relationship between quality, accessible greenspace and mental and physical health and wellbeing; although the mechanisms by which these benefits occur are not yet fully understood.<sup>1</sup>

People of all ages who use green spaces regularly are more likely to be physically active; and urban dwellers who use outdoor spaces such as woodland for physical activity have a lower risk of poor mental health than those who exercise in the gym or the streets.<sup>2</sup> Studies consistently show a positive relationship between levels of stress and increasing time spent in outdoor green spaces, regardless of age, gender and socioeconomic status.<sup>3</sup> This is likely to result from the individual or combined restorative effects of outdoor activity and exercise; natural daylight, stimulation of the senses and the aesthetic experience. There is some evidence to suggest that greenspace can also contribute to reducing health inequalities, with studies in Scotland demonstrating a link between men living in deprived urban areas with higher amounts of local greenspace and lower risk of mortality.<sup>4</sup> A number of studies have demonstrated positive clinical outcomes resulting from contact with the natural environment which include: lowered heart rate and blood pressure; reduced experience of pain; and improved post-operative recovery.<sup>5</sup>

Social interaction and wellbeing is consistently reported as a significant outcome which can be gained from using greenspace. However, opportunities for quiet contemplation and for some, the spiritual dimension of connecting with the outdoors, are also key. Greenspaces are seen as one of the few remaining neutral spaces that are available to all and tend to be highly valued by communities.<sup>1</sup> Greenspace creation also has a positive impact on other aspects of the physical environment linked to climate change such as reducing flooding, air pollution and global warming which, in turn, have an impact on population health.

#### Strategic/ Policy Context

A strong, cross-sectoral policy framework is emerging which now sees the links between greenspace and health recognised in health and environment as well as transport, planning and education policy. Examples include Good Places, Better Health (2008), and the Scottish Biodiversity Strategy (2013). Greening the NHS Estate also fits with the Scottish Government's 2020 Vision by helping to better focus the healthcare system on upstream prevention.

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In 2007 the Green Exercise Partnership (GEP), a joint venture between Forestry Commission Scotland, Scottish Natural Heritage and NHS Health Scotland, was formed. A key objective of this work was to support NHS Boards to make better use of their outdoor estate as a resource for health and wellbeing.

### Greening the NHS Ayrshire & Arran Estate

NHS Ayrshire & Arran has been working in partnership with the GEP since 2011. A Public Health led joint strategic review of the NHS Ayrshire & Arran estate was carried out. A total of 86 sites were assessed against criteria including: size; potential for improving health and wellbeing and enhancing biodiversity; how accessible, connected, attractive and appealing they were; and opportunities to involve communities. Seven sites were prioritised for possible future development and Landscape Assessment and Development Reports were prepared to inform action. These sites are:

- University Hospital Ayr/Ailsa
- Ayrshire Central Hospital/ Woodland View
- University Hospital Crosshouse
- Girvan Community Hospital
- Arrol Park Resource Centre
- Biggart Hospital
- Arran War Memorial Hospital

### National Demonstration Project- University Hospital Ayr/ Ailsa

A GEP National Demonstration project was established at University Hospital Ayr and Ailsa in South Ayrshire to showcase the health and wellbeing benefits that can be gained from positive investment in and management of the NHS estate. Funding was secured from Scottish Government, GEP (Forestry Commission Scotland), NHS Endowments and Sustrans Scotland to develop a landscape master plan and carry out improvement works.

The project has brought neglected woodland back into sustainable management and given the extensive area of woodland, meadow and grassland (approximately 28 hectares) a clear purpose as a health improvement asset for patients, staff, visitors and the local community. Approximately 3.6 km of new paths network has been created in the hospital grounds including: 1km of a new Sustrans cycle route which will ultimately connect to the A77; and a network of woodland walks. These are supported

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by new signage and interpretation. In addition, approximately 2,500 new trees have been planted and 26 new seats and perches have been installed, all in native green oak. A new teaching circle has also been created in one of the meadow areas.

The new network of paths and greenspace developments were officially opened by the Chairman of the NHS Board on 5 October 2015. Footfall counters are beginning to show an increase in the volume of people using the new paths. Staff report that they are using the grounds for walking and relaxation and they are reporting mental health benefits from taking time away from busy wards to 'de-stress and unwind'. Some staff also report using the paths for 'walk and talk' meetings with colleagues. Patients have commented that they find the paths and the spaces 'peaceful and therapeutic'. In addition to benefits to public health, infrastructure improvements are supporting the NHS Board to meet its corporate objectives relating to climate change, biodiversity, sustainability and good corporate citizenship.

Work is now required to promote engagement with, and use of, the outdoor space. Funding has been secured for a Greenspace for Health Senior Project Officer who will liaise with patients, clinicians, staff and wider community groups to support and enable green exercise, recovery programmes and outdoor learning on site. The Conservation Volunteers (TCV) have been commissioned to deliver this project.

### **Mainstreaming Beyond the Demonstration Site**

The demonstration site has acted as a catalyst for greening projects at other sites prioritised in the strategic review. At Ayrshire Central Hospital/Woodland View in North Ayrshire, there was an opportunity to consider how we use and adapt the greenspace infrastructure for health and wellbeing whilst the new hospital was being built. Further joint working with, and grant funding from, Sustrans Scotland has led to the upgrade of a footpath linking Woodland View and the neighbouring community of Castlepark to dual use pedestrian/ cycle path status. Work is also progressing with North Ayrshire Council to create an active travel hub on site. This will complement the existing paths infrastructure being implemented within the hospital grounds as part of the new build developments. A woodland management plan and access proposals have also been produced to inform the development of a significant section of the existing woodland on site and the creation of woodland walks and useable green spaces. Proposals are also being developed to improve and develop the more limited greenspace at University Hospital Crosshouse in East Ayrshire.

### Key Points

- much has been achieved in bringing together the health and environment sectors in this programme and we are beginning to reap the benefits of NHS greenspace as an asset and an opportunity for upstream prevention rather than an underutilised, unmanageable liability
- we have benefited greatly from partnership funding to unlock the potential of the estate; and greenspace development is being integrated into NHS policy and strategy and is influencing operational practice. However, incorporating and funding this work as a core element of estate management remains challenging given the current service pressures
- there is some way to go to mainstream the use of the outdoor estate as a key element of prevention, treatment, care and recovery. It is recognised that this will take time and will only be achieved through continued partnership working, longer term planning and enhanced engagement and ownership of patients, visitors, staff and the wider community.

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The following are: an extract from the woodland walk leaflet showing the paths infrastructure at University Hospital Ayr and Ailsa; a few before and after shots from the site; and a photograph of our newly completed teaching space.

### Woodland Walks and Greenspace Infrastructure University Hospital Ayr/ Ailsa



Evergreen Way Pre Development



Evergreen Way Completed

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Woodland Wynd Before



Woodland Wynd After



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## Glossary

AAA	Abdominal Aortic Aneurysm
ACSC	Ambulatory Care Sensitive Conditions
AHEAD	Ayrshire Asset Development
A&E	Accident & Emergency
BBV	Blood Borne Virus
CB	Community Builders
CHD	Coronary Heart Disease
COPD	Chronic Obstruction Pulmonary Disease
CPPs	Community Planning Partnerships
DPH	Director of Public Health
DRS	Diabetic Retinopathy Screening
DWP	Department of Work and Pensions
ED	Emergency Department
FIT	Faecal Immunochemical test
FOB	Faecal Occult Blood
GDC	General Dental Council
GEP	Green Exercise Partnership
HIV	Human Immunodeficiency Virus
HPS	Health Protection Scotland
HPT	Health Protection Team
HPV	Human Papilloma Virus
H&SCPs	Health and Social Care Partnerships
IMT	Incident Management Team
IT	Information Technology
LARC	Long acting reversible contraception
LGBT	Lesbian, Gay, Bisexual and Transgender
MCN	Managed Clinical Network
OHP	Oral Health Promotion
PPF	Patient, Public Forum
UK	United Kingdom
UTI	Urinary Tract Infection

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