The Health Sector in Scotland

A Labour Market Intelligence Report
January 2014

Better **skills** | Better **jobs** | Better **health**

Contents

List of tables

List of charts

List of figures

1. Executive summary

This report provides an overview of the current and potential future skills needs of Scotland's health sector. In developing this overview, Skills for Health, the Sector Skills Council for Health, have brought together a broad range of intelligence. Much of this intelligence is drawn from the health sector itself. However, in order to provide fresh ways of looking at the challenges confronting the sector, we have drawn extensively from sources that those working in it might be less familiar with. These include a range of national statistics from the ONS, econometric projections of possible workforce demand, skills surveys and population statistics. We have also introduced projections of possible risks to wellbeing, based on consumer habits of Scotland's population.

It is our hope that this report will be of interest to those working in workforce planning and training and development in the health sector. We also believe that policy makers will find its content of interest, as well as clinicians and those supporting the sector in a wide variety of ways.

It is clear that the sector is confronted with a wide range of challenges. Whilst Scotland's health sector shares many of these challenges with countries throughout the West, it has some unique characteristics of its own.

In terms of demand for healthcare, the sector is facing increasing pressures and demands for services that are brought about by the changing demographics of the population. The population in Scotland is ageing and this issue is currently more acute than elsewhere in the UK. As a consequence, the challenge of helping individuals living with long-term conditions and co-morbidities is greater. Social changes, including the increase in single person households, will also have a profound impact on how people might be cared for, particularly the availability of informal or unpaid carers.

Scotland's contrasting geographies, with densely populated urban areas and very sparsely populated rural areas, present interesting challenges for the sector. Some Territorial Health Boards are experiencing difficulties filling vacancies, with some reporting a significant number of long-term vacancies. This may result in two systems of healthcare, with the urban response being quite different to that found in the rural context. Undoubtedly the continued rollout of technology, particularly in remote areas, could help transform services for the patient and the sector.

There are an estimated 183,000 people working in the Scottish health sector, accounting for 7% of all people working in Scotland. The NHS is the largest employer in the sector, accounting for around 80% of health sector employment.

In terms of meeting these increasing and diverse demands, Scotland's health sector has some important demographic differences to the rest of the economy. It has an older age profile, which may be due to the need for a highly skilled workforce required to have attended higher education. The sector will also need to be alert to occupational groups which have large numbers of people approaching retirement.

It is also a highly feminised sector. 79% of the workforce is female, as opposed to 45% in the whole economy. With this, the sector will need to be ever mindful of the need to effectively manage careers of individuals that may need to take career breaks, or require flexible working practices. In the medium term, the ability of the sector to effectively succession plan in order to avoid a substantial skills and knowledge deficit will become increasingly important as existing workers retire.

In many respects, there is a positive story to tell around the level of skills in the sector. Employees are highly qualified, particularly in comparison to many other sectors of Scotland's economy. Professional occupations (which include doctors, dentists, nurses, therapists, midwives and dental technicians) make up 53% of the health sector. Almost 70% of those working in the health sector are qualified to level 4 or above, in comparison to 44% in Scotland's economy. The sector is therefore making an important contribution to Scotland's overall level of skills.

Health sector employers also place a great deal of importance on training and development as well as qualifications. These are valued as they are intrinsically linked to service quality, patient safety and regulation.

But employers do report skills gaps. According to latest available surveys, employers in Scotland estimate that 6% of the health sector workforce is not fully proficient in their role. Many gaps identified relate to generic skills such as team working, communication, customer service skills and problem solving, all of which are used across a wide range of occupations. It would be wrong to dismiss such skills gaps as 'soft' and not requiring attention. Indeed, the very nature of such skills is that they will flex and change as the demands on the sector shift. Importantly, ongoing and focused attention addressing these generic skills gaps could have a positive impact on the quality of health services and the patient experience, particularly with the ever increasing need to work across professional boundaries and more joint working between health and social care.

The reliance on government funding is shared with many countries in the OECD. Since 2008, the rate of increase in health sector funding has slowed and, since the economic crisis, there has been increased focus on making better use of resources. Early indications are that the sector has experienced some reduction in overall employment levels. However, this contraction, particularly in the public sector, has not yet reached the levels that many feared or projected.

This report highlights the need for those working in the sector to continue to develop the workforce. Demand for healthcare is changing, and the skills needed by those in the sector and how they work will also need to adapt. Those working in the sector should use this report to ask some important questions; for example, what will the sector look like going forward? What types of skills might we need? How do we train and develop individuals to meet this demand? Many of these questions are taken up in our second report, which explores how the drivers for change in the sector may shape services and skills needs in the future.

2. Introduction

2.1 Purpose of the report

The aim of this report is to provide comprehensive labour market intelligence (LMI) for the health sector in Scotland. The report, commissioned by the Scottish Government, aims to provide intelligence at a broad level utilising national data sets.

Where possible, comparisons are made between Scotland and the UK health sectors, and between the health sector and the whole economy in Scotland. Furthermore, where data is available and it enriches the intelligence, information is presented at a Territorial Health Board level.

2.2 Defining the sector

When using cross-sectoral/whole economy data sets, the health sector has been technically defined using the 2007 Standard Industrial Classification (SIC) code of '86 – 'Human Health Activities'. This technical definition includes all hospital, medical nursing home, general and specialist medical practice and dental practice activities, as well as other human health activities.

Cross-sectoral data sets also allow us to separate the health sector into public and private sub-sectors. This is particularly important in terms of understanding the subtle differences between the different parts of the sector, and when making comparisons with other parts of the economy.

The sector is dominated by employees in the public sector; however, there are a significant number of employees working in the private sector, and the business models of these employers, as well as their current and future skills issues, may be very different.

2.3 Sector Skills Councils

Skills for Health is the Sector Skills Council (SSC) for the health sector. We are an independent, employer-led, UK-wide organisation working in partnership with others to increase employer investment in skills.

This report has been developed by the Research and Labour Market Intelligence team within Skills for Health. The SSC is engaged in an active research and labour market intelligence programme. The outputs of these activities can be found at www.skillsforhealth.org.uk.

2.4 Summary of methodology

This report draws upon a range of data sources, many of which are UK-wide and some of which are specific to Scotland. The use of national data sources in this way ensures that the data we present is robust and based upon sufficient sample sizes for patterns to emerge and conclusions to be drawn.

The data sources that have been used in this report are listed in more detail in appendix 1.

3. The Scottish health sector

3.5 Policy context

Health is a devolved function within Scotland; this means that the Scottish Government have full legislative and decision-making powers in respect of health policy across Scotland.

The National Health Service (NHSScotland) is therefore structurally different to other parts of the UK. There are also differences in relation to the interaction between health and social care in Scotland in comparison to other parts of the UK.

The health sector in Scotland is dominated by the NHS. Although there are a large number of independent and voluntary health sector organisations, the majority of traditional health activity is conducted through NHSScotland, and the large majority of the health sector workforce in Scotland is employed in the public sector.

NHSScotland consists of fourteen Territorial Health Boards, seven Special NHS Boards and one public health body. Each Territorial Health Board is accountable to Scottish Ministers, supported by the Scottish Government Health and Social Care Directorates.

Territorial Health Boards are responsible for the protection and the improvement of their population's health, and for the delivery of frontline healthcare services. Importantly, Territorial Health Boards both plan and deliver services for and to their populations.

Special NHS Boards support the Territorial Health Boards by providing a range of important specialist and national services.

All Territorial Health Boards work together for the benefit of the people of Scotland. They also work closely with partners in other parts of the public sector to fulfil the Scottish Government's Purpose and National Outcomes. Collectively, the 14 NHS Boards are responsible for around 70% of the total £11.6bn health budget (2012-13[1]). All 14 Territorial Health boards can be seen in Figure 1.

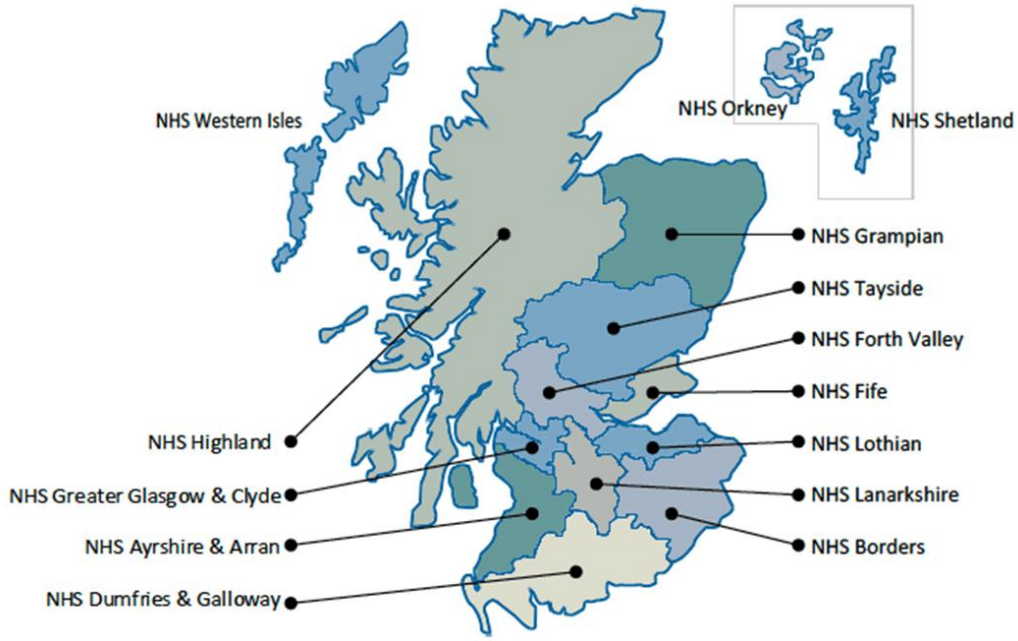
The Scottish health sector is characterised by a strong emphasis on collaboration and partnership. This collaboration is seen between Territorial Health Boards and other agencies such as social care. It is a matter of policy to make much less use of the independent sector to deliver NHS activity.

[1] Source: Scottish Government, Scottish Draft Budget 2013-14
http://www.scotland.gov.uk/Publications/2012/09/7829/5

The proportion of the NHS budget spent in the independent sector in Scotland is 1%, significantly less than in England (5%)[2].

Figure 1 shows the geographic areas of each Territorial Health Board.

Figure 1: Scotland's Territorial Health Boards



There are some significant overarching policies within Scotland that highlight the drive to deliver, and continue to improve, the quality of healthcare in NHSScotland. The policies below continue the theme of collaborative working in NHSScotland to enhance the delivery of quality healthcare services and improve the health of Scotland.

Quality Healthcare

The Healthcare Quality Strategy for Scotland was launched by the Cabinet Secretary for Health, Wellbeing and Cities in May 2010. This provides the basis for people who deliver healthcare services in Scotland to work with partners and the public towards achieving the three quality ambitions and shared vision of world-leading safe, effective and person-centred healthcare across Scotland.

This vision and the focus on quality healthcare is the context for all strategic and operational decision-making across NHSScotland.

[2] Source: Timmins, (2013) The four UK health systems: Learning from each other, Kings Fund, London

2020 Vision for NHSScotland

Since the launch of the Quality Strategy, the Scottish Government announced its ambitious plan for integrated health and social care and set out the 2020 Vision and Strategic Narrative for achieving sustainable quality in the delivery of health and social care across Scotland.

The 2020 Vision and Strategic Narrative describe the challenges for health and social care for the future, and provide a commonly agreed narrative about the direction we are working towards. The Quality Strategy provides the approach and the actions required to improve both quality and efficiency in order to achieve financial sustainability.

Everyone involved in the delivery of healthcare in Scotland is now asked to play a part in turning the vision into a reality.

Performance management in NHSScotland

Each year, the Scottish Government sets performance targets for NHS Boards to ensure that the resources made available to them are directed to priority areas for improvement and are consistent with the Scottish Government's Purpose and National Outcomes. These targets are focused on Health Improvement, Efficiency, Access and Treatment, and are known collectively as HEAT targets. Once a HEAT target has been achieved, it becomes a 'HEAT Standard' and Boards are expected to maintain it.

NHSScotland works closely with partners in local authorities and the third sector. The Quality Strategy provides a basis for NHSScotland to work with partners, through Community Planning Partnerships, to secure progress towards the three quality ambitions, and the outcomes agreed locally and nationally through the Single Outcome Agreements and the National Performance Framework.

3.6 A recent overview of NHSScotland's achievements

NHSScotland's Chief Executive's Annual Report 20011/12 highlights the many recent achievements of the NHS in Scotland[3]. The report notes:

> "Significant progress has been made in recent years through impressive improvements in waiting times for access to high quality healthcare services and treatments. We have a world-leading patient safety programme which is making a real difference to standards of care and to hospital mortality. We have made substantial progress on issues as varied as access to GPs and dentistry, support for people with long term conditions, and outcomes for cancer, stroke and heart disease. We are producing improved outcomes for people in terms of reduced need for hospitalisation, shorter stays, faster recovery and longer life expectancy."

HEAT targets that have been achieved by NHSScotland in recent years include:

- Delivery of the 18-week referral to treatment waiting time target
- Delivery of cancer waiting times targets, including the reduction of time between decision to treat and treatment to 31 days
- 24% reduction in Clostridium Difficile and a 10%reduction in MRSA/MSSA in 2011/12
- Reduction in deaths from cancer, stroke and Coronary Heart Disease (CHD) since 2007 by 5%, 24% and 20%respectively
- Over £1 billion of efficiency savings that have been reinvested in the NHS in Scotland between 2008/9 and 2011/12

The report highlights one of the most significant achievements across Scotland: the fall in premature mortality in the past 20 years. Premature mortality is a key indicator of the general health of the population. It measures the death rates of those under 75, and over the past 20 years levels have fallen by over a third.

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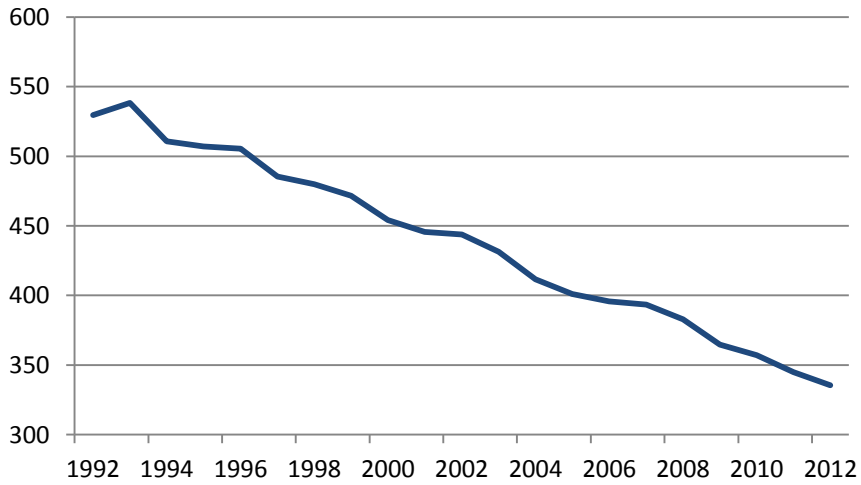
[3] Source: Scotland Performs website
http://www.scotland.gov.uk/About/Performance/scotPerforms/partnerstories/NHSScotlandperformance

NHSScotland Chief Executive's Annual Report 2011/12
http://www.scotland.gov.uk/Resource/0040/00408794.pdf

Chart 1: Premature mortality 1992-2012 (rate of death per 100,000 people aged under 75)



Source: National Records of Scotland: Under 75 Age Standardised Death Rates http://www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/age-standardised-rates.html

In addition to the improvements set out in the 2011/12 Annual Report, there are a range of health indicators that support the conclusion that the work of NHSScotland and the wider health sector is helping to improve the general health of the Scottish population.

Table 1 shows life expectancy for each UK nation. We can see that life expectancy for males and females is highest in England and lowest in Scotland. All nations of the UK have increased life expectancy in recent years, with Scotland making greater absolute gains than Wales and Northern Ireland for both females and males. For the latter, the rate of change has been better than both Wales and Northern Ireland and on a par with England; for the former, the rate of change has been greater than Wales and Northern Ireland but slightly lower than the rate of change achieved in England.

The data therefore clearly demonstrates that life expectancy within Scotland is beginning to catch up with other parts of the UK. The challenge for all agencies within Scotland is to maintain or improve the pace of change.

Table 1: Life expectancy in each UK nation, 2003-05 to 2007-09

		2004-06	2005-07	2006-08	2007-09	2008-10	2004-06 to 2008-10	
							Absolute change (in years)	% change
Males								
UK		77.0	77.3	77.5	77.9	78.2	+1.2	+1.6%
	England	77.3	77.6	77.9	78.3	78.6	+1.3	+1.6%
	Wales	76.6	76.8	77.0	77.2	77.6	+1.0	+1.3%
	Scotland	74.6	74.8	75.0	75.4	75.9	+1.3	+1.6%
	Northern Ireland	76.2	76.2	76.4	76.8	77.1	+0.9	+1.2%
Females								
UK		**81.3**	**81.5**	**81.7**	**82.0**	**82.3**	**+1.0**	**+1.2%**
	England	81.6	81.8	82.0	82.3	82.6	+1.0	+1.3%
	Wales	81.0	81.2	81.4	81.6	81.8	+0.8	+1.0%
	Scotland	79.6	79.7	79.9	80.1	80.4	+0.9	+1.1%
	Northern Ireland	81.0	81.3	81.3	81.4	81.5	+0.5	+0.6%

Three-year rolling average, based on deaths registered in calendar years and mid-population estimates. Please note figures may not sum due to rounding
Northern Ireland life expectancy data for 2008-10 are provisional.
Source: Office for National Statistics; National Records of Scotland; Northern Ireland Statistics and Research Agency.

As with all measures of population and health characteristics, we see differences across the geography of Scotland. In general terms there are differing patterns of improvement across Scotland, with smaller improvements in health outcomes in more deprived areas of the country.

At council area level, life expectancy between 2008 and 2010 was lowest in Glasgow City, Inverclyde, West Dunbartonshire and Renfrewshire, and highest in East Dunbartonshire and Perth and Kinross.

Over the period 2004-06 to 2008-10, all council areas saw an increase in life expectancy, with the exception of the Shetland Isles, which saw a 0.6 year decrease in female life expectancy. The greatest increase in life expectancy in males was seen in Perth and Kinross, whilst Eilean Siar saw the greatest increase in life expectancy in females.

Table 2: Life expectancy for council areas (2004-6 and 2008-10)

	Males			Females		
	2004-06	2008-10	Absolute change (in years)	2004-06	2008-10	Absolute Change (in years)
Scotland	74.6	75.9	+1.3	79.6	80.4	+0.9
Aberdeen City	74.9	76.3	+1.4	80.1	80.9	+0.8
Aberdeenshire	77.0	78.2	+1.2	81.2	81.7	+0.5
Angus	76.2	77.6	+1.4	79.7	80.3	+0.6
Argyll & Bute	75.8	77.0	+1.2	80.6	80.9	+0.3
Clackmannanshire	73.2	75.6	+2.4	78.8	80.6	+1.8
Dumfries & Galloway	76.1	76.7	+0.6	80.4	81.5	+1.1
Dundee City	73.6	73.9	+0.3	79.2	79.2	0.0
East Ayrshire	74.5	75.4	+0.9	78.2	79.5	+1.3
East Dunbartonshire	78.0	79.4	+1.4	81.7	82.7	+1.0
East Lothian	76.3	77.3	+1.0	80.7	81.2	+0.5
East Renfrewshire	77.2	78.3	+1.1	81.9	82.3	+0.4
Edinburgh, City of	75.8	77.2	+1.4	80.9	81.8	+0.9
Eilean Siar	73.0	74.0	+1.0	79.9	82.0	+2.1
Falkirk	74.5	76.4	+1.9	79.4	80.3	+0.9
Fife	75.5	76.3	+0.8	80.1	80.7	+0.6
Glasgow City	70.5	71.6	+1.1	77.0	78.0	+1.0
Highland	75.2	76.4	+1.2	80.6	81.5	+0.9
Inverclyde	72.2	73.0	+0.8	77.8	79.1	+1.3
Midlothian	75.1	76.6	+1.5	79.7	81.4	+1.7
Moray	75.8	76.9	+1.1	79.9	81.3	+1.4
North Ayrshire	73.9	75.0	+1.1	79.0	79.5	+0.5
North Lanarkshire	73.0	74.3	+1.3	78.2	78.8	+0.6
Orkney Islands	76.0	77.3	+1.3	81.0	81.4	+0.4
Perth & Kinross	76.5	79.1	+2.6	81.2	82.3	+1.1
Renfrewshire	73.4	73.8	+0.4	78.4	79.5	+1.1
Scottish Borders	76.5	77.5	+1.0	80.5	81.2	+0.7
Shetland Islands	76.6	77.2	+0.6	81.5	80.7	-0.8
South Ayrshire	75.8	76.4	+0.6	80.5	81.1	+0.6
South Lanarkshire	74.4	75.7	+1.3	79.3	80.3	+1.0
Stirling	76.6	77.8	+1.2	80.6	81.9	+1.3
West Dunbartonshire	71.8	73.6	+1.8	77.7	78.3	+0.6
West Lothian	75.2	76.2	+1.0	79.0	80.0	+1.0

Source: National Records of Scotland

3.7 Conclusion

The literature on health improvements across Scotland paints a positive and improving picture of the performance of the health sector. The recent improvements in health outcomes and quality of healthcare delivery across Scotland demonstrate the continued commitment to investing in the health sector and to working across agencies to deliver the best outcomes possible for the population of the country.

Despite these improvements, there remain challenges ahead for the sector. There are undoubtedly areas of Scotland where incidence of ill health and social factors such as levels of deprivation remain high. The Scottish Government will undoubtedly continue to remain focused on the interaction between socio-demographic factors, the existing incidence of ill health and lifestyle factors in order to ensure that the development of high impact, high quality health interventions continues.

4. Demography of Scotland

Chapter summary

- It is estimated that just under 5,300,000 people live in Scotland.
- The largest centres of population are found in Glasgow City (593,000), Edinburgh City (477,000) and North Lanarkshire (338,000).
- In 2011, almost 17% of the population were aged over 65.
- Between 2001 and 2011, the number of people aged over 65 increased by 11%, whilst the number of people aged over 80 increased by 19%.
- Between 2001 and 2011, the number of households in Scotland increased by 8%. This is greater than the increase in the population, which has created a shift in the average number of people per household.
- In 2011, one-person households were the most common type and accounted for 35% of all households. This has implications for the health sector in relation to ensuring that people are appropriately cared for within their own homes.
- Over 70% of the Scottish population live in the central lowlands. Given the large landmass of the country, this means that many areas of Scotland are sparsely populated.
- Using the ACORN wellbeing classification system, the largest health groups in Scotland are 'health challenges' and 'healthy'.

4.1 Introduction

This section of the report focuses on the population of Scotland, examining some key trends and projections whilst considering the implications of these changes on health delivery across Scotland.

The data is drawn from National Statistics, including census and National Records of Scotland data. Health profile data is also presented, and is drawn from two sources, ScotPHO (Scotland Public Health Observatory) and ACORN Health Classification. The overall purpose of this data is for us to examine at a broad level the general health of the Scottish population.

There is a glossary in appendix 1 that provides more detail of all the data sources used in this report.

4.2 Urban and rural Scotland

The issue of urban and rural geographies is key to many discussions surrounding demography and the health sector. Whilst there are significant areas of dense population, much of Scotland is characterised as rural and remote. In addition, the islands of Scotland, some of which have very low population numbers, also present a unique aspect to geographical considerations when looking at data or considering future issues for the delivery of high quality health services.

Scotland makes up 32% of the total UK landmass; it covers a total area of 78,772 km^2 with 800 islands, 130 of which are inhabited[4]. Approximately 70% of Scotland's population live in the central lowlands, stretching in a north east to south west belt between the major cities of Edinburgh and Glasgow.

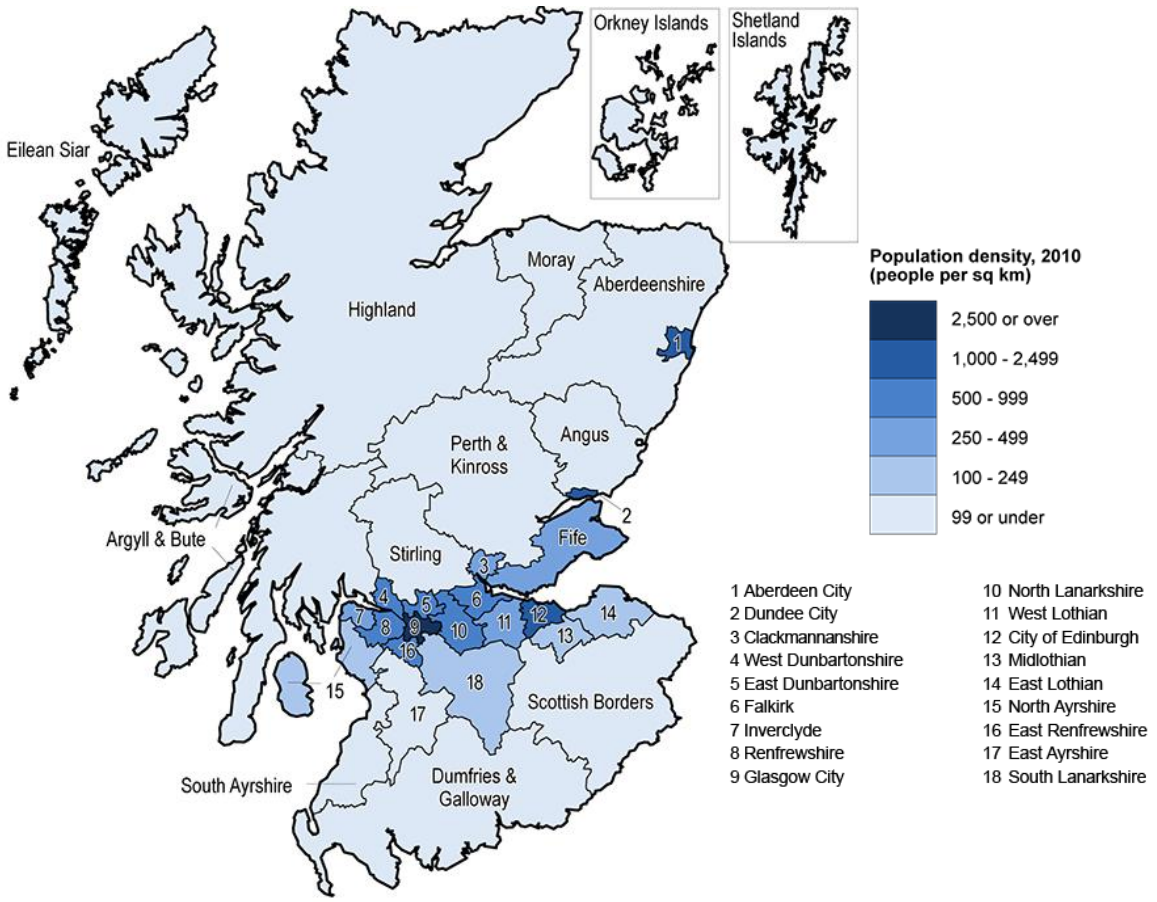
Other major areas of population density include Paisley, Stirling, Falkirk, Perth and Dundee. There are also areas of higher population density around the north east coastal areas of Aberdeen and Inverness.

The highlands have the lowest population density in Scotland.

The map that follows shows the population density (people per km^2) across the country.

[4] Source: http://www.scotland.org/about-scotland/scotlands-geography

Figure 2: Population density of Scotland

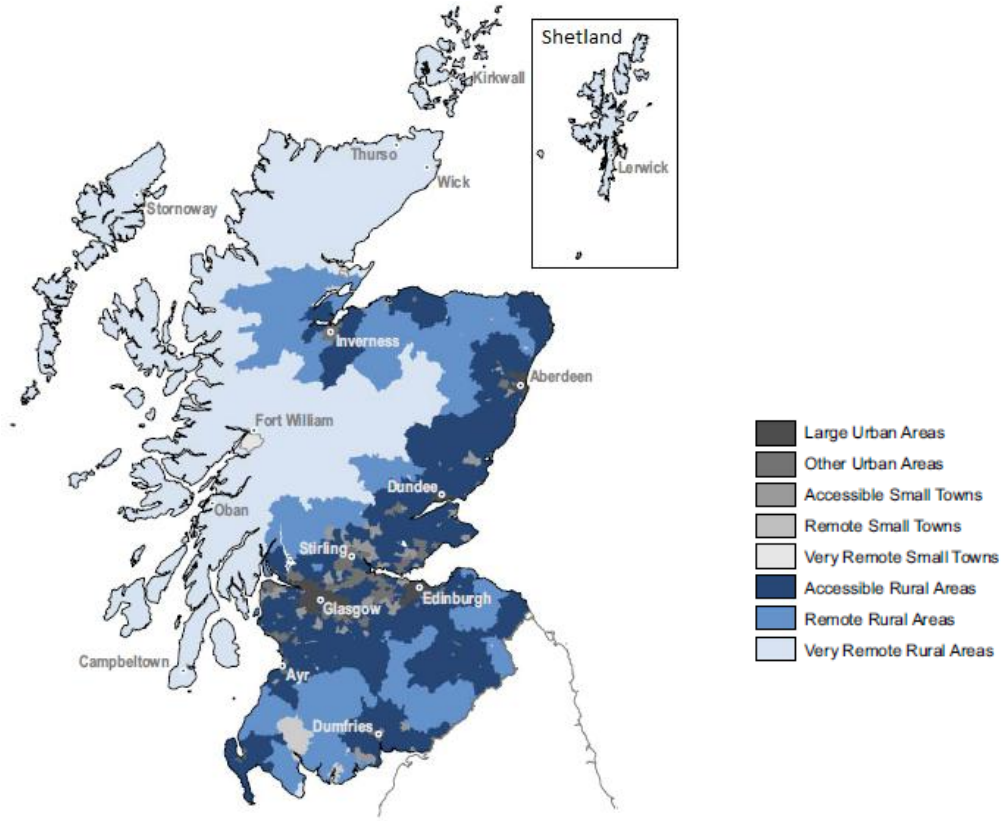


Source: http://www.ons.gov.uk/ons/rel/regional-trends/region-and-country-profiles/key-statistics-and-profiles---august-2012/key-statistics---scotland--august-2012.html

The unique geography of Scotland results in several classifications of rurality. The Scottish Government Urban Rural Classification for Data Zones provides the most detailed breakdown of geographies, ranging from large urban areas to very remote rural areas.

The map that follows shows the distribution of these different urban and rural classifications across Scotland.

Figure 3: Scottish Government Urban Rural Classification for Data Zones



Contains Ordnance Survey data © Crown Copyright and database right 2011
Source: Scottish Government
Extracted from: ONS (2010) Regional Trends, No 43 – Rural and urban areas: comparing lives using rural/urban classification

4.3 Population

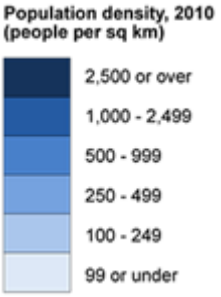
The population of Scotland is estimated to be 5,295,400[5]. There were more women than men living in Scotland on census day, and this was the case for all council areas except for the Shetland Isles.

The table below presents the percentage of data zones in each council area that are within the 15% most deprived data zones in Scotland, together with the overall resident population estimate and gender split. The rows of the table have been shaded to match the six population density classifications seen in Figure 2 above, and the key from this map is also provided for ease of reference.

[5] Source: Census 2011 Release 1B

Table 3: Census day usually resident population by sex and council area and Local Share % Scottish Index of Multiple Deprivation (SIMD)

	SIMD Local Share (%)*	Population			%	
		Person	Males	Females	Males	Females
SCOTLAND	**5.0**	**5,295,400**	**2,567,400**	**2,728,000**	**48.5**	**51.5**
Glasgow City	21.3	593,200	286,100	307,200	48.2	51.8
Inverclyde	12.7	81,500	39,000	42,500	47.8	52.2
Dundee City	10.6	147,300	70,700	76,600	48.0	52.0
West Dunbartonshire	10.2	90,700	43,200	47,500	47.6	52.4
East Ayrshire	7.8	122,700	59,400	63,400	48.4	51.6
North Ayrshire	6.7	138,200	65,800	72,400	47.6	52.4
Renfrewshire	6.5	174,900	84,100	90,800	48.1	51.9
North Lanarkshire	5.5	337,800	163,400	174,400	48.4	51.6
South Ayrshire	4.8	112,800	53,700	59,000	47.6	52.4
Stirling	3.6	90,200	43,200	47,000	47.9	52.1
Edinburgh, City of	3.5	476,600	232,400	244,200	48.8	51.2
Clackmannanshire	3.1	51,400	25,100	26,300	48.8	51.2
South Lanarkshire	2.8	313,800	150,900	163,000	48.1	51.9
Argyll & Bute	2.5	88,200	43,100	45,000	48.9	51.1
Falkirk	2.0	156,000	76,100	79,900	48.8	51.2
Highland	1.4	232,100	113,500	118,700	48.9	51.1
Fife	1.3	365,200	176,900	188,300	48.5	51.5
East Dunbartonshire	1.6	105,000	50,600	54,400	48.2	51.8
Aberdeen City	1.1	222,800	110,100	112,700	49.4	50.6
Perth & Kinross	1.1	146,700	71,500	75,200	48.7	51.3
Dumfries & Galloway	1.0	151,300	73,400	77,900	48.5	51.5
Scottish Borders	0.8	113,900	55,200	58,700	48.4	51.6
East Renfrewshire	0.8	90,600	43,200	47,400	47.7	52.3
Aberdeenshire	0.0	253,000	125,300	127,700	49.5	50.5
West Lothian	0.0	175,100	85,500	89,500	48.9	51.1
Angus	0.0	116,000	56,200	59,800	48.5	51.5
Moray	0.0	93,300	45,900	47,400	49.2	50.8
East Lothian	0.0	99,700	47,900	51,800	48.0	52.0
Midlothian	0.0	83,200	40,100	43,100	48.2	51.8
Eilean Siar	0.0	27,700	13,700	14,000	49.4	50.6
Shetland Islands	0.0	23,200	11,800	11,400	50.8	49.2
Orkney Islands	0.0	21,400	10,600	10,800	49.5	50.5



Notes: 1. Population data are rounded to the nearest hundred
2. Percentages are calculated from unrounded numbers

Source: Population numbers - National Records of Scotland

Source: Scottish Index of Multiple Deprivation (SIMD) 2012 – Scottish Government simd.scotland.gov.uk[1]

* The **SIMD Local Share** considered the percentage of an area's data zones that are amongst the 15% most deprived in Scotland.

The table demonstrates that there are large population centres within Scotland, including Glasgow, Edinburgh, North Lanarkshire and Aberdeen. The Scottish Index of Multiple Deprivation (SIMD) data demonstrates that a higher proportion of data zone areas in Glasgow, Inverclyde, Dundee and West Dunbartonshire are amongst the 15% most deprived in Scotland.

In addition, using the shading provided by the population density definitions, we can see that Glasgow, Inverclyde, Dundee and West Dunbartonshire are also more densely populated areas; this may indicate that they represent more of a challenge in improving health outcomes.

4.4 Scotland population health profiles

The general trends in healthcare and healthcare provision are played out very differently throughout the regions of Scotland. There are a range of organisations seeking to understand the variances in health and wellbeing throughout Scotland and the UK, including Public Health Observatories, as well as local healthcare providers.

The Scottish Public Health Observatory (ScotPHO) provides a wide range of data related to the health of the population in Scotland. Their publication 'Health and Wellbeing Profiles 2010'[6] provides an overview of 67 indicators that cover a range of health outcomes, health-related behaviours and wider determinants of health for a range of geographies across Scotland.

The data shows that there is a range of health-related concerns in different parts of Scotland. There are some Territorial Health Boards that appear to fare worse in comparison to the Scotland average on a number of indicators, and these include Greater Glasgow, Lanarkshire, and Ayrshire and Arran.

The table below summarises the ScotPHO profiles for each health board, providing a very quick overview of the total number of indicators where each health board is significantly worse, better or the same as the Scottish average.

[6] http://www.scotpho.org.uk/web/FILES/Profiles/2010/ScotPHO_overview_2010-tiffs-print-and-web.pdf

Table 4: A summary of the ScotPHO profiles by Health Board

	Total number of indicators where the Territorial Health Board is…..		
	…significantly 'worse' than Scotland average	…significantly 'better' than the Scotland average	…not significantly different from the Scotland average
Greater Glasgow	42	6	3
Lanarkshire	30	14	8
Ayrshire & Arran	28	5	18
Highland	13	32	7
Fife	12	27	12
Tayside	11	27	13
Dumfries & Galloway	10	30	14
Borders	9	31	11
Grampian	8	37	4
Orkney	8	24	18
Western Isles	8	16	28
Lothian	6	37	10
Shetland	4	33	14
Forth Valley	2	32	19

Source: ScotPHO, 2010 CHP Profiles, NHS board level tool for Profiles 2010
http://www.scotpho.org.uk/comparative-health/profiles/2010-chp-profiles

The full overview of the CHP profiles for all Territorial Health Boards against the individual health profile indicators is included in appendix 2.

An alternative way of examining health profiles is to use CACI's health and consumer ACORN profile (A Classification of Residential Neighbourhoods). This is a commercially available source of population profiling which enables us to examine the potential demand for healthcare at a geographic level. This profile provides us with a snapshot of current and possible future health requirements.

Wellbeing ACORN draws upon a range of National Statistics including indices of multiple deprivation, population profiles and unemployment data, as well as consumer data such as household income and lifestyle choices. Health ACORN therefore paints a complete picture of life in order to classify households into four main health groups:

- **Unhealthy/health challenges** – these areas contain people with the greatest health challenges and risky behaviours now and in the past. They contain some of the oldest people in the most deprived neighbourhoods.
- **At risk** – these neighbourhoods do not generally have high incidence of illness. However, multiple unhealthy behaviours, as a result of their lifestyles, could put their health at risk in the future.
- **Caution** – these are areas where the health and wellbeing of the residents are generally good. Some behaviours do create health risks and may result in lifestyle-related ailments in time.
- **Healthy** – these neighbourhoods are more affluent, often with older residents. Their health, given their age, is especially good with very low levels of illness and good lifestyles.

The largest wellbeing groups in Scotland are 'unhealthy/health challenges' and 'healthy'.

Over a third of the resident population of Scotland fall into the 'unhealthy/health challenges' category. The table below outlines the broad health profile of Scotland compared to the UK.

Table 5: Health profile of Scotland

	Dominant health group	Unhealthy/ health challenges	At risk	Caution	Healthy	Unclassified
Scotland	*Health challenges*	32%	20%	20%	26%	1%
UK	*Healthy*	18%	22%	26%	34%	1%

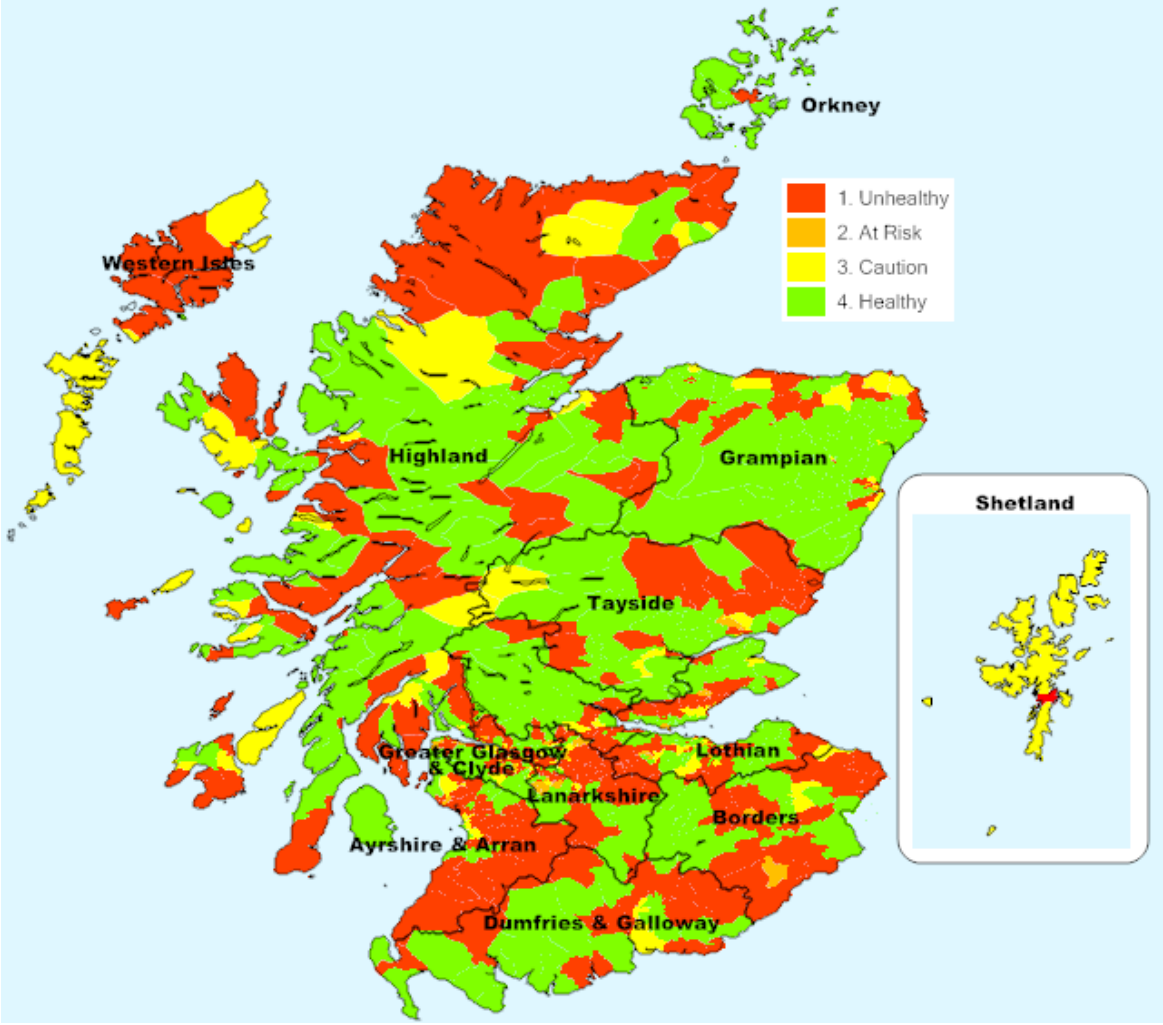
Source: CACI Wellbeing Acorn 2013

Fig. 4 below shows local areas of Scotland categorised by their dominant wellbeing group. The map serves to illustrate the complexity of health profiles throughout Scotland.

The areas classed as healthy are shaded in green; these are located in the rural north and southern borders of Scotland. Areas whose dominant group is 'unhealthy/health challenges' are located in the central areas, reflecting the population centres of Scotland.

The ‘caution’ and ‘at risk’ groups are of particular interest to the health sector as these are the groups that may not be presenting issues related to ill-health now but could do so in the future if there are no changes to their lifestyle. These groups represent the population that could benefit from targeted public health initiatives and health education in order to live healthier lifestyles now and prevent issues of ill health and demand on the sector in the future.

Figure 4: Dominant health group in Health Boards



Source: CACI Wellbeing Acorn (2013)

4.5 Age profile

Like many western countries, the population of Scotland has 'aged' over the past 10 years. Table 6 shows that, in 2011, 16.8% of the total population was aged over 65. The total number of people aged over 65 increased by almost 11% from 2001 to 2011; however, the largest percentage increase is seen in those aged over 80.

The number of people aged 80 and over has increased by 19% since 2001. All council areas have seen rises, although the level of increase across Scotland is different.

Table 6: Age profile of Scotland, 2001 and 2011

	2001		2011		% change 2001 to 2011
	Population	%	Population	%	
15 and under	906,900	17.9	854,100	16.1	-5.8
16 – 39	1,7340,00	34.3	1,702,100	32.1	-1.8
40 – 64	1,616,200	31.9	1,848,900	34.9	14.4
65 – 79	611,600	12.1	659,900	12.5	7.9
80 +	193,300	3.8	230,400	4.4	19.2
All ages	**5,062,000**	**-**	**5,295,400**	**-**	**4.6**

Source: National Records of Scotland

This changing demographic is significant for those delivering health services, as the growth in the proportion of the population aged over 65 is likely to result in greater demand for health sector services. This demand is also more likely to be for treatment for long-term or chronic conditions, with potentially added complexity brought about by issues such as co-morbidity.

The second issue for health sector employers raised by this changing demographic is the reduction in the younger age groups, who are the workforce of the future. This could mean that demand for skills will increase over the long term, with the health sector facing difficult competition to recruit and attract young people into the sector.

4.6 Changes to households in Scotland

The 2011 census allows us to examine other important changes to the population of Scotland over the past 10 years. Since 2001, the number of households in Scotland has increased by 180,530 (8%), from 2,192,250 to 2,372,780. All council areas saw increases, with the largest in the Orkney Islands (17%), Aberdeenshire (15%) and Highlands (14%). The smallest increases were in East Dunbartonshire, Argyll and Bute, and Inverclyde.

Between 2001 and 2011, the number of households increased faster than the number of people in households in all areas of Scotland. This has led to a decrease in average household size, from 2.27 to 2.19 people per household.

In 1961, one-person households were the least common household type and accounted for 14%of all households. By 2011, they became the most common household type and accounted for 35% of all households.

Again, this shift to one-person households has an increasing relevance and importance for the health sector. Implications in the future could include: an increased importance for telehealth to ensure that those living alone are managing long-term conditions well; increased demand for the community-based workforce assessing and treating individuals within their own homes; and coordinating packages of care that will maintain health, wellbeing and independence.

4.7 Population projections

Between 2011 and 2035, the population of Scotland is projected to increase by 10% (approximately 533,400 people).

The main driver of population change is projected to be migration into the country. The table below shows the components of population change between 2010 and 2035.

Table 7: Scotland population projections - detailing the components of projected population change

	Population (000s)
Population at start (2010)	5,222
Total births (2010 to 2035)	1,467
Total deaths (2010 to 2035)	1,399
Natural change (births – deaths)	*69*
Migration (2010 to 2035)	465
Total change	*533*
Population at end (2035)	5,755

Source: Projected Population of Scotland (2010-based), General Register Office for Scotland http://www.gro-scotland.gov.uk/statistics/theme/population/projections/scotland/2010-based/tables.html

The table below shows the percentage increase in population by broad age categories. We can see that the largest percentage increase in population is seen in the over 65 age group, which is projected to increase by 63% over the period. By 2035, those aged over 65 will make up approximately 25% of the total population (they made up 17% in 2010).

Table 8: Age profile of the population – projected 2035

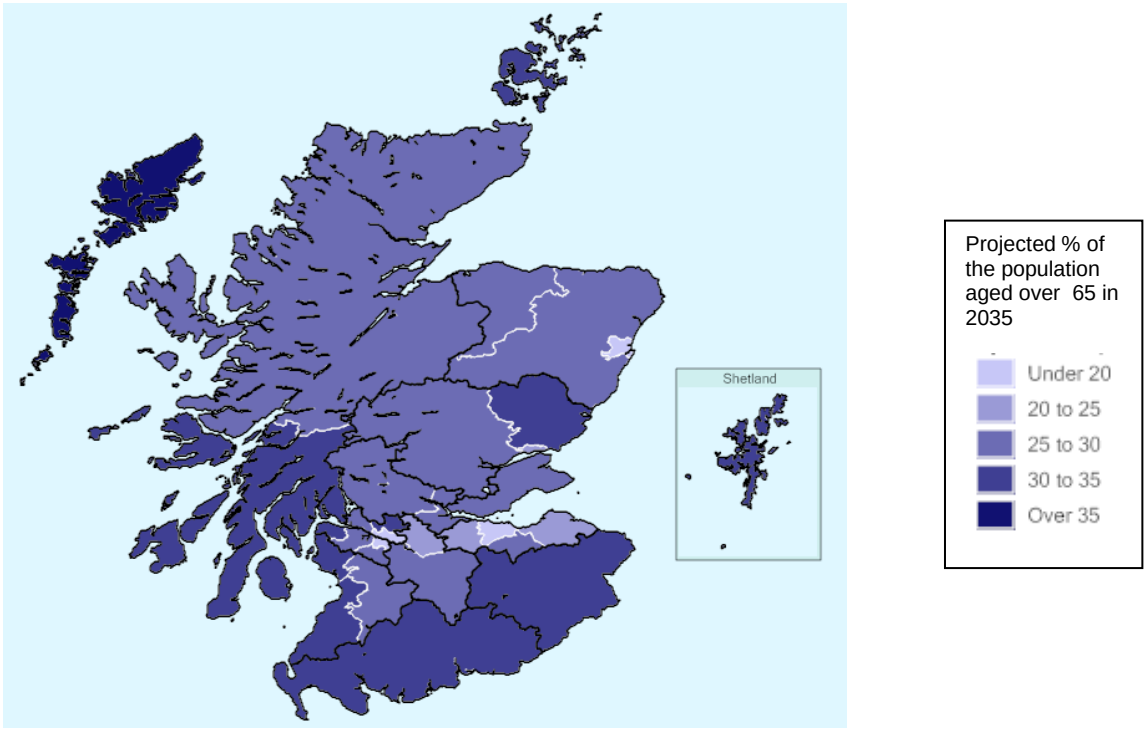
	2010		2035		% change 2010 to 2035
	Population (000s)	%	Population (000s)	%	
15 and under	911.8	17%	941.4	16%	3.2%
16 – 29	975.4	19%	944.3	16%	-3.2%
30 – 49	1,437.7	28%	1,437.4	25%	0%
50 – 64	1,017.7	19%	1,001.8	17%	-1.6%
65 – 74	473.9	9%	6928	12%	46.2%
75+	405.6	8%	737.9	13%	81.9%
All persons	**5,222.1**	**-**	**5,755.5**	**-**	**10.2%**

Source: Population Projections for Scottish Areas (2010-based), Naional Records of Scotland

The map below shows the projected percentage of the population aged over 65 in each council area in 2035. We can see that whilst the overall trend is that the population across Scotland is ageing over the reference period, not all areas of Scotland are ageing in a uniform way.

The Western Isles are projected to have the greatest proportion of the population aged over 65 in 2035 (38%). The Shetland Isles, Orkneys, Dumfries and Galloway, Angus, Argyll and Bute, East Dunbartonshire, Inverclyde, Scottish Borders and South Ayrshire are all projected to have between 30% and 35% of the population aged over 65 in 2035.

Figure 5: Projected % of the population aged over 65 in 2035, council areas



Data Source: Population Projections for Scottish Areas (2010-based), Naional Records of Scotland
Map produced by Skills for Health using CACI GIS software
The black borders represent NHS Health Boards and the white borders represent council areas.

4.8 Conclusion

There are many complex interactions between factors relating to the population that have an impact on the health sector and the delivery of health services both now and in the future within Scotland. The geographical diversity of Scotland and the distribution of the population create unique challenges and debates that are the backdrop for further discussion throughout this report.

The ageing population and the changing composition of households will undoubtedly influence the direction of health and social care policy in the future. Policy makers will also be concerned with how to continue to improve the health of the population; public health and wellbeing interventions targeted at those who currently lead unhealthy lifestyles will be key to ill-health prevention in the long term.

In the following section we look at the workforce profile of the health sector across Scotland.

5. The workforce

Chapter summary

- In 2012 there were an estimated 183,000 people working in the Scottish health sector.
- This figure represents approximately 9% of the UK health sector workforce.
- The importance of the health sector to the Scottish economy is underlined by the fact that this figure represents approximately 7% of all people working in Scotland.
- 80% of Scottish health sector professionals work in the public sector/NHS. This is slightly higher than the UK average and reflects the differing policy context across the UK.
- It is estimated that just over two thirds (67%) of the Scottish health sector workforce are engaged in 'hospital activities'.
- NHS workforce data shows that the spread of the workforce across Scotland closely mirrors the population spread.
- The health sector in Scotland is highly feminised, 79% of employees are female. This is significantly higher than the whole economy average across Scotland (45%).
- Employees in the health sector are older than in the whole economy. The sector employs fewer people aged under 25 than the whole economy average, and the proportion of the workforce aged 35- 59 is higher than in the whole economy.
- The health sector workforce is highly skilled. Professional occupations (which include doctors, dentists, nurses, therapists, midwives and dental technicians) make up 53% of the health sector compared to 19% of the whole economy in Scotland.
- The health sector in Scotland has proportionally fewer managers, directors and senior officials than the whole economy average and the UK average for the health sector (2% compared to 9% for the whole economy and 4% for the UK Health sector).

5.1 Introduction

This section draws together information relating to the characteristics of the health sector workforce in Scotland.

The data is drawn primarily from the Labour Force Survey (LFS). The LFS provides a means to accurately draw comparisons between the health sector in Scotland with averages across the general economy and the UK. The LFS uses international definitions of employment, unemployment and economic inactivity, together with a wide range of topics such as occupation, training and hours of work. The survey allows us to estimate the size of individual sectors as defined by Standard Industrial Classification (SIC) codes and the number of people working in given occupations as defined by Standard Occupation Classification (SOC) codes.

The LFS is particularly useful for making broad comparisons between Scotland, England, Wales and Northern Ireland. It also enables international comparisons to be made, and is often used as the basis for OECD studies which compare the performance of advanced economies.

Due to the integration and nature of health and social care in Scotland, we have also included a brief analysis of the social care workforce using the LFS in appendix 4.

The Labour Force Survey data is supplemented where appropriate with workforce data from Information Services Division (ISD), which provides data on the NHS workforce.

5.2 The delivery of services in Scotland's health sector

Within Scotland, health sector services are delivered via three sub-sectors:

- Publicly funded services via the NHS (NHSScotland)
- Services delivered by independent sector organisations (private companies, social enterprises etc.)
- Services delivered by voluntary organisations

A range of services are delivered by the NHS, private and voluntary organisations, including:

- Hospital care
- Doctor's surgeries
- Community-based healthcare
- Therapy services
- Dental care

- Emergency healthcare and ambulance transportation
- Complementary medicine
- Other health services (for example opticians, pharmacists)

Outside of services delivered to the public, the health sector also includes research activities carried out in medical laboratories across the country.

The sector is constantly evolving and the traditional models of healthcare delivery are rapidly changing. Placing the patient at the centre of care delivery, and adapting services in order to provide better outcomes and higher quality for patients, are key to the Scottish Government's health policy.

Trends in technology, public expectations and the drive to improve quality have driven changes in the way health services are delivered over recent years, and these will undoubtedly continue to evolve. These include:

- The movement of healthcare delivery from traditional hospital settings to the community, including the expansion of services provided in retail outlets such as pharmacists and opticians
- Movement of minor operations into more local settings such as GP surgeries
- Continued rollout of rapid diagnostic testing
- Mobile health screening services
- The availability of telehealth to facilitate remote monitoring of long-term chronic conditions

Within Scotland, the rural geography has meant that some health boards have been extremely innovative in developing models of care that make the best use of technology to enable quicker and faster access to health services for the public.

5.3 Size and shape of Scotland's health sector

The health sector in Scotland is an important one, employing a significant proportion of workers but also contributing to the whole economy of Scotland by keeping people fit, healthy and able to work.

5.3.1 Number of employees

In 2012, there were an estimated 183,000 people working in all parts of the Scottish health sector, including the NHS, independent and voluntary sectors. This figure represents over 7% of all people working in Scotland, and almost 9% of the total UK health sector workforce. Scotland has a slightly greater proportion of the economically active workforce in the health sector compared to the UK average.

Table 9: Total employment

	Scotland		United Kingdom	
	Health sector	Whole economy	Health sector	Whole economy
Total workforce	183,000	2,476,800	2,104,200	29,511,700

Source: Labour Force Survey (2012)

The health sector is dominated in terms of employment numbers by the public sector. Table 10 shows that just over 80% of the total health sector workforce in Scotland are employed in the public sector (NHS), 18% in the independent sector and 2%in the voluntary sector.

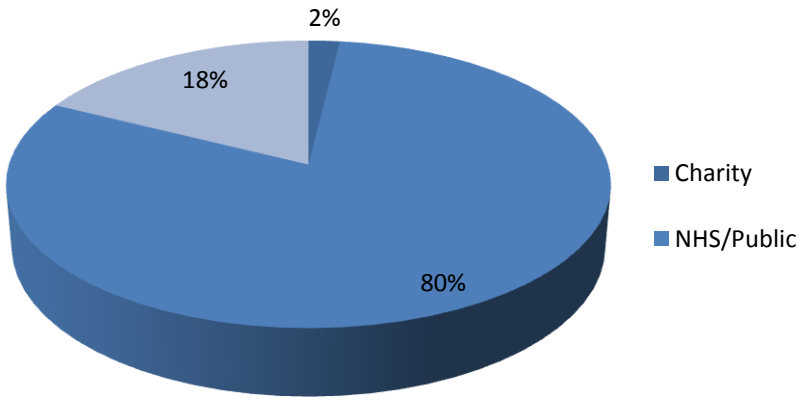
Rates of employment in the independent sector in Scotland are lower than the UK average; this is as expected given the Scottish Government's policy of keeping NHS activity within the NHS and not, as we see in England, contracting NHS work to independent sector providers.

Table 10: Distribution of the workforce by sub-sector

	Health sector		Whole economy	
	Scotland	UK	Scotland	UK
Public/NHS	80%	75%	16%	14%
Independent sector	18%	23%	74%	77%
Voluntary sector	2%	2%	11%	9%
Total workforce	100%	100%	100%	100%

Source: Labour Force Survey (2012) - please note figures may not sum due to rounding

Chart 2: Percentage of total health sector employees working in the NHS, independent and voluntary sectors in Scotland



Source: Labour Force Survey (2012)

These estimates from the Labour Force Survey are broadly consistent with data from Information Services Division (ISD), which show that, at 31st March 2013, there were 156,535[7] people working in NHSScotland.

We can break down the sub-sectors further to provide more information regarding the types of activities being undertaken by people working in the health sector as a whole, and the independent and public health sub-sectors[8].

The table below demonstrates that employment in the independent health sector in both Scotland and the UK is more evenly split between the four sub-activity levels described within the Labour Force Survey.

In Scotland, the percentage of the workforce in the independent sector undertaking general medical practice and dental practice activities is greater than across the UK as a whole. This is primarily because of the greater proportion of the workforce in England in independent hospitals. The one area of marked difference, however, relates to dental practice activities, with a significantly higher proportion of the workforce in the independent sector in Scotland compared to the UK as a whole.

It is interesting to note that general medical practices and many dental practices are, although technically independent businesses, of course viewed by the public as an integral part of the NHS system.

Table 11: Sub-sector activity split, Scotland and UK

	Total health sector		Independent health sector		Public health sector	
	Scotland	UK	Scotland	UK	Scotland	UK
Hospital activities	67%	64%	25%	33%	76%	73%
General medical practice activities	8%	9%	19%	16%	6%	7%
Specialist medical practice activities	1%	2%	3%	7%	<1%	<1%
Dental practice activities	8%	5%	33%	18%	2%	1%
Other human health activities	16%	20%	21%	27%	15%	18%

Source: Labour Force Survey (2012)

[7] Source: NHSScotland workforce statistics. Headcount figure for all NHSScotland staff (excluding GPs and GDs). Estimates from LFS give a figure of 152,000 people in non-private organisations in the health sector in Scotland.

[8] We have excluded the voluntary sub-sector from this analysis due to small employment numbers.

5.3.2 Distribution of employment in the health sector

There is no one single geographic centre of health sector activity across Scotland, largely because services are delivered via the NHS to the whole population throughout the country. As a result, health sector employment is geographically distributed, often reflecting the levels of population density in a given area.

The Labour Force Survey does not allow us to examine workforce estimates below the level of Scotland, but we can utilise NHS workforce data to look at employment across the different Territorial Health Boards. The table below shows the total staff in post in each Territorial Health Board, together with a comparison of the distribution of staff across Scotland and the population distribution in Scotland. We can clearly see that the 'staff in post' figures are closely correlated to population distribution.

Table 12: NHSScotland staff in post compared to population distribution

	Total staff (excluding GPs & GDs)	% (of total NHSScotland workforce)		Population distribution (% of total population in each health board)
NHS Borders	2,502.1	2%		2%
NHS Fife	7,052.8	5%		7%
NHS Lothian	18,925.0	14%		16%
NHS Highland	7,980.3	6%		6%
NHS Grampian	11,452.5	9%		11%
NHS Orkney	461.7	<1%		<1%
NHS Tayside	11,668.5	9%		8%
NHS Western Isles	832.2	1%		<1%
NHS Shetland	541.6	<1%		<1%
NHS Ayrshire & Arran	8,404.1	6%		7%
NHS Greater Glasgow & Clyde	33,343.6	25%		23%
NHS Lanarkshire	10,038.0	8%		11%
NHS Forth Valley	4,938.2	4%		6%
NHS Dumfries & Galloway	3,430.1	3%		3%
National bodies & special health boards	11,634.6	9%		n/a
NHSScotland	**133,205.3**	**100%**		**100%**

Source: NHSScotland Workforce Statistics 31st March 2013, published May 2013. Population statistics drawn from National Records of Scotland.

5.4 Workforce characteristics

Studying the workforce characteristics of the sector gives some indication of the way in which the demographics of the sector reflect those of the general population. This can highlight if there are any particular groups that are over- or under-represented in the sector.

Any over-representation of specific groups, either through a gender bias, skewed age profile or lack of diversity, can have both positive and negative impacts. For example, an older workforce can bring a richness of experience to the workplace. However, any peaks in retirement can create issues for organisations in how they effectively succession plan in order to ensure that knowledge and skills are retained in the workforce.

5.4.1 Gender

The gender profile within the health sector is vastly different to the averages that we see across the whole economy. Across Scotland, the sector is highly feminised, with 79% of employees being female and 21% male.

In general terms, the Scottish labour force has a slightly greater proportion of females participating in employment compared to the UK average. This is also reflected in the health sector, with a slightly greater proportion of females in Scotland than in the UK.

Table 13: Employment by gender

	Scotland				United Kingdom			
	Health sector		Whole economy		Health sector		Whole economy	
	N	%	N	%	N	%	N	%
Male	38,000	21	1,299,500	52	478,900	23	15,833,000	54
Female	144,900	79	1,177,300	48	1,625,300	77	13,678,700	46
Total	183,000	100	2,476,800	100	2,104,200	100	29,511,700	100

Source: Labour Force Survey (2012)

The health sector has historically had a greater proportion of female workers; this related to the way in which roles in the sector were seen to require skills such as ‘caring’, traditionally viewed as natural skills for females. However, at a time of rapid expansion from 1997 onwards, organisations in the sector sought to expand opportunities for part-time and flexible working as a way to not only retain their current workforce but to attract new employees. These patterns of working are likely to have been more attractive to new female entrants into the labour market.

There are some differences between broad occupational groups in the gender profile. In general, in the health sector, the feminisation of the workforce remains true for managers and senior officials.

This is interesting considering the way in which the percentage of females in this category in the whole economy decreases compared to the overall percentage. This may suggest that female managers in the health sector experience more support than in other sectors to enable them to be promoted to higher level roles or it may be indicative of the health sector's willingness to promote from within and the value placed on experience in its managers.

There are proportionally more males in the skilled trades occupations and process plant and machine occupations than other staff groups. These are occupational groups that are heavily dominated by men in the whole economy too.

Table 14: Gender split by broad occupation group

	Scotland Health sector		UK Health sector	
	Male	Female	Male	Female
Managers, directors & senior officials	25%	75%	27%	73%
Professional occupations	24%	76%	25%	75%
Associate professional & technical occupations	33%	67%	29%	71%
Administrative & secretarial occupations	2%	98%	6%	94%
Skilled trades occupations	100%	0%	67%	33%
Caring, leisure and other service occupations	15%	85%	17%	83%
Sales & customer service occupations	0%	100%	37%	63%
Process, plant and machine operatives	24%	76%	37%	63%
Elementary occupations	8%	92%	9%	91%
Total	25%	75%	27%	73%

Source: Labour Force Survey (2012)

An examination of NHS data reveals an overall gender profile that is similar to that estimated by the LFS. However, it also reveals that groups such as qualified nursing, health visiting and midwifery staff are more feminised than the average, with just over 89% being female, and that staff groups such as emergency services are more likely to be male than the average (66%).

Table 15: NHSScotland gender profile by staff group

	NHSScotland	
	Male	Female
Medical staff	51%	48%
Dental staff	41%	59%
Medical and dental support	10%	90%
Nursing and midwifery	11%	89%
Allied health professions	10%	90%
Other therapeutic services	18%	82%
Personal and social care	19%	81%
Healthcare science	33%	67%
Emergency services	67%	33%
Administrative services	17%	83%
Support services	40%	60%
Unallocated/not known	12%	88%
All staff	79%	21%

Source: NHSScotland workforce statistics, 31st March 2013 (percentages based on headcount numbers)

There are also examples of ways in which the gender profile within specific occupational groups has changed over time. Data for doctors and dentists now appears to show that these occupational groups have a roughly equal ratio of males to females (British Medical Association, 2009). These professions have, however, historically been dominated by men. Recently, the number of women training in these professions has vastly increased, resulting in the tipping point for women to begin to outnumber men in this occupational category.

The high level of feminisation across the workforce presents challenges for employers relating to maternity leave and flexible working arrangements. For example, if we examine the medical staff group, large proportions of young female doctors are likely, at some point, to take maternity leave and may then request more 'family friendly' working arrangements to allow them to balance work and family life. It is also possible that certain specialties may be more attractive to women than others, which could theoretically create skills shortages in specialties that are not able to accommodate flexible working practices or are seen as being less 'family friendly'. In 2009, the British Medical Association described 'horizontal' gender segregation, with high proportions of female doctors found in specialties such as clinical genetics, dermatology and palliative medicine but low proportions found in specialties such as general surgery, cardiology, gastroenterology and medical ophthalmology.

Although the health sector has been an early leader and adopter of flexible working practices, employers may wish to re-examine whether the options available to the workforce are flexible enough to enable the progression of women to higher-level roles across the organisation. This is not only a challenge but an opportunity for employers to examine roles and career structures, and redesign them to make them not just fit for purpose but fit for the future. One solution highlighted as having the potential to improve the retention of female doctors, and enable them to progress in their chosen careers, is flexible training, which allows participation in medical activities for at least half the time of a full-time trainee (British Medical Association, 2009).

5.4.2 Age

The study of the age profile of a sector or organisation has particular benefits in respect of succession planning. Even at times when sectors may be contracting, having an age profile that is older than average can mean that there are still significant numbers of jobs that need to be recruited.

Within the health sector, having a detailed understanding of the age profile of the workforce is particularly important for activities such as workforce planning. The training times for professionals means that organisations and education commissioners have to look at least five years ahead in order to ensure that there are sufficient new trainees to replace those leaving the sector through retirement etc.

The age profile in the whole economy in Scotland is broadly consistent with the UK average. There are low proportions of the workforce aged between 16 and 24 years, with the largest age category being 45-54 and a sharp drop in the proportion of the workforce aged over 55 (table 16).

Employees in the health sector are older than the whole economy. The sector employs fewer people aged under 25 than the whole economy average, and the proportion of the workforce aged 35- 54 is higher than in the whole economy.

The reasons for this are partly due to the training times to enter professions within the health sector. Many workers do not join the sector until their mid-twenties or early thirties as they require qualifications at least at graduate level to join. The opportunities for young people (particularly those aged 16 to 21) within the sector are therefore limited to administrative, infrastructure and clinical support roles.

Table 16: Age profile of the health sector and whole economy

	Scotland				United Kingdom			
	Health sector		Whole economy		Health sector		Whole economy	
	N	%	N	%	N	%	N	%
16-24yrs	9,100	5	326,600	13	118,600	6	2,751,300	10
25-34yrs	36,600	20	542,200	22	442,300	21	6,692,300	23
35-44yrs	49,500	27	545,600	22	551,100	26	6,862,000	24
45-54yrs	58,200	32	624,800	25	607,500	29	7,158,900	25
55-64yrs	26,900	15	371,500	15	337,100	16	4,179,100	15
65 and over	2,600	1	66,100	3	47,700	2	935,000	3
Total	183,000	100	2,476,800	100	2,104,200	100	29,511,700	100

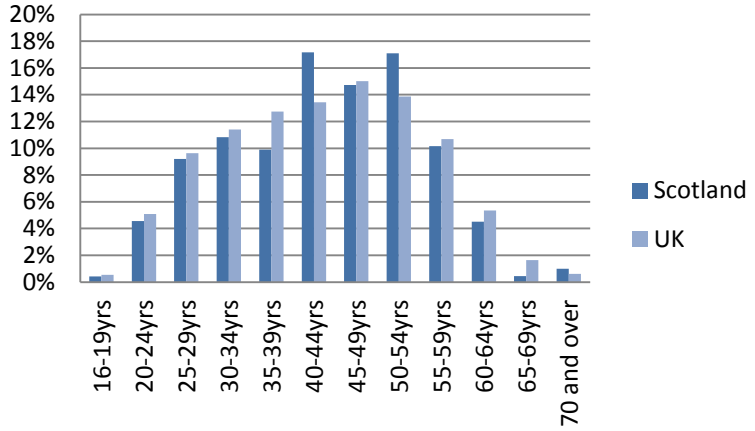
Source: Labour Force Survey (2012)

There is a greater proportion of the health sector in Scotland aged between 40 and 54 years compared to the UK average. However, the percentage of the workforce aged over 55 is slightly lower than the UK average.

This indicates that there could be issues in the medium term as the cohort of workers aged between 40 and 54 years approach retirement in the next 10-20 years. The challenge for the sector is how to retain and replace these skills in an efficient manner.

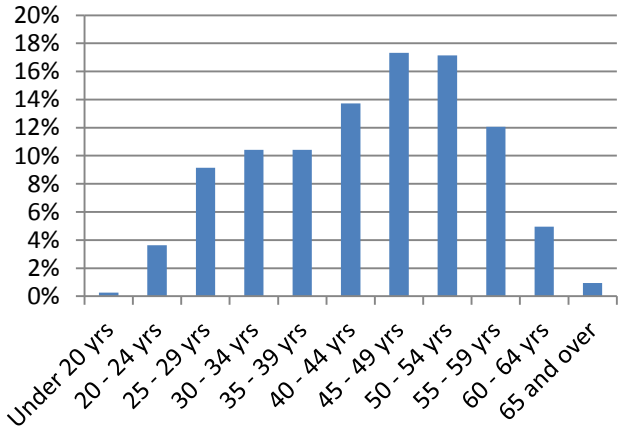
Charts 3 and 4 compare the Scottish health sector age profile with the UK average, and provide the age profile of the NHS workforce.

Chart 3: Age profile of the health sector, Scotland and the UK



Source: Labour Force Survey (2012)

Chart 4: Overall NHSScotland workforce age profile



Source: ISD Scotland NHSScotland workforce statistics, March 2013

The current age of the workforce could also be an asset for the health sector. Many older workers are likely to very experienced and knowledgeable in their individual fields. We have to recognise that working in the sector can be very physically, emotionally and mentally demanding; the challenge for employers is how to retain the skills and knowledge of the older workforce, either through more flexible working practices or job redesign, in order to ensure that their skills and knowledge are not lost to the sector too soon.

These individuals could also, with the right type of support, become mentors to colleagues, thereby sharing their knowledge and skills and potentially ensuring that employers secure the skills they need for the future.

5.4.3 Ethnicity

The study of the ethnicity profile of a sector or organisation has particular benefits in respect of ensuring that the organisation is reflective of the population that it serves. As the health sector has a large public sector component, there has been a statutory duty placed upon NHS employers to monitor and publish a range of statistics relating to workforce and ethnicity since 2000. This has meant that employers across the sector are not only aware of the demographics of their organisation, but have policies and practices in place to increase diversity across their workforce and ensure that the services they provide meet the diverse needs of the population.

At a UK level, the health sector is more ethnically diverse than many other sectors of the economy; only the hospitality, tourism and sport sector is more diverse. An estimated 15% of UK health sector employees are from a black, Asian and minority ethnic group (BAME). This is significantly greater than the all-economy average of 9%.

The greater diversity of the health sector across the UK is, in some respects, an indicator of the historic reliance on international recruitment to fill hard-to-fill vacancies. At times of rapid expansion in the sector, particularly during the late 1990s and early 2000s, international recruitment of large numbers of professionals was commonplace, particularly in the NHS. Nurses were sought from countries such as the Philippines, physiotherapists and medics from India, and dentists from Poland. This international recruitment was necessary due to the time lag for increased numbers of UK-based health professionals to complete training. The sector continues to operate in an international labour market, an issue that is reflected in the number of high skills occupations on the latest Skilled Shortage and Sensible list developed by the Migration Advisory Committee.

At a national level, the ethnicity profile of the whole economy workforce varies considerably. A significantly lower proportion of the workforce in Wales, Scotland and Northern Ireland are from a BAME background. This is a reflection of the lower levels of people from a BAME background in the general population (table 17).

Table 17: Ethnic group of health sector workforce

	Scotland	England	Wales	Northern Ireland	UK
White	96%	83%	94%	96%	85%
Black, Asian and minority ethnic group (BAME)	4%	17%	6%	4%	15%

Source: Labour Force Survey (2012)

5.5 The jobs people do

With over 180,000 people working in the Scottish health sector, and a diverse number of activities undertaken, it is no surprise that there are a variety of roles available across a range of different employers and businesses.

There are estimated to be over 300 different careers within the sector[9]. However, the number of different roles available is far greater than this. Roles within the sector are specialist in nature and require specialist training. Even within small occupational groups, there are sub-specialties where further study is required to undertake roles; for example, for many staff groups, there are differing qualification paths for working within paediatrics.

Specialists providing services to children will rarely be responsible for providing clinical care to adults. This is all underpinned by regulation, patient safety and best practice.

Before analysis of core national datasets, it is useful to outline some of the different types of careers that are available in the health sector. Clinical staff, providing direct patient care and including doctors, dentists, nurses and therapists, make up the majority of employees in the sector. However, there are a range of non-clinical support roles, such as admin and clerical staff that support the everyday business of employers.

Table 18 shows that the occupation profile of the health sector is very different to the profile of the whole economy. We can see that a high proportion of the health sector workforce can be found within professional occupations (which includes doctors, dentists, nurses, therapists, midwives, and dental technicians), with this group making up 53% of the health sector but only 19% of the whole economy.

This demonstrates, quite dramatically, the reliance of the health sector on high-level skills. These professional occupations typically require degree-level or above qualifications as a prerequisite to entry, and require a significant investment in time and money to train.

As well as the sector having a greater proportion of professional occupations than the whole economy, there is also a greater proportion of the workforce found in caring, leisure and other service occupations (18% versus 9%). This occupational group would include roles such as health care assistants, nursing assistants and therapy assistants.

Occupational breakdowns, detailing the types of roles found in each of the broad LFS categories, can be found in appendix 2.

[9] NHS Careers

Table 18: Occupation profile of the health sector and whole economy

	Scotland				United Kingdom			
	Health Sector		Whole economy		Health sector		Whole economy	
	N	%	N	%	N	%	N	%
Managers, directors & senior officials	4,500	2	219,700	9	77,400	4	2,977,800	10
Professional occupations	96,300	53	478,100	19	1,052,800	50	5,667,600	19
Associate professional & technical occupations	12,000	7	324,300	13	183,100	9	4,106,000	14
Administrative & secretarial occupations	21,700	12	269,400	11	285,600	14	3,253,100	11
Skilled trade occupations	200	0	271,600	11	12,700	1	3,153,200	11
Caring, leisure & other services occupations	32,500	18	227,000	9	354,600	17	2,637,100	9
Sales & customer service occupations	500	0	230,100	9	23,500	1	2,433,300	8
Process, plant & machine operatives	700	0	168,600	7	9,500	0	1,884,200	6
Elementary occupations	14,500	8	273,800	11	104,700	5	3,242,000	11
Total	183,000	100	2,462,500	100	2,104,000	100	29,354,300	100

Source: Labour Force Survey (2012)

The health sector in Scotland has proportionally fewer managers, directors and senior officials than the whole economy and UK average (2% compared to 9% for the whole economy and 4% for the UK health sector). Levels of administrative and secretarial staff are broadly similar to the whole economy, but again are lower than the UK average for the health sector.

This demonstrates that, in broad terms, the health sector in Scotland has a greater proportion of the workforce providing hands-on clinical care, and a lower proportion involved in management and administration compared to other parts of the UK.

5.6 Working patterns

Organisations in the health sector have worked hard to become an employer of choice over recent years. Through periods of recruitment, when competition for skills has been high, they have sought to set themselves apart from others by introducing working patterns and policies that are at the forefront of improving equality and diversity and improving the working lives of employees.

The health sector provides a 24-hour service, 365 days of the year, and this heavily influences working patterns. Whilst in some respects this may make some areas of work less attractive (due to the need to work unsociable hours), it also means that the sector can be innovative in offering working patterns that are flexible around the individual needs of employees. Employers adopt a range of working patterns that allow them to effectively attract and retain staff, whilst ensuring high quality service delivery. These working patterns include term-time working, annualised hours, 'long days' (where individuals work full-time hours over three days), job shares and flexi-time.

There is a higher proportion of the health sector that works part-time compared to other sectors across Scotland (table 19).

Table 19: Rates of part-time working

	Scotland Health sector			Scotland Whole economy		
	Male	Female	All staff	Male	Female	All staff
Full time	89%	57%	64%	87%	57%	73%
Part time	11%	43%	36%	13%	43%	27%

Source: Labour Force Survey (2012)

Higher overall levels of part-time working are intrinsically linked to high levels of female participation in the health sector workforce. The working patterns of male employees across the sector are the same as that found in the whole economy, indicating that female employees in the sector are probably balancing work with family caring commitments.

Those working in the sector are more likely to be employees than self-employed compared to other sectors. An estimated 95% of workers in the sector are employees, whilst 5% are self-employed. The rate of self-employment is considerably lower than the all-economy average, but is comparable to other sectors where the public sector has a large presence such as 'education' and 'government services'.

There are a number of reasons why the levels of self-employment may be lower in the health sector. These include:

- The majority of people working across the sector do so to deliver public services, and the high presence of the government in the sector makes being directly employed attractive.
- Professional bodies require all those practising in their relevant field, whether directly employed or self-employed, to adhere to core standards, and there may be core minimum standards relating to continuing professional development that some self-employed clinicians might struggle to meet without the diverse caseload that a large organisation can bring.
- There are further barriers related to liability. Self-employed practitioners are required to hold professional indemnity insurance to protect the individual against claims arising from medical malpractice, negligence, and breach of duty. Such insurance can be very costly depending upon the activities undertaken; the employer usually carries these risks and liabilities for those that are direct employees.

Within the health sector there are some professions where the levels of self-employment are higher; these tend to be based more around the therapeutic professions.

Table 20: Employees and self-employed

	Scotland Health sector	Scotland Whole economy
Employees	95%	89%
Self-employed	5%	11%

Source: Labour Force Survey (2012)

5.7 Conclusion

The health sector is important for overall employment in Scotland; one in fourteen Scottish workers are employed in it, and the activities of the sector contribute to maintaining the health of the population and the workforce across the entire Scottish economy.

In terms of employment, a large proportion of the workforce (80%) is engaged in activities in the public sector. Furthermore, the distribution of the workforce across the public, private and voluntary sector reflects the differing policy context in Scotland in comparison to other parts of the UK.

The overall profile of the health sector workforce outlined here creates a comprehensive picture of the health sector workforce of today, whilst also giving a glimpse into some of the potential workforce issues of tomorrow.

The data presented underlines how employers in the sector have positioned themselves in a competitive labour market. High levels of feminisation and part-time working are intrinsically linked to the flexible working practices offered by employers in order to attract and retain the talents of their workforce.

The occupation profile of the sector in Scotland demonstrates the focus on front-line patient care, with almost 80% of the workforce being deployed in clinical roles. By contrast, managers comprise just 2% of the total sector workforce in Scotland.

The highly regulated and professionalised nature of the sector is underlined by the tendency for those working in the sector to be employees rather than self-employed.

The age profile of the health sector is one area of concern for employers. The sector is older than others in Scotland and it is likely that, at a local level, there may be critical skills deficits created when individuals, particularly those in very small specialties, retire. Employers therefore need to ensure that they are working to effectively identify risk areas, and are addressing these through suitable training and development and talent management or succession planning.

The following section examines the data regarding vacancies and skills shortages within the health sector in Scotland.

6. Vacancies, skills shortages and training in the sector

Chapter summary

- The health sector is highly qualified in comparison to the whole economy. 68% are qualified to level 4 or above, in comparison to 44% of the whole economy in Scotland.
- This is slightly higher than the average across all health sectors of the UK (64%).
- There is a relatively low proportion of the health sector workforce in Scotland qualified to level 3 (8%); this may indicate an opportunity for employers to make better use of intermediate level skills.
- The sector reports fewer vacancies as a proportion of total employment than other sectors of the economy, and lower levels of hard-to-fill and skills shortage vacancies. Taken together, this indicates that the sector generally performs well in terms of balancing the supply of skills within the labour market and the demand for skills from employers.
- NHS data shows that, at a local level, some Territorial Health Boards are experiencing difficulties filling vacancies, with some reporting a significant number of long-term vacancies.
- There is an intrinsic link between the training of the professional healthcare workforce and employer need. Workforce planning activities within NHSScotland are hugely influential in shaping the number of training places commissioned for healthcare professionals.
- In 2011/12, just under 18,000 people were studying on health-related courses attached to a regulatory body for health.

6.1 Introduction

This section draws together data about vacancies, skills shortages and training in the sector. The data is drawn from several sources including the LFS, the UK Employer Skills Survey (UKESS 2011), Information Services Division (ISD), the Migration Advisory Committee and Higher Education Statistics Agency (HESA). The section draws comparisons between the data sets in order to attempt to create a rounded view of the match or mismatch between employer demand for skills and labour market supply. It gives a broad overview of the types of skills issues and skills shortages currently experienced in the sector.

6.2 Nature of skills used

For a sector to perform effectively it requires a sufficient and appropriate stock of skills within its workforce. Many attributes will influence the mix of skills needed and how these skills are used. These could include the individual organisation's activities, overall strategy, work structure and its use of technology. However, a recent literature review undertaken by UKCES (Campbell, Garrett and Mason, 2010) concludes that a high stock of qualifications in an organisation's workforce, among other factors, supports more effective achievement of its organisational goals. This implies that a high stock of qualifications should also support a high performing sector.

The health sector and its workforce are large and diverse. In this section we provide an overview of the skills used across the sector, and how they are distributed across the workforce.

6.2.1 Qualification levels

The health sector workforce is more highly qualified than the UK average. Almost 60% of the workforce are qualified to the equivalent of level 4 or above, compared to just over a third of workers across the whole economy. In addition, just 2% of the workforce has no qualification compared to an estimated 4% of workers across all sectors (table 21). This is most likely due to the fact that many occupations, including nursing, are heavily regulated, ensuring minimum skill requirements across large sections of the health sector workforce.

Table 21: Qualification profile of the workforce

	Scotland				United Kingdom			
	Health sector		Whole economy		Health sector		Whole economy	
	N	%	N	%	N	%	N	%
NQF Level 4 or above	123,300	68	1,096,851	44	1,339,300	64	11,675,450	40
NQF Level 3	13,800	8	430,182	17	250,200	12	5,643,441	19
NQF Level 2	18,900	10	420,485	17	241,400	11	5,379,866	18
NQF Level 1 or below	10,100	7	223,381	9	144,700	7	3,223,390	11
Other qualifications	9,600	5	149,103	6	78,600	4	1,820,426	6
No qualifications	6,800	4	149,191	6	47,400	2	1,707,645	6
	182,500	100	2,469,194	100	2,101,600	100	29,450,217	100

Source: Labour Force Survey (2012)

Overall, qualification levels in the sector reflect the fact that over half of the workforce is employed in professional or associate professional and technical occupations. Around nine out of ten of these have a qualification of level 4 or above. However, personal service occupations are the second largest major occupational group in the sector, accounting for around one sixth of the workforce. Around one quarter of this group either have no qualifications or a qualification below level 1 (UK Commission for Employment and Skills, 2011).

The comparatively low proportion of the workforce with qualifications at level 3 is of interest to the health sector. There may be an opportunity to make better use of qualifications at this level, to enable more effective skills utilisation at the intermediate level and more effective vertical delegation of activities across the workforce.

6.3 Vacancies and skills shortages

There are many reasons why vacancies arise within an organisation. These reasons are consistent across all part of the general economy; however, there are some unique characteristics of the health sector that makes movement around it easier for employees. This section explores the reasons vacancies might arise in the sector, and the types and levels of vacancies reported in national surveys contrasted with data from the NHS.

Vacancies within an organisation can arise due to:

- Normal retirement. This can be calculated based on the age of the workforce and an employer's retirement policy. However, pressure points can be reached when large numbers of people reach retirement age within a short period of time.
- Involuntary circumstances, generally beyond the control of either the employer or the employee. This could include death, ill health or dismissal.
- Voluntary resignation by the employee for their own reasons. These reasons are usually of most interest to those wanting to improve retention rates in organisations.
- Job creation by the employer.
- Internal movement of staff to other vacancies within the existing organisation.

It is important to recognise that the health sector is large, with employers spread throughout Scotland. Over recent years, the expansion in the number of employees in the health sector has meant that it has been relatively easy for people to find new jobs when they wish to move on to a different role or to progress their career.

The NHS facilitates movement between employers through continuity of terms and conditions and service. This may, in part, contribute to any retention issues reported by organisations.

We know that levels of movement around the sector are high[10], and whilst this does not mean that skills are lost to the sector overall, it does create issues for individual employers. These include recruitment and induction costs for new staff, temporary staffing costs, loss of knowledge and skills from the workforce and a loss of stability within teams.

An examination of vacancy levels at occupational level can help to identify any specific pressure points for the sector. This is important, particularly in the health sector, because the lead-in time to get sufficient numbers through education and training can be lengthy.

Table 22 shows that 9% of establishments in the health sector reported vacancies in professional occupations; this staff group includes roles such as hospital doctors, general practitioners and dentists. 5% reported vacancies in associate professional occupations[11], which includes roles such as nurses, physiotherapists and speech therapists.

6% reported vacancies in caring services roles, and 5% reported vacancies in administrative and clerical roles. The proportion of establishments reporting vacancies in all three of these occupation groups is greater than the whole economy average.

[10] The Mackinnon Partnership (2009), Identifying the Movement of the Workforce around the Sector. Skills for Health

[11] Please note that these definitions are different to those provided earlier in the report (Section 4). This is due to changes in the Standard Occupation Classification (SOC) codes since this survey was published – see appendix 3 for a full explanation.

Table 22: Employers reporting vacancies by occupation

	Scotland				UK			
	Health sector		Whole economy		Health sector		Whole economy	
	N	%	N	%	N	%	N	%
Managers, directors & senior officials	9	**	814	1	522	1	18,783	1
Professional occupations	295	9	1,426	1	3,823	7	37,601	2
Associate professional & technical occupations	163	5	1,485	2	631	1	51,880	2
Administrative & secretarial occupations	64	2	2,091	1	2,385	5	45,285	2
Skilled trade occupations	45	1	1,715	2	220	**	35,607	2
Caring, leisure & other services occupations	320	10	1,254	1	3,334	6	31,635	1
Sales & customer service occupations	0	0	1,730	2	72	**	37,961	2
Process, plant & machine operatives	0	0	832	1	57	**	18,684	1
Elementary occupations	91	0	1,937	3	580	1	41,164	2

Source: UK Employer Skills Survey (2011)
** Denotes a figure greater than 0% but less than 0.5%

The relatively high level of vacancies reported in the professional and associate professional staff groups are of concern for the sector. The training times for occupations in these categories are lengthy, their skills are highly regarded across the sector and the competition between employers for these skills is high. We also know that the caring roles make more use of generic and transferable skills; there is therefore much more competition for skills with other sectors where these roles are concerned.

The sectors competing for the skills utilised in the caring services occupations not only include the care sector but also, because of relatively low wage levels in these occupations, the retail sector.

In order to establish if there are serious recruitment issues, it is important to identify the proportion of vacancies that employers are finding it difficult to fill (hard-to-fill or HTF vacancies) and the proportion that are skills shortage vacancies (SSVs).

Skills shortage vacancies are defined as hard-to-fill vacancies where the causes of being unable to fill the vacancy include a low number of applicants with the required skills, a lack of relevant work experience or a lack of relevant qualification.

The health sector in Scotland reports lower levels of overall vacancies as a percentage of total employment compared to the whole economy (1% versus 2%). Of the vacancies reported, a lower proportion of those in the health sector are classed as hard-to-fill vacancies and skills shortage vacancies compared to the whole economy. The proportion of vacancies that are reported as hard-to-fill in the health sector in Scotland is 19%, compared to 20% in the whole economy, whilst the proportion of skills shortage vacancies in the health sector is 9%, compared to 14% in the whole economy.

Table 23: Profile of vacancies

	Scotland Health sector	Scotland Whole economy
Vacancies as a % of employment	1	2
Hard-to-fill vacancies as a % of vacancies	19	20
Skills shortage vacancies as a % of vacancies	9	14

Source: UK Employer Skills Survey (2011)

We are able to examine vacancies at a more detailed occupational level using NHS vacancy data. The table below shows data from the latest vacancy collection within the NHS in Scotland (June 2013). In general terms, it shows that the total vacancy rate across key occupation groups is generally higher than that reported in the UKESS.

Table 24: Summary NHS vacancy data (June 2013)

	Total vacant posts (WTE)	Of which vacant for <3months (<6months for consultants)	Of which vacant for >3months (>6months for consultants)	Total vacancy rate
Consultant	221.9	171.2	50.7	4.7%
Nursing & midwifery	1,672.9	1,298.3	353.4	2.8%
Allied health professions (AHP)	456.9	345.8	101.5	4.0%

Source: ISD (2013) NHS Scotland Workforce, Data as at 30 June 2013, published 27 August 2013 – data for consultants is for posts vacant for less than 6 months, or 6 months or more

The general pattern across these key staff groups appears to show that there are more issues for Scottish employers in the health sector around staffing posts that fall into the consultant and AHP groups than the nursing group. However, the majority of posts have been vacant for less than three months (75% of AHP posts, 77% of nursing and midwifery and consultant posts). This supports the earlier discussion regarding ‘churn’ in the sector, with employees moving around to gain valuable experience and further their careers. It also demonstrates that the overall health sector labour market is working relatively well across Scotland, with the right skills being available to employers within a short period of time of posts becoming vacant.

The tables that follow show the NHS vacancy data split by Territorial Boards. The Boards that are experiencing vacancy rates above the Scotland average are highlighted in dark blue. These must be interpreted with some caution as, for some Territorial Health Boards, the overall employment levels and levels of vacancies will be low, even though the rates appear higher than average.

In the nursing and midwifery staff group there appears to be some element of difficulty in the retention or recruitment of staff in certain Territorial Health Boards. In broad terms, the difficulties can be characterised by two main groups:

- High vacancy rates, indicating potential retention issues but no long-term recruitment issues – Territorial Health Boards in this category would include NHS Greater Glasgow and Clyde, and NHS Grampian
- High proportion of all vacancies that appear to be difficult to fill and have been vacant for more than three months – Territorial Health Boards in this category would include NHS Borders and NHS Fife, where the proportion of vacancies that have been vacant for three months or more exceeds 50%

Table 25: Vacancy data by Territorial Health Board – nursing and midwifery

Nursing	Total vacant posts	Of which vacant for <3months	Of which vacant for >3months	Total vacancy rate
Scotland	1,672.9	1,298.3	353.4	2.8%
East Region	304.8	188.3	116.5	2.2%
NHS Borders	50.9	24.0	26.9	4.3%
NHS Fife	102.9	49.5	53.5	3.0%
NHS Lothian	151.0	114.8	36.2	1.6%
North Region	497.5	369.1	125.0	3.5%
NHS Highland	92.0	68.2	23.8	3.0%
NHS Grampian	308.7	212.7	93.6	5.9%
NHS Orkney	9.0	7.0	2.0	4.9%
NHS Tayside	73.7	72.7	1.0	1.4%
NHS Western Isles	1.0	-	-	0.3%
NHS Shetland	13.1	8.5	4.6	6.7%
West Region	835.8	706.2	111.8	2.9%
NHS Ayrshire & Arran	17.8	-	-	0.4%
NHS Greater Glasgow & Clyde	565.1	528.3	36.8	3.6%
NHS Lanarkshire	139.1	104.2	34.9	2.7%
NHS Forth Valley	56.8	38.8	18.0	2.2%
NHS Dumfries & Galloway	57.0	34.9	22.1	3.2%
National bodies & special health boards	34.7	34.7	-	2.2%

Source: ISD (2013) NHS Scotland Workforce, Data as at 30 June 2013, published 27 August 2013

There are also some Territorial Health Boards that appear to be experiencing difficulty in the recruitment or retention of staff in the allied health professionals group. If we, again, characterise the difficulties by either a recruitment/retention difficulty we see:

- High vacancy rates, indicating potential retention issues but no long-term recruitment issues – Territorial Health Boards in this category would include NHS Greater Glasgow and Clyde
- High proportion of all vacancies that appear to be difficult to fill and have been vacant for more than three months – Territorial Health Boards in this category include NHS Fife, NHS Highland and NHS Grampian, where the proportion of vacancies that have been vacant for three months or more is close to, or greater than, 50%

It would therefore appear that employers are experiencing more difficulty recruiting to allied health professional roles than nursing and midwifery roles in a timely manner.

Table 26: Vacancy data by Territorial Health Board – allied health professionals

AHPs	Total vacant posts	Of which vacant for <3months	Of which vacant for >3months	Total vacancy rate
Scotland	456.9	345.8	101.5	4.0%
East Region	90.9	55.4	35.5	3.8%
NHS Borders	9.4	1.8	7.6	4.9%
NHS Fife	34.8	12.6	22.2	5.5%
NHS Lothian	46.7	41.0	5.6	3.0%
North Region	128.6	80.8	47.8	5.2%
NHS Highland	37.4	18.8	18.6	6.9%
NHS Grampian	58.1	31.9	26.2	6.1%
NHS Orkney	1.0	1.0	-	3.1%
NHS Tayside	31.1	29.1	2.0	3.6%
NHS Western Isles	-	-	-	-
NHS Shetland	1.0	-	1.0	2.7%
West Region	226.4	202.6	14.2	4.5%
NHS Ayrshire & Arran	9.6	-	-	1.4%
NHS Greater Glasgow & Clyde	163.1	158.8	4.3	5.9%
NHS Lanarkshire	19.6	17.6	2.0	2.2%
NHS Forth Valley	19.4	15.1	4.3	4.4%
NHS Dumfries & Galloway	14.7	11.1	3.6	5.7%
National bodies & special health boards	11.0	7.0	4.0	0.7%

Source: ISD (2013) NHS Scotland Workforce, Data as at 30 June 2013, published 27 August 2013

6.3.1 Impact of having hard-to-fill vacancies

There are many logical conclusions that can be drawn about the impact of hard-to-fill vacancies on the overall performance of an organisation and the workforce. Whilst the data examined above is interesting, it does not allow us to draw any firm conclusions about the definitive impact of having vacancies that are difficult to fill.

The UK Employer Skills Survey 2011 (UKESS11) provides some useful evidence at a UK level of the experience of employers who are dealing with vacancies that are hard to fill. Those employers in the UK health sector who could identify the main impact of hard-to-fill vacancies highlighted the following as the main issues:

- Increased workload for other staff (76%)
- Increased operating costs (41%)
- Difficulties meeting customer service objectives (36%)
- Difficulties meeting quality standards (34%)

It is clear from the above issues that employers in the health sector believe that hard-to-fill vacancies have a detrimental effect on the existing workforce, the efficiency of the organisation and the quality of care that can be provided.

The UKESS11 asked those employers with hard-to-fill vacancies about the measures they take to overcome these difficulties. Employers who did take action highlighted the following measures as those most commonly taken:

- Increasing advertising/recruitment spend (44%)
- Using new recruitment methods or channels (26%)
- Redefining existing jobs (11%)
- Increasing salaries (9%)

When asked about the measures they take, 15% of employers in the UK health sector responded that they did nothing. This is comparable with the average for the whole economy (14%).

6.4 International recruitment

Historically the health sector has relied on international recruitment, both from within and outside the EU, to fill skilled posts where the specialist skills required could not be sourced within the UK.

An indicator of where severe skills shortages currently exist within high skilled ‘professions’ can be found in the MAC Skilled, Shortage and Sensible occupation list for the UK and Scotland (Migration Advisory Committee, September 2011). Evidence for shortages across the UK health sector are gathered and submitted collaboratively by the Centre for Workforce Intelligence, Skills for Health, NHS employers and the Scottish Government.

The MAC list outlines the specialist roles within the health sector where the shortage is so severe that skills can be sought from outside the EU. It is clear that, for many of the staff groups on the list, the roles that are experiencing severe shortages require very specialist levels of skills in sometimes very specific health specialties. As such, overall numbers across the sector within the UK may be low.

The health sector roles that appear on the MAC Skilled, Shortage and Sensible occupation list are shown below.

Medical Practitioners (SOC 2211) in the following occupations ONLY

(UK wide list)

Consultant in emergency medicine, haematology and old age psychiatry

Non-consultant, non-training, medical staff post in anaesthetics, general medicine specialties delivering acute care services (intensive care medicine, general internal medicine (acute), emergency medicine (including specialist doctors working in A&E)), rehabilitation medicine and psychiatry

(Scotland only list)

ST3, ST4, ST5 and ST6 trainees in paediatrics or anaesthetics

SAS staff doctors in paediatrics or anaesthetics

Consultants in paediatrics or anaesthetics

Non-consultant, non-training doctors in obstetrics and gynaecology

Medical Radiographers (SOC 2217) in the following occupations ONLY

(UK wide list)

HPC-registered diagnostic radiographer, HPC-registered therapeutic radiographer and sonographer

Nurses (SOC 2231) in the following occupations ONLY

(UK wide list)

Specialist nurse working in neonatal intensive care

Medical & Dental Technicians (SOC 3218) in the following occupations ONLY

(UK wide list)

Nuclear medicine technologist, radiotherapy technologist

Source: Tier 2 Shortage Occupation List – valid from 6 April 2013
(Available from http://www.ukba.homeoffice.gov.uk)

The list appears to demonstrate that, in the medical specialties, Scotland is experiencing severe shortage issues in areas such as paediatrics and anaesthetics which are more acute than those seen currently in other parts of the UK.

6.5 Training activities

The sector is one where compliance is high; there are minimum standards of knowledge and skills required before individuals can qualify in professional roles within the sector. Registration with the appropriate professional body is mandatory for those undertaking professional clinical roles.

There is also an intrinsic link between training activities and the requirements of employers for workforce skills. Workforce numbers across the health sector are planned and managed carefully with regard to the workforce planning activities of Territorial Health Boards. Although not perfect – indeed, the planned requirements of employers could change quickly whilst the professional workforce takes many years to train and qualify - the system does mean that the numbers of professionals accessing training through higher education is managed.

This section focuses on the training activities in higher education and is drawn from data available from the Higher Education Statistics Agency (HESA) student record 2011/12.

6.5.1 Higher education training activities

In 2011/12, there were just over 216,000 people studying in higher education institutions in Scotland; of these, 65% were studying at First Degree level and 25% were studying at Post Graduate level. The general split across the levels of study in Scotland broadly reflects the split across the UK.

Table 27: Total number of higher education students by level of study – Scotland and the UK

	Domicile			Total
	UK (incl. Scotland)	Scotland	Non-UK	
Studying in Scotland				
Post Graduate	32,242	23,261	21,871	54,113
First Degree	118,371	98,956	21,822	140,193
Foundation Degree	0	0	8	8
Other Undergraduate	19,731	18,805	2,274	22,005
All levels of study	170,344	141,022	45,975	216,319
Studying in the UK (incl. Scotland)				
Post Graduate	353,750	28,147	207,194	560,944
First Degree	1,325,119	112,539	195,475	1,520,594
Foundation Degree	76,621	767	2,665	79,286
Other Undergraduate	280,874	28,235	23,918	304,792
All levels of study	2,036,264	169,688	429,252	2,465,616

Source: HESA Student record (2011/12)

Of the total number of students in higher education in Scotland, approximately 8% (17,878) are studying on health-related courses attached to a regulatory body for health.

We can examine the age profile of these students split by their level of study. This analysis shows that there are differing age profiles dependent upon the level of study being undertaken.

Across all levels of study there is a 'spike' in the proportion of students between the ages of 18 and 24, with this age group making up 67% of all students on higher education health-related courses in Scotland.

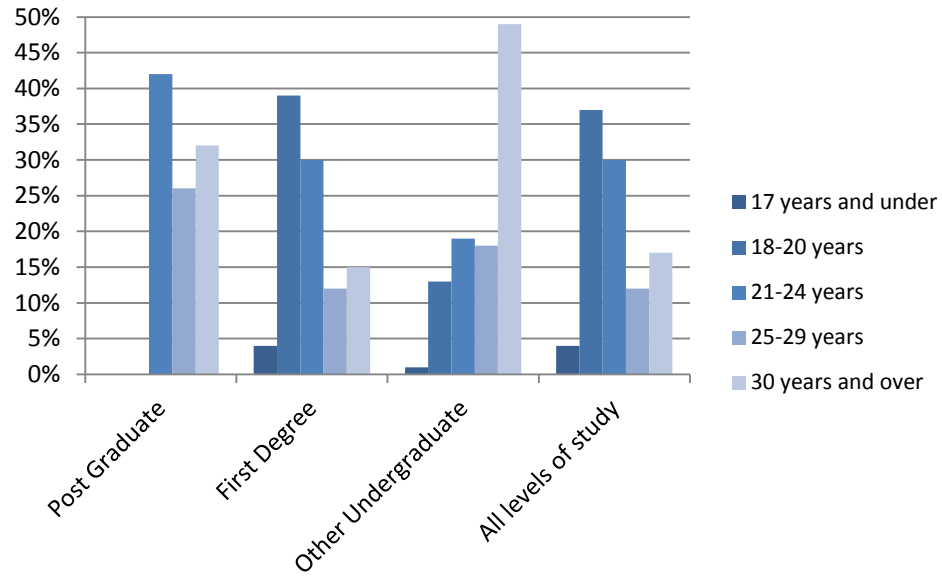
Unsurprisingly, those students on Post-Graduate level courses are 'older' than those studying First Degrees. We also see that the 'other undergraduate' courses appear to be more popular with students aged over 30 than other levels of courses.

Table 28: Age profile of students on health-related courses (registered with health) – in Scotland

	Post Graduate	First Degree	Other Undergrad	All levels of study
17 years and under	0	683	12	695
18-20 years	1	6399	153	6553
21-24 years	112	5015	212	5339
25-29 years	70	1955	202	2227
30 years and over	86	2416	562	3064

Source: HESA Student record (2011/12)

Chart 5: Age profile of higher education students studying health courses in Scotland



Source: HESA Student record (2011/12)

There is some interesting intelligence when we examine the percentage of students who live in Scotland that choose to study there. The data shows that 88% of Scottish students studying at higher education institutions in the UK choose to remain in Scotland to study.

Table 29: Percentage of Scottish domicile students studying in the UK choosing to study in Scotland

Post Graduate	83%
First Degree	88%
Foundation Degree	0%
Other Undergraduate	67%
All levels of study	83%

Source: HESA Student record (2011/12)

In line with the gender profile that we have seen across the health sector workforce, the profile of students in higher education is highly feminised. This holds true across all levels of study, with those in the 'other undergraduate' category even more likely to be female. Taken with the age profile, it is likely that individuals studying in the 'other undergraduate' category are older females who are perhaps seeking to return to work or change career, potentially with some form of existing caring responsibilities for either children or elderly relatives.

Table 30: Gender profile of health students in Scottish institutions

	Post Graduate		First Degree		Other Undergrad		All levels of study	
Female	213	79%	12,705	77%	948	83%	13,866	78%
Male	56	21%	3,763	23%	193	17%	4,012	22%

Source: HESA Student record (2011/12)

The HESA data allows us to examine the broad destination of students who have been studying in higher education institutions in Scotland. The table below shows that, in comparison with individuals studying non-health-related courses, those undertaking health-related studies are more likely to join the workforce after the completion of their course.

Table 31: Destination of health-related leavers (HESA leavers survey)

	Health		Non-health	
Full-time work	2,121	50%	16,448	27%
Part-time work	430	10%	3,407	6%
Primarily in work and also studying	58	1%	822	1%
Primarily studying and also in work	22	1%	907	1%
Full-time study	36	1%	4,817	8%
Part-time study	9	0%	256	0%
Due to start work	22	1%	153	0%
Unemployed	55	1%	1,800	3%
Other	57	1%	1,317	2%
Not applicable	1,402	33%	31,819	52%
Total	4,212	100%	61,746	100%

Source: HESA Student record (2011/12)

We can also examine where the students from higher education institutions in Scotland are working. The data shows that 78% of students on health-related courses that are studying at Scottish HEIs and in work are working in Scotland. This is a slightly higher percentage than those on non-health-related courses (75%).

Table 32: Of those working – location of employment

	Scotland institutions			
	Health	Non-health	Health %	Non-health %
Total students working	2,631	21,584		
Total working in Scotland	2,040	16,219	78%	75%
Total working elsewhere*	591	5,365	22%	25%
*Including not known	14	151	<1%	<1%

Source: HESA Student record (2011/12)

6.6 Conclusion

The health sector relies on a highly skilled and highly qualified workforce to deliver services across Scotland. The proportion of the health sector qualified to level 4 and above far exceeds the average across the whole economy.

There is an intrinsic link between the demand for skills and the supply of professionals through education and training within the health sector. Unlike other areas of the economy, the health sector labour market is much more tightly managed and planned. The data that is available would appear to indicate that the labour market is broadly in balance, signalling that the systems in place for workforce planning across the health sector, and the links to planning education and training, are robust and working well.

Of course, no system is perfect; workforce requirements can change quickly and it can take many years to train healthcare professionals. There is evidence that in a small number of very specialist roles there are difficulties attracting people with the right skills to work within Scotland. These areas feature on the Migration Advisory Committee shortage occupation list, and employers are able to seek these skills from outside the EU.

There is also evidence that some geographical areas of Scotland may be experiencing more difficulty attracting workers than others, with NHSScotland data showing long-term vacancies in some occupation groups in a small number of Territorial Health Boards.

There is significant investment in training the workforce of the future, with high numbers of individuals undertaking health-related courses attached to a regulatory body for health.

The following section examines the skills deficiencies in the current health sector workforce (skills gaps) and outlines the reported effects of this on organisational performance.

7. Skills gaps

Chapter summary

- Employers in Scotland estimate that 6% of the health sector workforce is not fully proficient in their role. This is broadly in line with averages across the UK and the whole economy.
- The causes of skills gaps within the health sector in Scotland primarily relate to the work-readiness of new employees.
- The top skills identified as lacking in the workforce include team working, customer handling, written communication, job-specific skills and strategic management.

7.1 Introduction

This chapter examines the extent to which there is a mismatch between the skills needs of health sector employers and the skills available within the existing workforce. It utilises the UK Employer Skills Survey to examine the level of reported skills gaps within the current workforce, as well as looking at the reasons identified by employers for these gaps.

The data provides a high-level overview of the types of skills that employers report as lacking in their current workforce, with a comparison against the whole economy in Scotland and the health sector across the UK.

7.2 Extent and nature of skills issues

Skills gaps are said to exist in an establishment when the employer indicates that staff at the establishment are not fully proficient in their jobs. There are many things that occur within organisations that can create skills gaps within the workforce, including:

- Changing services requiring individuals to undertake new tasks
- The introduction of new technology in the workplace
- Movement of staff from one part of the organisation to another to cope with service demands
- Promotion of individuals within the workplace to higher grades

Skills gaps can be expressed as a percentage of employers reporting skills gaps and the percentage of employees with skills gaps.

Table 33 shows that 24% of establishments in the Scottish health sector reported skills gaps in their workforce, compared to 16% in the whole economy. The percentage of employers reporting skills gaps has been consistently higher in the health sector than in the whole economy in most historic skills surveys. This could indicate that employers in the health sector are relatively proactive at identifying skills gaps.

At the employee level, employers in Scotland estimate that 6% of the health sector workforce is not fully proficient in their role, compared to an average of 5% across the UK and the whole economy.

Table 33: Percentage of employers and employees with skills gaps

		Employers with skills gaps	Employees with skills gaps
Scotland	Health sector	24	6
	Whole economy	16	5
United Kingdom	Health sector	19	5
	Whole economy	13	5

Source: UK Employer Skills Survey (2011)

Table 34 outlines that the main causes of skills gaps identified among employers in the health sector in Scotland are:

- Employee training is currently only partially completed (53%). More health employers cite this as the main cause of skills gaps than the all-sector average (50%).
- Employees are new to the role (60%). This is perceived as more of a significant cause of skills gaps than in the wider economy (51%).
- More employers in health state that skills gaps are caused by the fact that employees have not received appropriate training (35%) than in the whole economy (23%).

These causes of skills gaps highlight the importance of work-readiness in new employees. The sector is one where regulation is high and, as such, requirements for organisations to assure themselves of the clinical competence of staff is also high.

Table 34: Causes of skills gaps – Scotland and UK

	Scotland		UK	
	Health sector	Whole economy	Health sector	Whole economy
They are new to the role	60	51	37	47
Their training is currently only partially complete	53	50	40	46
Staff lack motivation	7	27	35	32
They have been on training but their performance has not improved sufficiently	38	32	21	29
The introduction of new working practices	39	24	24	23
They have not received the appropriate training	35	23	37	23
Unable to recruit staff with the required skills	4	16	28	18
The introduction of new technology	41	17	19	17
The development of new products and services	32	17	14	15
Problems retaining staff	14	9	11	10
Lack of other skills e.g. communication, interpersonal	2	1	1	1
Lack of aptitude to do job/reach maximum potential	1	1	**	1
Non-work related problems e.g. health or personal problems	0	1	**	1
Language barrier – English not first language	1	0	1	1
Staff are too old to carry out the work required	0	0	**	*
Other	0	1	1	2
No particular cause	0	1	**	1
Don't know	34	18	23	19

Source UK Employer Skills Survey (2011)

Many newly qualified clinical staff will undertake a period of preceptorship under the observation and guidance of more experienced staff; this allows the individual to consolidate the learning that they have recently completed and work on areas of skills development.

Whilst not compulsory, it is seen as good practice in helping employees through the transition from student to clinician. Given this culture within the sector to acknowledge that new staff will not be fully proficient within their roles on joining, it is not surprising that the top three causes of skills gaps relate to issues of work-readiness.

It has already been established that the composition of the health sector workforce is complex, with numerous distinct roles, many of which require qualifications at a very high level. These roles, however, are also subject to constant change; the innovations that are led by the sector in identifying, managing and treating disease mean that the knowledge and skills of those in it is constantly in need of updating.

This is recognised by employers, regulatory bodies and employees through their commitment to continuing professional development.

Table 35 shows that the skills lacking in the health sector workforce and therefore in need of improvement are:

- Team working (52%)
- Customer handling (47%)
- Written communication (44%)
- Job-specific skills (40%)
- Strategic management (35%)

With the exception of 'job-specific skills', all the above deficiencies were higher in the health sector than in the whole economy. Other areas where skills gaps were higher in the health sector than the whole economy included 'basic computer literacy/using IT' and 'office admin skills'.

Table 35: Skills lacking within the workforce, Scotland and UK

	Scotland		UK	
	Health sector	Whole economy	Health sector	Whole economy
Basic computer literacy/using IT	28	21	22	17
Advanced IT or software skills	12	17	14	15
Oral communication skills	32	33	24	34
Written communication skills	48	28	44	28
Customer handling skills	51	38	47	38
Team working skills	60	42	52	38
Foreign language skills	7	10	5	9
Problem solving skills	52	42	28	35
Planning and organisation skills	50	45	29	39
Strategic management skills	40	21	35	19
Numeracy skills	16	16	12	15
Literacy skills	17	16	18	19
Office admin skills	24	17	18	16
Technical or practical skills	19	31	17	27
Job-specific skills	59	56	40	48
Personal attributes (e.g. motivation, work ethos, common sense, initiative, reliability)	0	0	*	1
Experience/lack of product knowledge	2	1	1	1
Other	0	0	*	*
No particular skills difficulties	0	2	1	3
Don't know	34	18	23	19

Source: UK Employer Skills Survey (2011)
% of all skills gaps followed up
*Sample size too small for a reliable estimate, data suppressed

7.3 Conclusion

Skills deficiencies in the current workforce are no more an issue in the health sector in Scotland than in the whole economy or the rest of the UK.

Employers in the sector identify a number of causes for skills deficiencies or skills gaps, most of which relate to issues of work-readiness of new employees. This is not surprising given the highly complex nature of problems that individuals working in the sector are likely to encounter. There is also a culture within the sector that recognises that the transition from

student to clinician needs to be supported and managed. Newly qualified clinical staff are not expected to enter the workforce and be fully proficient within their role.

Many of the main skills identified as lacking in the workforce relate to 'generic' skills such as team working, customer handling and written communication. Given the wide spread of roles utilising generic skills within the sector, it is not surprising that these non-technical skills rank higher than job-specific skills for employers.

Further research and exploration of these issues with employers would be useful to identify if they feel these generic skills deficiencies are being addressed in a robust way, and whether these skills gaps are potentially blocking health sector organisations from performing at an optimum level.

The following section examines the latest employment projections that are available for the health sector.

8. Projections of future employment

Chapter summary

- Whole economy projections of employment (Working Futures 2010 – 2020) anticipate that the health sector in Scotland will contract by 13% over the period; this is the largest projected contraction in any country in the UK.
- The Labour Force Survey shows that workforce numbers across the sector have contracted by approximately 8% since 2010.
- NHS workforce numbers over the same period have shown a small increase (2%).
- Further tracking of overall workforce numbers will be of interest to the sector; however, it appears at present that the workforce composition of different parts of the sector may be changing at very different rates.

8.1 Introduction

Projections of employment are a useful way to attempt to understand the demand for employment in a particular sector in the future.

Working Futures 2010-2020 is the latest in a series of detailed projections of UK employment, productivity, labour supply and skills. The projections are published by the UK Commission for Employment and Skills (UKCES). They provide an overview of projected employment patterns across the whole of the UK and all sectors of the economy.

Projections are not intended to be prescriptive in nature; they attempt to look at the main political, economic and social drivers that impact upon a sector and provide an indication of the magnitude of change that may happen based upon the assumptions used.

We contrast the Working Futures projections with subsequent releases of the Labour Force Survey and NHSScotland Workforce data in order to examine how employment in the sector has actually changed in comparison to the projections.

8.2 Working Futures 2010 - 2020

In broad terms, the Working Futures 2010-2020 employment projections indicate a picture of many sectors contracting in the first half of the decade (2010–2015), with growth returning in the second half of the decade (2015-2020).

The overall projections for Scotland show a small increase in employment across the whole economy - (2%) over the period 2010-2020 - and a large contraction in overall employment levels in the health sector (13%) over the same period.

Table 36: Projected employment change 2010–2020, health sector, UK overview

Employment change	UK	England	Scotland	Wales	Northern Ireland
Managers, directors and senior officials	6%	7%	-7%	8%	20%
Professional occupations	6%	6%	-7%	20%	2%
Associate professional and technical	6%	6%	-8%	20%	15%
Administrative and secretarial	-32%	-32%	-37%	-28%	-29%
Skilled trades occupations	-39%	-39%	-39%	-38%	
Caring, leisure and other service	7%	8%	-3%	20%	-5%
Sales and customer service	-11%	-11%	-21%	-3%	
Process, plant and machine operatives	-43%	-45%	-38%		
Elementary occupations	-43%	-44%	-40%	-35%	-30%
All occupations	-1%	-1%	-13%	12%	-3%

Source: Working Futures (2010–2020)

The overall pattern of the projected contraction of employment numbers for the health sector in Scotland is a fall of 10% in overall numbers between 2010 and 2015, and a further 3% fall in employment numbers between 2015 and 2020.

Examination of the change in overall health sector and NHS employment from 2010 to 2012 shows that total employment in the health sector in general, as measured by the Labour Force Survey, is following a pattern projected by Working Futures 4, with an 8% decrease in employment numbers between 2010 and 2012.

NHSScotland, however, has seen much smaller levels of overall contraction in headcount numbers, with only a 2.2% decrease between September 2010 and September 2012.

Table 37: Changes in health sector employment 2010–2012, Scotland

	2010	2012	2010–2012 change
Labour Force Survey	199,000	183,000	-8.0%
NHS*	159,752	155,281	-2.2%

*Sept figures, Source, ISD. NHSScotland Workforce Statistics, headcount figures used

Figures from NHSScotland produced since September 2012 also show that overall employment numbers are slowly rising, with a 0.9% increase in overall headcount numbers reported between September 2012 and June 2013.

8.3 Conclusion

Projecting employment numbers at a sectoral level is never a precise science. Working Futures is useful in order to obtain a general sense of direction in overall employment numbers and the figures should not be viewed as prescriptive.

The contrast that we are able to draw between the Labour Force Survey and NHSScotland Workforce Statistics could provide some additional insight into the ways in which the changes in employment numbers are perhaps not happening uniformly across the sector. The continued monitoring of changes in employment numbers across different parts of the health sector over the medium term will be of interest to both policy makers and key stakeholders.

9. Conclusion

This report provides a comprehensive overview of the available Labour Market Intelligence available for the health sector at the time of publication.

It is useful to frame the issue surrounding employment within the sector in the context of Scottish Government health policy. The drive from government to emphasise or prioritise certain aspects of health activity not only influences overall employment numbers but also the demand for specific occupations.

The geographical context for the health sector in Scotland creates unique challenges and debates for policy makers and employers. The dispersed nature of the population over large remote geographical areas raises debate around how best services can be delivered in order to ensure that there is equitable access to advice and guidance, and also suitably qualified and competent health professionals. The geographical context also has very positive impacts upon the sector; there is evidence that employers in Scotland have embraced technology as a means of providing the link between patients in rural areas and clinicians in more densely populated areas. The continued rollout of broadband and 3G internet access could be crucial in meeting demand in the future.

In broad terms, the health sector in Scotland is performing well and the literature on health improvements across Scotland paints a positive and improving picture. There is continued commitment to investing in the health sector and working across agencies to deliver the best outcomes possible for the population of Scotland.

There are, however, many challenges ahead for the sector. There are undoubtedly areas of Scotland where incidence of ill health and social factors such as levels of deprivation remain high. The focus on the interaction between socio-demographic factors, the existing incidence of ill health and lifestyle factors must remain a priority in order to ensure that the development of high impact, high quality health interventions continues in Scotland.

The ageing population and the changing composition of households will continue to be major drivers of the health sector. The use of public health and wellbeing interventions targeted at those who currently lead unhealthy lifestyles will also be key to ill-health prevention and reducing demand upon the health sector in the long term.

The story of employment in the sector is largely very positive. The distribution of the workforce across Scotland mirrors the population distribution. The occupation profile underlines the focus on front-line patient care, with almost 80% of the workforce being deployed in clinical roles. By contrast, managers comprise just 2% of the total sector workforce in Scotland.

The age profile of the health sector is likely to be one area of concern for employers; the sector is older than others in Scotland, and there are likely to be large proportions of the workforce retiring in the medium term. Employers therefore need to ensure that they are working to effectively identify risk areas and address these through suitable training, development and talent management or succession planning.

There is evidence that the demand for and supply of skills are broadly balanced. Reported levels of vacancies across the health sector in Scotland are no greater than in other parts of the UK or the general economy.

Some Territorial Health Boards are reporting significant numbers of long-term vacancies that they are finding it difficult to fill, and there are a small number of clinical specialisms where employers have to seek skills from outside the EU. Providing a suitable supply of skills in all areas of the health sector is always a difficult balance as it takes many years to train health professionals. These skills shortages, however, should be the focus of employers and education and training commissioners to ensure that the demand for skills is met in the longer term.

In looking at the reported data on the skills deficiencies of the current workforce, we have found that many of the main skills identified as lacking relate to 'generic' skills such as team working, customer handling and written communication.

Further research and exploration of these generic skills deficiencies with employers would be useful in order to identify if they feel they are being addressed in a robust way, and whether these skills gaps are potentially blocking health sector organisations from performing at an optimum level.

Finally, we have examined the latest econometric projections of employment for the health sector. The projections show significant contraction in overall employment numbers for the health sector between 2010 and 2020. The latest data from the Labour Force Survey and the NHS demonstrates that, whilst the direction of travel within the projections is broadly correct, the magnitude of the contraction is probably not going to be as significant as projected, particularly in the NHS.

Having drawn all of the data and intelligence together, there are a number of areas that we regard as priorities for the health sector and policy makers in Scotland. These are:

Age: The ageing population and the age profile of the workforce are both likely to be key drivers for service and workforce priorities in the medium to long term. The age profile of the population is already driving changes in service provision and will continue to do so. Employers also have to continue to respond to the ageing workforce. This report has identified some possible solutions, such as enabling older workers to continue working longer (beyond normal retirement age) through flexible working practices, or redesigning roles to facilitate the retention of people in roles for longer.

Succession planning: Intrinsically linked to the age profile of the sector, employers must ensure that they systematically examine future skills gaps and skills shortages that may arise due to retirements, particularly in areas of small specialties requiring high-level skills. Employers in the sector should examine ways in which they could work collaboratively to identify suitable individuals for development and promotion to fill future posts, identifying mentors and ensuring that, in service-critical areas in particular, retirees have a suitable handover period in order to pass on their knowledge and skills.

Managing careers: The sector within Scotland has an opportunity to enhance collaborative working and more effectively manage careers by developing the skills base of individuals through experience with different employers. Movement around the sector, particularly internal movement around the NHS, is a reality for employers that they should embrace as an opportunity. Health Boards could work together to identify areas where responsibility for skills development of certain sections of the workforce could be shared in such a way as to encourage movement between employers at certain career stages. This could help address some areas of skills shortages/recruitment difficulties and could also give people a broader experience base, better preparing them for higher level, more specialist roles.

Intermediate level skills: The data on qualification levels appears to indicate that there is the opportunity for employers to make more effective use of skills at the intermediate level. Increasing the number of workers with level 3 skills may not be appropriate for all employers in all areas of Scotland, but examining the opportunity to make better use of skills at this level could assist some in addressing skills shortages and enhancing career development.

Appendix 1 – Glossary of data sources

This report draws upon a wide range of data sources. This section is intended to provide an overview of the data sources, together with some narrative of how the data has been handled to produce the information within this report. We have split the sections into sources that have come from National Statistics, Scottish Government or affiliated sources and those that have come from other sources.

9.1 National Statistics and Scottish Government sources

Government data

The following datasets are all drawn from government sources. The links provided are to the pages where data downloads have been obtained for the purposes of this report:

- **Population projections** – data was drawn from the General Register Office for Scotland http://www.gro-scotland.gov.uk/statistics/theme/population/projections/scotland/2010-based/tables.html
- **Census** – data was drawn from Scotland's Census 2011 website http://www.scotlandscensus.gov.uk/en/censusresults/downloadablefiles.html
- **Scotland Index of Multiple Deprivation** - data was drawn from the Scottish Index of Multiple Deprivation portal http://simd.scotland.gov.uk/publication-2012/
- **Scotland Public Health Observatory data** - http://www.scotpho.org.uk/
- **NHS Data** - NHS data is drawn from Information Services Division Scotland (ISD) http://www.isdscotland.org/Health-Topics/workforce/

Labour Force Survey

About the survey

One of the key data sources used within the report is the Office for National Statistics' (ONS) Labour Force Survey (LFS). The LFS is a survey of households living at private addresses (plus in NHS accommodation and

student halls of residence) in the UK. It is a survey of the employment circumstances of the UK population.

The survey is the largest household survey in the UK and provides the official measure of employment and unemployment. It is carried out on a quarterly basis with a sample of around 41,000 responding (or imputed) households in Great Britain every quarter, and around 1,600 households in Northern Ireland. The LFS uses a rotational sampling design, which means that, once selected, a household[12] is kept in the sample for a total of five consecutive quarters. The numbers reported by the LFS are likely to differ from other employer-based surveys, and this is a function of the methodology used.

The Labour Force Survey uses international definitions of employment, unemployment and economic inactivity, together with a wide range of topics such as occupation, training, hours of work and personal characteristics of household members aged 16 and over. The survey allows us to estimate the size of individual sectors as defined by Standard Industrial Classification (SIC) codes and the number of people working in given occupations as defined by Standard Occupation Classification (SOC) Codes.

The LFS is particularly useful for making broad comparisons between Scotland, England, Wales and Northern Ireland. It also enables international comparisons to be made, and is often used as the basis for OECD studies which compare the performance of advanced economies.

Preparation of LFS data for this report

The data within the LFS tables was prepared in five stages:

1. The original survey data was downloaded from UK Data Archive in SPSS format.

2. Data for SIC 86 (Health) was copied out into a new data sheet – this produced separate data sheets for the health sector and the whole economy for each quarter.

3. Each data sheet (eight in total) was analysed within SPSS to produce the tables presented in the report for Scotland and the UK – these were copied into MS Excel.

4. The annual data presented is based upon an average of four consecutive quarters of data, from quarters one to four, 2012.

5. The above process was then repeated for SIC 87 (Social Care) at the request of the reference group.

[12] Note - it is the address that is selected and not necessarily the particular people who live there.

ACORN and ACORN Wellbeing

ACORN is a consumer classification tool, which uses a wide range of data to segment the UK's population into different demographic types. The data drawn into ACORN includes public, census, lifestyle and commercial data.

There are two aspects of ACORN classification that we use within Skills for Health:

- ACORN Population, which segments households, postcodes and neighbourhoods into 6 categories, 18 groups and 62 types.
- ACORN Wellbeing, which segments households into 4 groups and 25 types.

The broad range of data that is used means that we are able to look at the population in a more complete and rounded way. ACORN provides a ready link between data that we might look at separately, such as age, ethnicity, housing type, deprivation and income etc. The way in which it then draws these together into a population or health 'type' allows us to more easily make links with other data.

One unique aspect of ACORN Wellbeing is its 'predictive' health types. By examining lifestyle data together with all of the other data, it can identify groups of the population that are likely to have health issues in the future, even though they are healthy now. This can be very powerful in the context of the health sector when seeking to understand long-term demand for services, or trying to identify the areas where public health campaigns should be targeted.

UK Employer Skills Survey 2011

The UK Employer Skills Survey 2011 (UK ESS 11) was the first large-scale economy-wide employer skills survey to be conducted across the whole of the UK with support from all four national governments.

The survey was managed by the UK Commission for Employment and Skills and was conducted by three contractors: IFF Research, BMG Research and Ipsos Mori. The project steering group included representatives from all four nation governments, the Alliance of Sector Skills Councils, the Department for Work and Pensions and the Skills Funding Agency.

Fieldwork was carried out from March to July 2011. Two waves of interviews were conducted. The main survey involved telephone interviews with approximately 87,600 employers, and a follow-up survey focusing on investment in training was undertaken with over 11,000 respondents. The data presented within this report draws only on information gathered from the main survey.

The table below provides information on the number of employers interviewed in each of the four UK nations for the main survey.

Nation	Number of employers interviewed from all sectors
England	75,054
Scotland	2,503
Wales	6,001
Northern Ireland	4,014
UK	**87,572**

UK ESS 11 is a quota survey. Quotas were set on a size by sector within nation / English region basis. In Northern Ireland and Wales, where more interviews were carried out than the required minimum to get national representation, they were predominately distributed in proportion to the population.

In order to include the maximum number of questions without extending the overall length of the interview, the sample was randomly split in half for some sections; one set of employers was asked one module of questions, and the other half of the sample, different questions.

The survey is a local unit (establishment) survey. This means that, for large multi-site organisations, several branches/locations may have been interviewed. The establishment level sampling reflects the fact that the survey asks employers about issues that need to be answered by people with day-to-day contact with employees rather than head office.

Respondents are those who have the best overview of HR and training within the establishment. This will tend to be HR or training managers in large establishments and owner/managers or senior managers within small establishments.

The valid population of establishments being used in UK ESS 11 is all establishments, with the exception of sole traders (this means that establishments with no employees where the only person working there is the proprietor (e.g. a private physiotherapist working for themselves with no employees) are excluded). In addition, establishments with multiple working proprietors but no employees are also included.

Within the report, data based on unweighted bases of less than 25 have been suppressed for quality reasons. In addition, data based on unweighted bases of between 25 and 50 have been marked as indicative.

Finally, occupations within the survey are defined by 2010 Standard Occupational Classification codes, and sectors are defined by 2007 Standard Industrial Classification codes.

Please visit the UK Commission's Employer Surveys website for further information, including the full survey report and questionnaire.

https://ness.ukces.org.uk/default.aspx

The results presented in this report from the UKESS11 have come directly from UKCES; we are not able to conduct any in-depth analysis on the raw data or survey results.

Working Futures

Working Futures 2010-2020 is the latest in a series of detailed projections of UK employment, productivity, labour supply and skills. The projections were prepared by the Institute for Employment Research (IER) and Cambridge Econometrics (CE), on behalf of the UK Commission for Employment and Skills (UKCES).

The projections are calculated from a number of different data sources, including the Annual Business Inquiry, the Business Register and Employment Survey, and the Labour Force Survey. The results provide a picture of employment prospects up to 2020 by industry, occupation, qualification level, gender and employment status for the UK as a whole, the four nations, and English regions.

As with all projections and forecasts, the results presented in Working Futures should be regarded as indicative of likely trends and orders of magnitude (given a continuation of past patterns of behaviour and performance), rather than precise forecasts of the future. At a time of great uncertainty about the short- to medium- term prospects for the economy, it is important to stress the value of Working Futures in aiding understanding of likely prospects for employment in the longer term (i.e. in 2020). Readers should therefore focus on the relative position of sectors and occupations in 2020, and treat the projected values as broad indicators of scale rather than exact predictions.

Further methodological details can be found on the UK Commission's website - http://www.ukces.org.uk/publications/working-futures-technical-report

10. Appendix 2 – ScotPHO indicators

Statistically significantly 'worse' than Scottish average
Statistically not significantly different from Scottish average
Statistically significantly 'better' than Scottish average
Statistically significant difference compared to Scottish average
No significance can be calculated

Domain	Indicator Number	Indicator \ NHS Health Board	Ayrshire & Arran	Borders	Fife	Greater Glasgow	Highland	Lanarkshire	Grampian	Orkney	Lothian	Tayside	Forth Valley	Western Isles	Dumfries & Galloway	Shetland
Life Expectancy and Mortality	1	Life expectancy - males														
	2	Life expectancy - females														
	3	Deaths all ages														
	4	Early deaths from coronary heart disease (under 75)														
	5	Early deaths from cancer (under 75)														
	6	Early deaths from cerebrovascular disease (under 75)														
Behaviours	7	Smoking attributable deaths														
	8	Smoking prevalence	#	#	#	#	#	#	#	#	#	#	#	#	#	#
	9	Patients hospitalised with alcohol conditions														
	10	Deaths from alcohol conditions														
	11	Patients hospitalised with drug related conditions														
	12	Active travel to work														
	13	Sporting participation														
Ill_Health_and_Injury	14	Patients registered with cancer														
	15	Patients hospitalised with COPD														
	16	Patients hospitalised with Coronary Heart disease														
	17	Patients hospitalised with cerebrovascular disease														
	18	Patients hospitalised with asthma														
	19	Patients hospitalised as an emergency														
	20	Patients (65+) with multiple hospitalisations														
	21	Road traffic accident casulties														
	22	Patients hospitalised after a fall in the home (65+)														
	23	Prevalence of diabetes														
Mental Health	24	Patients prescribed drugs for anxiety/depression/psychosis														
	25	Patients with a psychiatric hospitalisation														
	26	Deaths from suicide														
Social Care and Housing	27	People (65+) receiving free personal care at home														
	28	Adults claiming incapacity benefit/severe disability allowance														
	29	People (65+) with intensive care needs cared for at home														
	30	Households assessed as homeless	#	#	#	#	#	#	#	#	#	#	#	#	#	#
	31	Children looked after by Local Authority														
	32	Single adult dwellings														
	33	Households in extreme fuel poverty	#	#	#	#	#	#	#	#	#	#	#	#	#	#
Education	34	Average tariff score of all pupils on the S4 roll	#	#	#	#	#	#	#	#	#	#	#	#	#	#
	35	Primary school attendance														
	36	Secondary school attendance														
	37	Working age adults with low or no educational qualifications	#	#	#	#	#	#	#	#	#	#	#	#	#	#
Economy	38	Population income deprived														
	39	Working age population employment deprived														
	40	Working age population claiming Jobseeker's Allowance														
	41	Dependence on out of work benefits or child tax credit														
	42	People claiming pension credits (60+)														
Crime	43	Crime rate														
	44	Prisoner Population														
	45	Referrals to Children's Reporter for violence-related offences														
	46	Patients hospitalised after an assault														
Environment	47	Population within 500 metres of derelict site														
	48	Population in 15% most 'access deprived' areas														
	49	Adults rating neighbourhood as a very good place to live														
Womens and Childrens Health	50	Breast screening uptake														
	51	Mothers smoking during pregnancy														
	52	Teenage pregnancies														
	53	Low weight live births														
	54	Babies exclusively breastfed at 6-8 weeks							#	#						
	55	Immunisation uptake at 24 months - MMR														
	56	Immunisation uptake at 24 months - all excluding MMR														
	57	Child dental health in primary														
	58	Child obesity in primary				#			#	#						#
	59	Unintentional injuries in the home - patients under 15														

11. Appendix 3 - Broad occupational categories

The table below contains an outline of the types of occupations that fall within each of the Labour Force Survey broad occupation categories used in this report.

The list is not intended to be exhaustive but to provide a quick overview of the types of specific occupations within each category. For a more exhaustive list please refer to ONS and their LFS Guidance.

http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/index.html

2010 Standard Occupation Classification

SOC broad descriptor	Types of occupations contained in this group
Managers, directors & senior officials	Senior managers across the health sector
Professional occupations	Medical and dental practitioners, pharmacists, psychologists, nurses, midwives, therapists, chiropodists, podiatrists, biochemists, biomedical engineers, paramedics
Associate professional & technical occupations	Medical illustrators, laboratory assistants, medical researchers, technicians
Administrative & secretarial occupations	Admin officers, filing & records clerks, medical secretaries, personal assistants
Skilled trade occupations	Maintenance and works occupations
Caring, leisure & other services occupations	Nursing auxiliaries, nursery nurses, healthcare assistants, ambulance staff (excluding paramedics) dental nurses, cleaning managers and supervisors
Sales & customer service occupations	Dispatchers, pharmacy and other dispensing assistants, retail assistants (cafeterias/hospital shops), call and contact centre occupations
Process, plant & machine operatives	Plant controllers, drivers
Elementary occupations	Cleaners, hospital porters

12. Appendix 4 – Social care workforce overview

Table 38: Total social care sector employment

	Scotland		United Kingdom	
	Social care sector	Whole economy	Social care sector	Whole economy
Total workforce	173,000	2,476,800	1,782,000	29,511,700

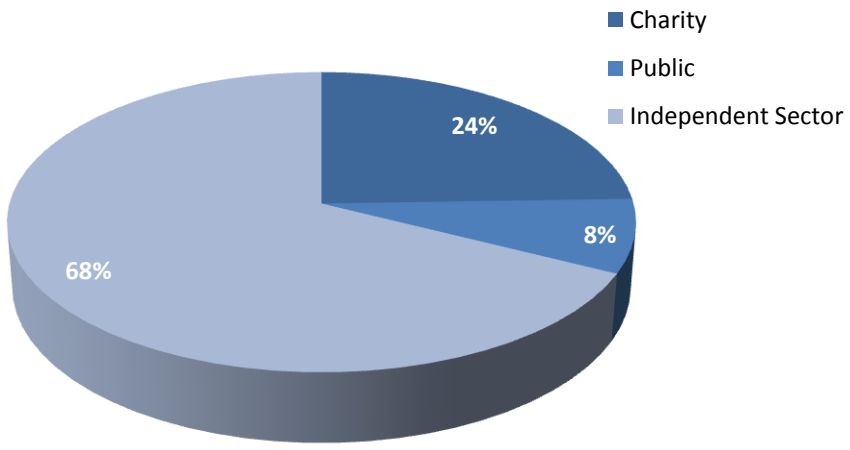
Source: Labour Force Survey (2012)

Table 39: Distribution of the social care workforce by sub-sector

	Social care sector		Whole economy	
	Scotland	UK	Scotland	UK
Public/NHS	8%	2%	16%	14%
Independent sector	68%	76%	74%	77%
Voluntary sector	24%	23%	11%	9%
Total workforce	100%	100%	100%	100%

Source: Labour Force Survey (2012) - please note figures may not sum due to rounding

Chart 6: Percentage of total social care sector employees working in the NHS, independent and voluntary sectors in Scotland



Source: Labour Force Survey (2012)

Table 40: Sub-sector activity split, Scotland and UK

	Total social care sector		Independent social care sector		Public social care sector	
	Scotland	UK	Scotland	UK	Scotland	UK
Residential nursing care activities	19%	20%	4%	5%	14%	17%
Residential care activities for mental health	4%	11%	6%	9%	5%	10%
Residential care activities for the elderly & disabled	19%	19%	10%	9%	16%	17%
Other residential care activities	4%	3%	6%	4%	5%	3%
Social care activities without accommodation for the elderly & disabled	7%	4%	5%	5%	6%	5%
Child daycare activities	16%	16%	5%	4%	13%	13%
Other social work activities without accommodation	30%	27%	65%	64%	41%	36%

Source: Labour Force Survey (2012)

12.2 Social care sector workforce characteristics

Table 41: Employment by gender

	Scotland				United Kingdom			
	Social care sector		Whole economy		Social care sector		Whole economy	
	N	%	N	%	N	%	N	%
Male	35,000	20	1,299,500	52	356,000	20	15,833,000	54
Female	138,100	80	1,177,300	48	1,425,900	80	13,678,700	46
Total	173,000	100	2,476,800	100	1,782,000	100	29,511,700	100

Source: Labour Force Survey (2012)

Table 42: Gender split by broad occupation group

	Scotland Social care sector		UK Social care sector	
	Male	Female	Male	Female
Managers, directors & senior officials	10%	4%	15%	7%
Professional occupations	12%	13%	12%	12%
Associate professional & technical occupations	11%	10%	16%	11%
Administrative & secretarial occupations	7%	11%	8%	8%
Skilled trades occupations	4%	1%	5%	1%
Caring, leisure and other service occupations	51%	56%	37%	56%
Sales & customer service occupations	1%	<1%	1%	1%
Process, plant and machine operatives	1%	<1%	3%	<1%
Elementary occupations	3%	4%	4%	5%
Total	100%	100%	100%	100%

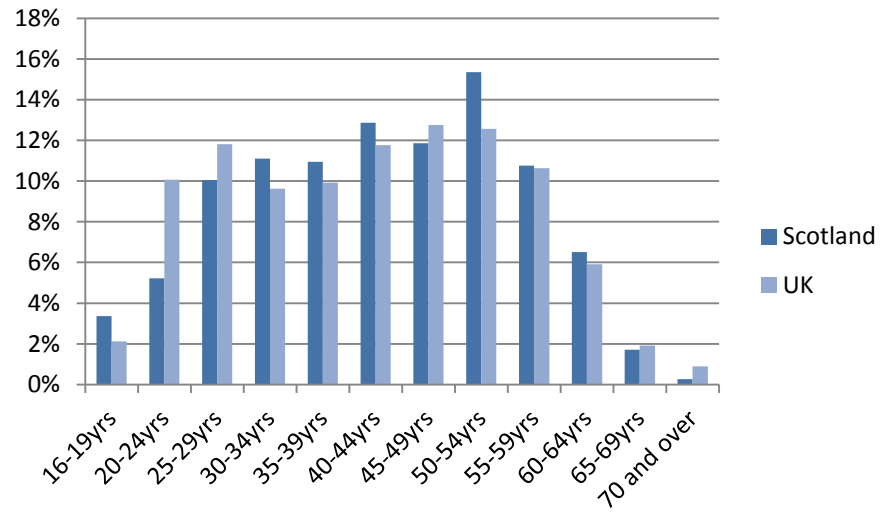
Source: Labour Force Survey (2012)

Table 43: Age profile of the health sector and whole economy

	Scotland				United Kingdom			
	Social care sector		Whole economy		Social care sector		Whole economy	
	N	%	N	%	N	%	N	%
16-19yrs	5,800	3	105,000	4	38,400	2	103,700	4
20-24yrs	9,100	5	221,600	9	181,600	10	2,647,600	9
25-29yrs	17,400	10	275,400	11	213,100	12	3,427,000	12
30-34yrs	19,300	11	266,800	11	173,800	10	3,265,300	11
35-39yrs	19,000	11	245,300	10	179,200	10	3,177,400	11
40-44yrs	22,300	13	300,300	12	212,300	12	3,684,600	12
45-49yrs	20,600	12	322,200	13	230,100	13	3,811,800	13
50-54yrs	26,600	15	302,600	12	226,800	13	3,347,100	11
55-59yrs	18,700	11	232,400	9	192,000	11	2,559,800	9
60-64yrs	11,300	7	139,100	6	106,800	6	1,619,300	5
65-69yrs	3,000	2	44,200	2	34,500	2	633,400	2
70 and over	400	0	21,900	1	16,100	1	301,600	1
Total	173,500	100	2,476,800	100	1,804,800	100	29,511,700	100

Source: Labour Force Survey (2012)

Chart 7: Age profile of the social care sector, Scotland and the UK



Source: Labour Force Survey (2012)

Table 44: Ethnic group of social care sector workforce

	Scotland	England	Wales	Northern Ireland	UK
White	96%	86%	95%	97%	88%
Black, Asian and minority ethnic group (BAME)	4%	14%	5%	3%	12%

Source: Labour Force Survey (2012)

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