Allied Health Professions
Education and Workforce Report
Speech and Language Therapy
Foreword

I am delighted to see the publication of this Allied Health Profession (AHP) education and workforce report for speech and language therapy.

This NHS Education for Scotland (NES) report uses individual level and aggregate data from multiple sources to examine trends in the demand, supply and use of speech and language therapy services. It collates, describes and interprets the data to promote understanding of speech and language therapists in education and in the NHSScotland workforce; intelligence which may be used to support workforce planning.

This is the first version of this report. It is hoped that future work will extend the quality and range of included data, which will in turn allow further interpretation and analysis.

I am grateful for the support and co-operation of the Scottish Government (SG), the Royal College of Speech and Language Therapists (RCSLT), the AHP Strategic Group, the AHP Directors Scotland Group, the Scottish Academic Heads Strategic Group, the AHP Federation Scotland and the Speech and Language Therapy NES Think Tank. These stakeholders have offered an essential source of professional expertise, knowledge of the context surrounding the Speech and Language Therapy workforce and awareness of local and national issues and developments.

Sonya Lam
Director of Allied Health Professions
NHS Education for Scotland
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Executive summary

Speech and Language Therapists (SLTs) and speech and language therapy assistants and support workers support people in Scotland throughout the age spectrum but mostly children and older people. Predicted changes in the demographics of Scotland’s population, increase in overall numbers and the proportion of older people in particular, may all have implications for the speech and language therapy workforce which spans the public, private and third sectors.

This is the first output of a programme of data development and analysis on the Allied Health Professions in Scotland by NES, which sought detailed, longitudinal data from multiple sources to allow analysis of trends particularly in student and workforce numbers. It offers an initial look at speech and language therapy with a focus on the health sector. As several years of individual level data was available for SLTs in pre-registration education, and detailed aggregate information was available on speech and language therapy staff of all grades working in NHSScotland, these groups comprise the main content of this report. Other aggregate, high level or short term datasets were identified, and these may be included in future work. However, other organisations already collate and publish some of this data which includes staff working in speech and language therapy in other sectors including public and private social care services, Scottish Social Services Council (SSSC), and staff working in the third sector, Scottish Council for Voluntary Organisations (SCVO).

The demand for Speech and Language Therapists

This chapter showed that:

- the actual level of current met or unmet need for speech and language therapy services is extremely difficult to quantify, however changing prevalence and survival rates for several conditions which cause communication difficulties which may benefit from speech and language therapy, are likely to have an impact on demand for services;

- between 2010 and 2021 Scotland’s population is projected to increase by over 5% and the number of people aged 65 and over is projected to increase by almost 25%.
• both of these factors are likely to lead to an increased demand for speech and language therapy services;

• the extent to which this increased demand for speech and language therapy services is translated into increased demand for speech and language therapy staff is a function of the objectives and constraints of NHS Boards and other potential employers.

### Education and Training Market

This chapter showed that:

• the ratio of applicants to accepted places for undergraduate pre-registration speech and language therapy education at University of Strathclyde (UoS) decreased from about six in 2003 to about four in 2012. At Queen Margaret University (QMU) it was about six in both 2003 and 2012, but varied considerably in between;

• with the exception of 2006-07 around 90 students have completed each academic year between 2005-06 and 2010-11;

• the vast majority of students are female;

• overall around 60% of first year pre-registration speech and language therapy students were domiciled in Scotland and of those, around 77% of undergraduates and 87% of postgraduates lived in the two least deprived Scottish Index of Multiple Deprivation (SIMD) quintiles on application to their course.

### Labour market

This chapter showed that

• the number of SLTs registered in the UK with the Health and Care Professions Council (HCPC) almost doubled between 2001 and 2013 to 13,928. In Scotland the number of registrants was relatively stable over the last four years, around 1,200, while the number increased in the UK as a whole by almost 10%;

• the Information Services Division (ISD) report that the number of speech and language therapy staff employed in NHSScotland on September 30th 2012 was 1,185 (headcount). By Whole Time Equivalent (WTE) this accounts for 10% of AHP staff in post or about 0.7% of NHSScotland staff in post. The number of staff in post at Agenda for Change (AfC) band five or over equated to an estimated 85% of all Scottish registrants;
• the distribution of speech and language therapy staff employed in NHS-Scotland by AfC band between September 30th 2009 and September 30th 2012 shows evidence of a reduction in the proportion of higher band posts, particularly at band seven;

• while the short term vacancy rate for NHSScotland speech and language therapy staff increased between September 30th 2010 and September 30th 2012, the short term vacancies have not translated into an increase in long-term vacancies.

Use of speech and language therapy services

This chapter showed that:

• around 1% of adults in Scotland reported using a speech therapist (the term used in the British Household Panel Survey (BHPS)) in Scotland each year between 1999 and 2008;

• the proportion of adults in Scotland who reported using a speech therapist increased with age.
Chapter 1

Introduction

This report is the first output of a programme of data development and analysis on the Allied Health Professions (AHPs) in Scotland by NHS Education for Scotland (NES) and it describes the education and training market and the labour market for Speech and Language Therapists (SLTs) with a focus on the health sector. It offers an initial look at the profession, drawing on several sources of routinely collected data at different stages along the education and employment pathway from application to university through to the provision of services. As several years of individual level data was available for SLTs in pre-registration education, and detailed aggregate information was available on speech and language therapy staff of all grades working in NHSScotland, these groups comprise the main content of this report. Other organisations in Scotland collate and publish data which include staff working in speech and language therapy in other sectors including public and private social care services, Scottish Social Services Council (SSSC) (www.sssc.uk.com/) and third sector service providers, Scottish Council for Voluntary Organisations (SCVO) (www.scvo.org.uk/).

The remainder of this chapter briefly describes the role of SLTs. Chapter 2 examines some of the determinants of the demand for speech and language therapy services and the extent to which they may change in the future. Chapter 3 provides an overview of the structure and finance of speech and language therapy education in Scotland. It examines trends in pre-registration education and training for the AHPs in general and SLTs in particular. Chapter 4 reports trends in labour market outcomes for the speech and language therapy workforce including employment and vacancy data from NHSScotland. Chapter 5 reports some information from a national longitudinal survey on the use of health and welfare services, including speech therapy services. Note that the terms speech therapist and speech therapy are used here, as this is the wording used in the British Household Panel Survey (BHPS). It is not known whether this term encompasses the full remit of SLTs as currently defined by the regulator. Chapter 6 reflects on the included evidence and sets out some
avenues for future work.

1.1 Role definition

The Health and Care Professions Council (HCPC) (www.hpc-uk.org), the professional regulator in the UK, states that SLTs assess, treat and help to prevent speech, language and swallowing difficulties. The professional body, the Royal College of Speech and Language Therapists (RCSLT) (www.rcslt.org) defines the role in terms of the management of disorders of speech, language, communication and swallowing in children and adults.

SLTs work in a wide variety of settings including community health centres, hospital wards, outpatient departments, patients’ homes, schools and prisons. Speech and language therapy services are provided by SLTs and speech and language therapy assistants or support workers. They all support individuals with a range of communication problems including those related to Autism Spectrum Disorder (ASD), cerebral palsy (CP), dementia, learning disability, motor neurone disease (MND), multiple sclerosis (MS), Parkinson’s and stroke. SLTs also work to resolve the speech and language delays and disorders experienced by children with no associated condition or medical diagnosis.
Chapter 2

The demand for Speech and Language Therapists

An economic evaluation of speech and language therapy services commissioned by the RCSLT reported in 2010 that overall 10% of children experience communication difficulties. [1] Speech and language delay and/or disorder may be their only difficulty, or children may have communication difficulties associated with other disability. There are many congenital and acquired conditions affecting children and adults which challenge their ability to communicate, for which speech and language therapy services may be beneficial. This section gives a brief review of published evidence on the prevalence or incidence of some of these conditions as a general indication of potential demand for speech and language therapy. Measuring the current level of met or unmet need for speech and language therapy services for the named conditions or the general population with communication problems is beyond the scope of this report.

While children with ASD all have, by definition, problems with communication, the severity of any impairment can vary enormously. Estimates from the Office of National Statistics (ONS) in 2005 suggest that around 90 in 10,000 children in the UK were affected by ASD, although it is acknowledged that estimates depend heavily on the definition of the condition and the included population. [2] A Scottish Government (SG) report in 2012 cited a figure of 5.1 affected adults per 100,000. [3]

CP is reported to occur in around one in every 500 births in the UK, and in a 2009 multi-centre European study, 43% of affected children had impaired or no speech. [4]

Mild to moderate learning disability has been reported to affect around twenty in 1,000 people in the UK, with up to four people per 1,000 profoundly affected. [5, 6] In 2003 the number of people with learning disabilities was predicted to rise by 1% per year.

Dementia is a degenerative condition which affects cognitive function and
is often associated with communication problems. The prevalence has been estimated as 1.5% of people aged 65-69 years, and it increases to 33% of those aged 90 and over. The number of people in Scotland with dementia is estimated to double in the next 25 years. [7]

MND is a progressive neurological disorder affecting motor, and in some cases, cognitive function. Incidence rates appear to be relatively high in Scotland with lower survival rates than other countries (median survival time of 25 months). Incidence in Scotland was reported to be 2.4 per 100,000 people rising to 7.3 per 100,000 in those over 80 years. [3]

MS is a group of neurological diseases which progress at varying rates between individuals, causing motor and cognitive impairment which may include communication difficulties. MSTrust reported that the estimated prevalence rate in Scotland; 190 per 100,000 was higher than in England and Wales (100-120 per 100,000) and Northern Ireland (170 per 100,000). [8]

Parkinson’s is also a progressive neurological condition that affects both motor and cognitive function. In Scotland there are reportedly between 120 and 230 people affected per 100,000 and the rate increases with age. The total number of people affected is expected to rise. [3] The rate in Scotland was reported to be the lowest among the UK countries. [9]

The Stroke Association report that there are 112,000 people in Scotland living after experiencing a stroke, and that each year there are 13,000 people newly affected. The incidence rate in Scotland is higher in men (202 per 100,000) than women (160 per 100,000), which are both around 15% higher than the rates for England. Approximately one third of people who experience a stroke develop one or more communication impairments while in 2010 Marsh et al estimated that up to 40% of stroke survivors experience communication or swallowing problems. [10, 1]

Longer life expectancy and increasing numbers of people living with chronic conditions is likely to result in an increase in the number of people who require support with their communication in Scotland, particularly among the older age groups. [11, 12] These changing demographics together with policy initiatives such as the Scottish Government’s Early Years Framework, which identified early intervention with preventative care on children’s communication as a priority, the recent updated strategy to support people with learning disability, and Scotland’s National Dementia Strategy, suggest that the demand for speech and language services may increase. [13, 6, 7]

### 2.1 Population projections

In addition to the composition of the population, a key determinant of the future demand for services is its overall size. Figure 2.1 reports the latest population projections by age group for Scotland. [14] Between 2010 and 2021 Scotland’s population is projected to increase by about 5.5% and the number of people
aged 65 and over is projected to increase by almost 25%.

Figure 2.1: Projected size and composition of the Scottish population 2010-2021

2.2 NHSScotland’s demand for speech and language therapy staff

NHSScotland is a major employer of and key source of demand for SLTs. NHS Boards’ demand for health care workers is a function of their objectives and constraints. The objectives of NHS Boards are developed against their local delivery plan, and policies such as the Quality Strategy and the Efficiency and Productivity Framework. [15, 16] The AHP perspective is guided by the National Delivery Plan for the Allied Health Professions in Scotland 2012-2015. [17]

Section 2.2.1 reports the planned spending on health by the SG, which represents the budget constraint of NHS Boards.

2.2.1 Government health spending

A key determinant of the demand for health care workers is the budget available to NHS Boards. [18] The SG’s planned expenditure on selected items from their health, wellbeing and cities portfolio, following a spending review in 2011, is shown in Table 2.1.
Table 2.1: Detailed planned spending on selected items from SG’s health portfolio, 2011-12 prices

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS &amp; Special Health Boards</td>
<td>8645.10</td>
<td>8646.15</td>
<td>8673.81</td>
<td>8686.27</td>
</tr>
<tr>
<td>EDUCATION &amp; TRAINING Workforce</td>
<td>28.30</td>
<td>30.34</td>
<td>29.54</td>
<td>28.77</td>
</tr>
<tr>
<td>Nursing</td>
<td>148.50</td>
<td>144.88</td>
<td>140.88</td>
<td>136.81</td>
</tr>
<tr>
<td>PRIMARY &amp; COMMUNITY CARE SERVICES General Medical Services</td>
<td>710.40</td>
<td>693.07</td>
<td>674.85</td>
<td>657.11</td>
</tr>
<tr>
<td>Pharmaceutical Services Contractors’ Remuneration</td>
<td>185.90</td>
<td>181.37</td>
<td>176.12</td>
<td>170.47</td>
</tr>
<tr>
<td>General Dental Services</td>
<td>398.70</td>
<td>388.98</td>
<td>378.75</td>
<td>368.79</td>
</tr>
<tr>
<td>General Ophthalmic Services</td>
<td>93.00</td>
<td>90.73</td>
<td>88.35</td>
<td>86.02</td>
</tr>
</tbody>
</table>

2.2.2 NHS Board workforce projections

NHS Board projections in 2012 showed that Hospital, Community and Public Health Service (HCHS) employment was projected to increase by 0.09% in the 12 months to March 2013. [19] This projected increase was a function of the projected increase in the number of Personal and Social Care employees, reflecting the transfer of staff from local authorities to NHSScotland.

Excluding Personal and Social Care employees, there was projected to be a 0.68% fall in HCHS employment. For AHPs there was projected to be a 0.57% reduction between March 2012 and March 2013.

2.3 Summary

This chapter showed that:

- the actual level of current met or unmet need for speech and language therapy services is extremely difficult to quantify, however changing prevalence and survival rates for several conditions which cause communication difficulties which may benefit from speech and language therapy, are likely to have an impact on demand for services;

- between 2010 and 2021 Scotland's population is projected to increase by over 5% and the number of people aged 65 and over is projected to increase by almost 25%;

- both of these factors are likely to lead to an increased demand for speech and language therapy services;
the extent to which this increased demand for speech and language therapy services is translated into increased demand for speech and language therapy staff is a function of the objectives and constraints of NHS Boards and other potential employers.
Chapter 3

Education and training market

3.1 Pre-registration education

The University of Strathclyde (UoS) and Queen Margaret University (QMU) provide speech and language therapy pre-registration education in Scotland. The HCPC current list of approved courses includes the Bachelor of Science (BSc) hons Speech and Language Pathology at UoS and the BSc hons Speech and Language Therapy at QMU for undergraduate study. They also list Master of Science (MSc) and postgraduate diplomas in Speech and Language Therapy at QMU.

3.1.1 Structure and funding

The minimum entry requirement for pre-registration speech and language therapy courses is usually three A-level passes or five Scottish Highers. The courses combine academic learning with practical clinical placements. By convention, most AHPs undertake a minimum of 1,000 hours in clinical placement, but this is not a formal requirement in speech and language therapy.

In Scotland places on SLT courses are not controlled by government, which means that the number of places is determined by the interaction of the supply of places by universities and the demand for places by students. The availability of practice placements is a key factor influencing the supply of places by universities.

Where eligibility criteria are met, Scottish domiciled and European Economic Area (EEA) students are funded by the public sector through the Scottish Funding Council (SFC) who use data returns from universities each year to set benchmarked prices for different subject groups. In academic year 2013-14 the gross subject price for subject price group 3, which includes Health and Community Studies, was £8,447. This included the tuition fee of £1,820 for undergraduate courses which is paid by Students Awards Agency for Scotland (SAAS) and the remainder which is paid by SFC. The fee for the postgraduate
The annual overseas tuition fee for the undergraduate course at UoS was £10,500 in academic year 2013-14. In the same year, QMU tuition fees were £10,170 and £10,420 for undergraduate and postgraduate courses respectively.

In addition to several demand side subsidies that are available to all EEA students studying in Scotland, students studying an AHP course also receive an income assessed Scottish Government Health Directorates (SGHD) bursary, a non-income assessed loan and may apply for income assessed support towards placement expenses. [20]

The pre-registration courses at UoS and QMU are approved by the HCPC and allow graduates to register with them. Anyone using either the title of Speech and Language Therapist or Speech Therapist must be registered with the HCPC. Speech and language therapy graduates and support staff may also become members of the Royal College of Speech and Language Therapists, although this is not mandatory.

3.1.2 Applications to undergraduate education

The Universities and Colleges Admissions Service (UCAS) collects data on applications and acceptances into undergraduate courses at universities. These data comprise the number of applications to courses through the main application scheme and number of accepted places via all application routes. The ratio is a proxy measure of the demand for course places in Scotland.

Figure 3.1 illustrates the ratio of applications to accepted places for speech and language therapy courses at UoS and QMU. The ratio of applications to accepted places at UoS decreased from about six in 2003 to about four in 2012. The ratio at QMU was about six in both 2003 and 2012, but varied considerably in between. Similar data for the other AHPs are shown in Figure A.1 in Appendix A.

The total number of accepted places into undergraduate speech and language therapy programmes in Scotland decreased from 104 in 2003 to a low of 51 in 2010, but it has subsequently increased again as shown in Table 3.1.

3.1.3 Students in undergraduate and postgraduate education

The Higher Education Statistics Agency (HESA) collects an annual record for each student in education and training at UK universities. Institutions submit data to HESA in September each year for the previous academic year, comprising one record for every student registered in each course. All relevant pre-registration speech and language courses were identified within this dataset by title, university and degree level, however it is possible that some students
Figure 3.1: Ratio of applications to accepted places for undergraduate speech and language therapy courses in Scotland 2003-2012

Table 3.1: Total number of accepted places in undergraduate courses Scotland 2003-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Accepted places</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>104</td>
</tr>
<tr>
<td>2004</td>
<td>88</td>
</tr>
<tr>
<td>2005</td>
<td>98</td>
</tr>
<tr>
<td>2006</td>
<td>81</td>
</tr>
<tr>
<td>2007</td>
<td>71</td>
</tr>
<tr>
<td>2008</td>
<td>65</td>
</tr>
<tr>
<td>2009</td>
<td>61</td>
</tr>
<tr>
<td>2010</td>
<td>51</td>
</tr>
<tr>
<td>2011</td>
<td>65</td>
</tr>
<tr>
<td>2012</td>
<td>77</td>
</tr>
</tbody>
</table>
are not captured due to variation in record coding over time, or delays to data submission.

The total number of students entering first year and completing one of the identified courses in each academic year from 2005-06 to 2011-12 is shown in Table 3.2. Note that the completion data for 2012 is not included as it was incomplete in the available dataset. The table reports a headcount of students who either entered first year, or completed a relevant course in each academic year (August to July). For example, among the 18 students recorded as completing a postgraduate course in 2006-07, 14 had begun their course in August 2005, one in August 2004, and three in August 2006. The month in which postgraduate students completed was mostly June and July, but occasionally December. Similarly most undergraduate students completed in the summer months but a small number of completions occurred at other times in the year. All are reported within academic years for consistency.

Table 3.2: Number of students beginning and completing pre-registration speech and language therapy courses in Scotland by academic year 2005-06 to 2011-12

<table>
<thead>
<tr>
<th></th>
<th>2005-06</th>
<th>06-07</th>
<th>07-08</th>
<th>08-09</th>
<th>09-10</th>
<th>10-11</th>
<th>11-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST YEAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>84</td>
<td>72</td>
<td>58</td>
<td>54</td>
<td>50</td>
<td>49</td>
<td>59</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>13</td>
<td>9</td>
<td>14</td>
<td>21</td>
<td>22</td>
<td>25</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>81</td>
<td>72</td>
<td>75</td>
<td>72</td>
<td>74</td>
<td>82</td>
</tr>
<tr>
<td>COMPLETED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate</td>
<td>64</td>
<td>38</td>
<td>72</td>
<td>76</td>
<td>66</td>
<td>63</td>
<td>-</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>27</td>
<td>18</td>
<td>12</td>
<td>16</td>
<td>22</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>56</td>
<td>84</td>
<td>92</td>
<td>88</td>
<td>86</td>
<td>-</td>
</tr>
</tbody>
</table>

The number of first year students decreased from 97 in 2005-06 to just over 70 in each year between 2007-08 and 2010-11, however it increased again, to 82, in the most recent year of available data: 2011-12. With the exception of academic year 2006-07 around 90 students have completed each year. Figure 3.2 shows the distribution of completions by university. It has not been possible to verify whether the drop in undergraduate completions at UoS in 2007 was a true reflection of student numbers or a miscoded course in the data.

Student demographics

Between academic year 2005-06 and 2011-12 the mean age of first year undergraduate students was around 21 and over 94% were female. The mean age of first year postgraduates was around 25 and over 78% were female.

Over the same time, around 6% of undergraduate and 11% of postgraduate students reported having a disability, including dyslexia, mental health difficul-
ties and long term illness.

Fewer than 3% of undergraduate and postgraduate students overall were recorded as being from Black and Minority Ethnic groups, but up to 12% did not provide this information in any given year.

Data was available from 2009-10 onwards HESA on whether or not students reported having dependants. Among both undergraduate and postgraduate speech and language therapy students, around 6% each year had dependant children and a very small number cared for other dependants.

Figure 3.3 shows the distribution of students by country of domicile. The percentage of undergraduate students who were domiciled in Scotland on application to university has increased overall from 52% to 85% between 2005-06 and 2011-12. It has differed somewhat between QMU and UoS with the latter’s population comprising a consistently higher percentage of Scottish domiciled students. The percentage of postgraduate students who were Scottish domiciled on application to the course has varied between 35% and 92% over the same time.

The Scottish Index of Multiple Deprivation (SIMD) combines a set of indicators across domains including income, employment, health, education, skills and training, housing, geographic access and crime and is available for students who were domiciled in Scotland on application. SIMD Q1 represents students from the most deprived 20% of datazones. Figure 3.4 shows that the distribution of students varied somewhat between institutions and programmes,
but overall about 77% of undergraduate and 87% of postgraduate students who were domiciled in Scotland on application were from areas within the two least deprived SIMD quintiles.

### 3.2 Summary

This chapter showed that:

- the ratio of applicants to accepted places for undergraduate pre-registration speech and language therapy education at UoS decreased from about six in 2003 to about four in 2012. At QMU it was about six in both 2003 and 2012, but varied considerably in between;

- with the exception of 2006-07 around 90 students have completed each academic year between 2005-06 and 2010-11;

- the vast majority of students are female;

- overall around 60% of first year pre-registration speech and language therapy students were domiciled in Scotland and of those, around 77% of undergraduates and 87% of postgraduates lived in the two least deprived SIMD quintiles on application to their course.
**Figure 3.4:** Percentage of first year Scottish-domiciled students by SIMD quintile and year of entry 2005-2012

Source: HESA
Chapter 4

Labour market

4.1 Registration with the regulator

Once they have completed an accredited pre-registration course, SLTs must register with the HCPC to work in the UK. Figure 4.1 shows the number of HCPC AHP registrants in the UK over the last twelve years on the left, and SLT registrants only on the right. [21, 22] Between 2001 to 2013 the number of UK registered SLTs increased annually, almost doubling from 7,303 to 13,928.

Freedom of Information requests published on the HCPC website indicate that the number of SLTs in Scotland in the last four years stayed relatively steady with 1,213 in November 2009 and 1,241 in November 2012, and did not mirror the UK increase of around 10%. [23] The latest figures suggest that approximately 9% of UK registrants are located in Scotland (comparing late 2012 registrations in Scotland with early 2013 UK figures). In each of the four years since 2009, over 97% of registrants in Scotland were female.

Without individual level data further analysis on the demographics or retention of Scottish registrants is not possible. Negotiations have been established with HCPC to develop work in this area in the future.

4.2 Employment in NHSScotland

Workforce data for social service and voluntary sector employees is collated by organisations such as SSSC and SCVO, while information on independent SLT is not publicly available. However national labour market information, which includes all sectors, is described in Section 4.3. The remainder of this section reports on speech and language therapy staff in NHSScotland.

Data on the NHSScotland workforce are collated regularly from NHS Boards and published by the Information Services Division (ISD) (www.isdscotland.org/Health-Topics/Workforce/), a division of NHS National Services Scotland (NSS). Using these aggregate data, Figure 4.2 reports the number of Whole Time Equivalent (WTE) staff in NHSScotland from 2007 to 2012 on the
left with AHPs only on the right. On September 30th 2012 AHPs accounted for 7.1% of HCHS staff, a slight increase in proportion since 2007 (6.8%). Note that the HCHS excludes staff who work within the general medical and dental service.

On September 30th 2012 SLTs accounted for 10% of AHP staff, or about 0.7% of all staff, employed in NHSScotland. Note that multi-skilled AHP staff work across more than one discipline and include support workers and AHP leads, and therefore are not counted within the relevant professions. These percentages have remained relatively steady between 2007 and 2012, and speech and language therapy has consistently been the fourth largest AHP group behind physiotherapy, occupational therapy and radiography.

The total number of speech and language therapy staff was similar between 30th September 2007 (n=1,154) and 2012 (n=1,185). In 2012 1,056 of the total number of individuals held posts at Agenda for Change (AfC) band five or over. This equates to approximately 85% of the number of SLTs in Scotland registered with the HCPC in November 2012.

Speech and language therapy support staff are typically employed in AfC bands one to four. Figure 4.4 shows that the percentage of speech and language therapy staff in bands one to four increased from 13% of the total WTE in 2007 to 16% in 2012. Data for the other AHPs are shown in Figure B.1 in Appendix B.

The distribution of SLT WTE staff in NHSScotland by AfC band between 2009 and 2012 is shown in Figure 4.5. Earlier data was not included in this Fig-
**Figure 4.2:** NHSScotland staff groups (left) and AHP staff (right) (WTE) 30th September 2007-2012

**Figure 4.3:** NHSScotland AHP staff (left) and speech and language therapy staff (right) (WTE) on 30th September 2007-2012
Figure 4.4: Percentage of speech and language therapy staff at bands 1-4 and 5-9 on 30th September 2007-2012

Figure 4.4 shows the distribution of NHSScotland speech and language therapy staff of all grades (WTE), between each NHS Board relative to their share of the population. NHS Boards with a value less than one have fewer speech and language therapy staff relative to its population than the other NHS Boards. Figure 4.6 shows that using this measure the employment rates of speech and language therapy staff between NHS Boards ranges from 0.6 to 2.1. The map shows relatively low ratios in NHS Highland and NHS Orkney, and a relatively high ratio in NHS Western Isles. Among the others, there is little variation. The reported staffing levels do not take into account variation in the health needs of the population, the effect of remoteness and rurality or the provision of services which operate across different NHS Boards or integrate with other sectors. The total WTE of SLT staff by Health Board is given in Appendix B.
4.2.1 NHSScotland staff demographics

The age distribution of SLTs employed in NHSScotland is shown in Figure 4.7. The age distribution of SLTs is relatively uniform across the age categories from 25-29 to 50-54 years. Just over a third (35%) of speech and language therapy WTE staff were aged between 20 and 34, a decrease from 39% in 2007. During the same period there was an increase in the percentage of WTE staff aged between 55 and 59 from about 7% in 2007 to about 10% in 2012. Figure B.4 in Appendix B illustrates the age distribution of all AHPs since 2007.

The proportion of speech and language therapy staff (by headcount) who work part time has increased from 49% in 2008 to 56% in 2012, compared to 47% of all AHPs in 2012.

Since 2007 the vast majority of speech and language therapy staff each year were female, around 98%, which is higher than AHP staff overall (89%) and the wider NHSScotland workforce (excluding general dental and medical practitioners) (79%).

4.2.2 NHSScotland vacancy rates

ISD publish national statistics on AHP vacancies in NHSScotland as reported to them by NHS Boards. The vacancy rate is defined as the number of WTE vacancies divided by the WTE establishment and is reported as a percentage. Information on absences and posts frozen or subject to review is not published.
Figure 4.6: Share of speech and language therapy staff relative to population by NHS Board on 30th September 2012
Figure 4.7: NHSScotland speech and language therapy staff (WTE) by age on September 30th 2007-2012

Figure 4.8 reports the trend in vacancy rates on 30th September 2007 to 2012 for speech and language therapy staff in AIC bands one to four. The short-term vacancy rate for these posts was less than 4% percent until 2012 when it increased to almost 6%. It has remained consistently higher than the rate of vacancies of more than three months duration during this time period.

Figure 4.9 reports the trend in vacancy rates on 30th September 2007 to 2012 for speech and language therapy posts in NHSScotland at AIC bands five to nine. Short-term vacancies of less than three months decreased from about 4% in 2007 to under 1% in 2010 and have subsequently increased, returning to 4%. However they have not tended to become vacancies of three months or more.

4.3 National labour market

Most jobs for SLTs in Scotland are unlikely to be advertised in job centres and are more commonly advertised on the Scotland’s Health On the Web (SHOW) website, RCSLT bulletin and in local newspapers. However, those data are not publicly available for analysis. NOMIS is a web-based database of labour market statistics run by the University of Durham on behalf of the ONS and contains official labour market statistics for the UK with location and profession specific data. The NOMIS data therefore represent a nationally standardised source of labour market information including public, private and third sector.
Figure 4.8: Vacancy rates for NHSScotland speech and language therapy posts at AfC bands 1 to 4 on September 30th 2007-2012

Figure 4.9: Vacancy rates for NHSScotland speech and language therapy posts at AfC bands 5 to 9 on September 30th 2007-2012
posts. There are Standard Occupational Classifications (SOCs) for several AHPs including SLTs. NOMIS routinely publishes the number of vacancies notified to employment service job centres and the number of Job Seekers' Allowance (JSA) claimants by the SOC of the sought occupation.

Figure 4.10 reports the number of vacancies and JSA claimants for SLTs in Scotland between May 1st 2006 and November 1st 2012. During 2007, 2008 and 2009 the number of vacancies regularly exceeded the number of claimants, however since 2010 the number of vacancies and SLTs claiming JSA have tended to fluctuate between zero and ten each month.

**Figure 4.10:** Number of job centre vacancies and JSA claimants for SLTs in Scotland 2006-2012

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### 4.4 Summary

This chapter showed that

- the number of SLTs registered in the UK with the HCPC almost doubled between 2001 and 2013 to 13,928. In Scotland the number of registrants was relatively stable over the last four years, around 1,200, while the number increased in the UK as a whole by almost 10%;

- ISD report that the number of speech and language therapy staff employed in NHSScotland on September 30th 2012 was 1,185 (headcount). By WTE this accounts for 10% of AHP staff in post or about 0.7% of
NHSScotland staff in post. The number of staff in post at AfC band five or over equated to an estimated 85% of all Scottish registrants;

- the distribution of speech and language therapy staff employed in NHS-Scotland by AfC band between September 30th 2009 and September 30th 2012 shows evidence of a reduction in the proportion of higher band posts, particularly at band seven;

- while the short term vacancy rate for NHSScotland speech and language therapy staff increased between September 30th 2010 and September 30th 2012, the short term vacancies have not translated into an increase in long-term vacancies.
Chapter 5

Use of speech and language therapy services

The BHPS is a nationally representative survey of residential households in the UK on use of a range of health and social care services in all sectors. The survey does not include information about use of services by children. In 1999 the Scottish sample of the BHPS was boosted from about 500 to 2,000 households per year. Each year all adults aged 16 and over in each household are asked a series of questions about their own personal use of health and welfare services, including three AHP services: speech therapy, chiropody and physiotherapy. Note that the terms speech therapist and speech therapy are used as this is the wording used in the BHPS. It is not known whether this term encompasses the full remit of SLTs as currently defined by the regulator. Respondents with communication difficulties used a proxy to facilitate completion of the survey. Further information about the BHPS can be obtained from the Institute for Social and Economic Research (www.iser.essex.ac.uk/survey/bhps).

Figure 5.1 shows that the use of AHP services in Scotland differed between services, and over time to varying degrees. The percentage of the adult population using speech therapy each year varied between about 0.5% and 1.5%.

The relationship between use of the same three AHP services included in the BHPS and age group of the user in Scotland between 1999 and 2008 is shown in Figure 5.2. This shows that there is a positive relationship between age and the use of speech therapy by adults.

The RCSLT have developed a workforce audit tool known as Q-SET for use by local service providers. Negotiations with RCSLT on access to the data as it develops will continue in the hope of enhancing future reports with more information on service delivery at local and national levels.
Figure 5.1: Proportion of adults who used selected AHP services in Scotland by year 1999-2008

Figure 5.2: Proportion of adults who used selected AHP services in Scotland by age 2008-2012
5.1 Summary

This chapter showed that:

- around 1% of adults in Scotland reported using a speech therapist in Scotland each year between 1999 and 2008;

- the proportion of adults in Scotland who reported using a speech therapist increased with age.
Chapter 6

Conclusion

6.1 Reflections on the available evidence

This initial examination of longitudinal data on the education and labour markets for speech and language therapy staff has revealed a number of trends.

Over the last six years there has been an average output from pre-registration courses of around 90 per year, with the highest numbers in the four most recent years. The demand for places on those courses has remained relatively high at between five and ten applications per place overall. Most students are female, white, in their early twenties, and domiciled in Scotland. Student domicile has implications for the income of universities and may also relate to the rate of retention of students within Scotland’s workforce, and there is some evidence that the proportion of Scottish-domiciled undergraduate students has been increasing.

The number of registered SLTs in Scotland has been steady for the last four years although the numbers in the UK as a whole have continued to increase. In late 2012 around 85% of all registered SLTs in Scotland were estimated to work in the NHS. The size of the NHSScotland speech and language therapy workforce has fallen slightly in the last few years (similar to the AHP workforce overall) and there is some evidence of a relatively greater loss of higher grade posts, particularly at band seven. NHS and national vacancy information suggest that in recent years, the rate of long term vacancies has stayed low with an increase in short term vacancies at bands one to four.

It is beyond the scope of this report to comment on the extent to which the current speech and language therapy workforce in Scotland meets the needs of the Scottish population. However, if the assumption is made that at least the same level of service will be required in future, the predicted changes in the population’s demographics and overall size suggest that there may be an increased demand for speech and language therapy services.
6.2 Avenues for future work

The avenues for future work arising from this report reflect limitations in both data and analysis.

There are several data sources that could be explored in more detail, including new information and more detailed examination of currently included data. NES will continue to negotiate with partners and stakeholders to collaborate and share access to data where appropriate. For example, the HCPC data publishes a consistent source of headcount and demographic information on registered AHPs at a UK country level but is not currently available for Scotland at the individual level, which could give an indication of the inflow and outflow from the profession in Scotland. Although NHS SLTs appear to comprise the majority of SLT registrants, data from organisations who hold data for the social services and third sector could enhance future work. Some of that data is published in aggregate form, but detailed longitudinal information would be required for any analysis of integrated services. As mentioned earlier, a tool developed by the RCSLT to collect local workforce and service planning information on local service delivery teams, may offer valuable information about service provision at local and national levels. Speech and language therapies are provided by teams of registered SLTs and speech and language therapy support workers and assistants, but little longitudinal data was found on the latter two groups. Data on their education and labour markets and their activity would be valuable.

ISD national statistics provides a rich source of information on registered SLTs and other support staff employed in NHSScotland and this report examined aggregate data on the number of SLTs at fixed points in time over several years. While this provides a sense of the capacity to deliver speech and language therapies at fixed time points, the next stage of analysis would be to examine the size and determinants of the flows of staff between points in time using anonymised individual-level data. This is important because the number of SLTs in the future is a function of the current number of SLTs and net inflow of SLTs. There are other NHSScotland datasets which could provide useful information including activity data for provision and use of speech and language therapy services, waiting times data, the support needs database and information on integrated and multi-professional services.
Appendix A

Additional education data

The ratio of applications to accepted places on undergraduate AHP courses at universities in Scotland is shown in Figure A.1.

**Figure A.1**: Ratio of applications to accepted places for undergraduate AHP courses in Scotland 2003-2012

![Graph showing the ratio of applications to accepted places for undergraduate AHP courses in Scotland 2003-2012.](source: UCAS)
Appendix B

Additional NHSScotland workforce data

The percentage of staff at grade one to four, generally the bands at which support workers are employed for each AHP staff group is shown in Figure B.1.

Figure B.1: Percentage of AHP staff at bands 1-4 and 5-9 on 30th September 2007-2012

Figure B.2 shows the distribution of all AHP staff by AfC band. Figure B.3 shows the distribution of the six largest AHP groups in NHS-Scotland by AfC band. There was some variation in the distribution by AfC band between professions, but the majority were on or above AfC band five.

The total WTE of SLTs staff in NHSScotland in September 2012 used to
Figure B.2: Percent of NHSScotland AHP staff (WTE) by AfC band 30th September 2007-2012

Source: ISD Scotland

Figure B.3: NHSScotland AHP staff as a proportion of WTE by AfC band on 30th September 2012

Source: ISD Scotland
produce the map in 4.6 are shown in B.1.

**Table B.1:** NHSScotland speech and language therapy staff (total WTE) by Health Board on 30th September 2012

<table>
<thead>
<tr>
<th>Health Board</th>
<th>Total WTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Borders</td>
<td>20.6</td>
</tr>
<tr>
<td>NHS Fife</td>
<td>61.1</td>
</tr>
<tr>
<td>NHS Lothian</td>
<td>133.4</td>
</tr>
<tr>
<td>NHS Highland</td>
<td>36.0</td>
</tr>
<tr>
<td>NHS Grampian</td>
<td>108.9</td>
</tr>
<tr>
<td>NHS Orkney</td>
<td>2.5</td>
</tr>
<tr>
<td>NHS Tayside</td>
<td>79.1</td>
</tr>
<tr>
<td>NHS Western Isles</td>
<td>10.1</td>
</tr>
<tr>
<td>NHS Shetland</td>
<td>3.5</td>
</tr>
<tr>
<td>NHS Ayrshire &amp; Arran</td>
<td>59.4</td>
</tr>
<tr>
<td>NHS Greater Glasgow &amp; Clyde</td>
<td>232.1</td>
</tr>
<tr>
<td>NHS Lanarkshire</td>
<td>106.9</td>
</tr>
<tr>
<td>NHS Forth Valley</td>
<td>61.0</td>
</tr>
<tr>
<td>NHS Dumfries &amp; Galloway</td>
<td>32.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>946.7</strong></td>
</tr>
</tbody>
</table>

Figure B.4 shows the distribution of AHP staff by age group within each profession in NHSScotland in September 2012.

Figure B.5 reports the trend in vacancy rates on September 30th 2012 for AfC bands one to four. One extreme value of 100% vacancy rate for orthoptists on September 30th 2007 was removed to allow the scale for all graphs to better illustrate the data. It represented a vacancy of one WTE for an establishment of one WTE. In general the rate for vacancies in AfC bands one to four: was less than five percent; was greater for short-term rather than long-term vacancies; and increased for short-term vacancies since 2010.

Figure B.6 reports the trend in vacancy rates on September 30th for AHP posts at AfC bands five to nine.

Figure B.7 reports the number of vacancies and JSA claimants for selected professional AHPs with defined SOCs between May 1st 2006 and November 1st 2012.
**Figure B.4:** Percent of NHSScotland AHP staff (WTE) by age on September 30th 2007-2012

**Figure B.5:** Vacancy rates for NHSScotland AHP posts at AfC bands one to four 30th September 2007-2012
Figure B.6: Vacancy rates for NHSScotland AHP posts at AfC bands five to nine
30th September 2007-2012

Figure B.7: Number of Job Centre vacancy and claimant counts for selected AHP
groups in Scotland 2006-2012

Source: ISD Scotland

Source: NOMIS
Appendix C

UK Border Agency shortage occupation list

There are several health and social care professions on the current UK Border Agency (UKBA) shortage occupation list. An occupation is on the shortage occupation list if there are not enough resident workers to fill the available jobs in that particular occupation.

Highly skilled migrants from outside the EEA who want to work in the UK must apply for visas through the Tier 2 immigration route. Migrant workers can only enter the UK under Tier 2 if the job is on the shortage occupation list or no suitable resident workers apply after advertising the job in the UK for four weeks.

The current shortage occupation list for the UK valid from 6th April 2013 includes the following professions in health and social care. Items in bold text apply to Scotland only.

- Medical radiographers (SOC 2217)
  - HCPC-registered diagnostic radiographer
  - HCPC-registered therapeutic radiographer
  - sonographer

- Nurses (SOC 2231)
  - specialist nurse working in neonatal intensive care units

- Medical and dental technicians (SOC 3218)
  - nuclear medicine technologist
  - radiotherapy technologist

- Medical practitioners (SOC 2211)
– consultants in emergency medicine, haematology, old age psychiatry
– non-consultant, non-training, medical staff posts in anaesthetics, general medicine specialities delivering acute care services (intensive care medicine, general internal medicine (acute), emergency medicine (including specialist doctors working in accident and emergency), rehabilitation medicine and psychiatry
– ST3, ST4, ST5 and ST6 trainees in paediatrics or anaesthetics
– Staff Grade and Associate Specialist (SAS) staff doctors in paediatrics or anaesthetics
– consultants in paediatrics or anaesthetics
– non-consultant, non-training doctors in the specialty obstetrics and gynaecology

• Social workers (SOC 2442)
  – social worker working in children and family services

• Biological scientists and biochemists (SOC 2112)
  – clinical neurophysiologist

• Physical scientists (SOC 2113)
  – nuclear medicine scientist
  – radiotherapy physicist
  – staff working in diagnostics radiology (including magnetic resonance imaging)
Glossary

**AfC** Agenda for Change

**AHP** Allied Health Profession

**Allied Health Professions** refers to a wide range of health care professions and includes Art Therapists, Dietitians, Drama Therapists, Music Therapists, Occupational Therapists, Orthoptists, Paramedics, Physiotherapists, Prosthetists and Orthotists, Podiatrists, Diagnostic Radiographers, Therapeutic Radiographers and Speech and Language Therapists

**ASD** Autism Spectrum Disorder

**BHPS** British Household Panel Survey

**BSc** Bachelor of Science

**CP** cerebral palsy

**EEA** European Economic Area

**HCHS** Hospital, Community and Public Health Service

**HCPC** Health and Care Professions Council

**HESA** Higher Education Statistics Agency

**ISD** Information Services Division

**JSA** Job Seekers’ Allowance

**MND** motor neurone disease

**MS** multiple sclerosis

**MSc** Master of Science

**NEC** Not Elsewhere Classified
NES  NHS Education for Scotland
NSS  NHS National Services Scotland
ONS  Office of National Statistics
QMU  Queen Margaret University
RCSLT  Royal College of Speech and Language Therapists
SAAS  Students Awards Agency for Scotland
SAS  Staff Grade and Associate Specialist
SCVO  Scottish Council for Voluntary Organisations
SFC  Scottish Funding Council
SG  Scottish Government
SGHD  Scottish Government Health Directorates
SHOW  Scotland’s Health On the Web
SIMD  Scottish Index of Multiple Deprivation
SLT  Speech and Language Therapist
SOC  Standard Occupational Classification
SSSC  Scottish Social Services Council
UCAS  Universities and Colleges Admissions Service
UKBA  UK Border Agency
UoS  University of Strathclyde
WTE  Whole Time Equivalent
References


