

Urban and Rural Issues for the Health Sector in Scotland

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Executive Summary

Scotland's health sector is dealing with the challenges of serving an aging, rural and remote population. Some communities in Scotland are experiencing a more acute 'demographic time bomb' than is seen elsewhere in the UK. The challenge of meeting the health needs of these communities is further compounded by the smaller number of people of working age in these areas as well as a range of ICT and travel infrastructure issues.

Skills for Health therefore commissioned this research to examine the ways in which the Scottish Territorial Health Boards have addressed these challenges and to use these lessons to inform health delivery policy and skills development in Scotland and across the UK more widely. It consisted of an analysis of literature and data relating to the delivery of health care in rural and urban settings; interviews with representatives from the 14 territorial Health Boards and NHS Education for Scotland (NES); and two case studies of innovative practice.

Service delivery issues


While the situation across the Health Boards does vary, those in the more remote and rural locations in particular pointed to challenges in provision of accommodation for staff and sub-optimal transport. Transport costs and time spent in travel for work compound difficulties.

While there is currently an over-supply of nurses in some areas there are shortfalls of some other professional groups. There is evidence that national problems in recruitment of some specialist staff are more keenly felt in rural areas. Some specialisms are concentrated in the 'central belt' of Scotland. In rural areas it can be difficult for people to gain experience and access continuing professional development, meaning that Health Boards are all the more dependent upon recruitment to obtain specialist staff.

Addressing the challenges

All Health Boards have attempted to address these challenges in service delivery. Whilst ultimately all service delivery issues focus on maintaining and/or improving services to the patient, some are more directly patient-centred (e.g. decisions about physical location of services) than others (e.g. staff development to provide additional skills to meet patient needs).

Service redesign attempts have striven to achieve a balance between providing locally-based services and cost containment. This has differing implications at the different levels of health service provision. At primary/acute care/initial access level, questions are being asked about the optimal provision of entry points and routes to services/treatment, and services redesigned accordingly in response to local conditions. Decisions about service location in general are influenced by access/travel issues for patients and staff. The need for service economy and maintenance of adequate staffing levels has led some Health Boards to concentrate services



on a smaller number of sites. While in some cases this may mean that travel times by public transport increase, such changes can serve to make the 'patient journey' through the health system more coherent and less confusing.

Although Health Boards are still largely trying to maintain clinical specialisms in more remote areas, this can be a struggle, both in terms of initial recruitment and then subsequent maintenance of specialist expertise. In very remote areas, even where clinical expertise is available, it can be challenging to bring that expertise to the patient, or vice versa. For this reason in one Health Board in particular there had been much work using ICT to resolve challenges in initial access, diagnosis and response. Initial analyses to support this work had also resulted in better insight into optimal service options for patients.

There has been much work on role redesign across the UK in order to find cost effective ways of providing expertise. This process appears to be more pronounced in Scotland's more remote communities as Health Boards look for ways to maintain health service provision, often in places where there are very small population numbers. Much of this work has focused on provision of emergency care and initial diagnosis.

There have been attempts to use ICT to provide more equitable access to CPD for remotely based staff and to provide communication options between staff groups to minimise the need for travel. However, some large areas of Scotland still have no ICT infrastructure at all while in others more could be done if faster broadband was available.

Much of the work described involved greater collaboration between health and social care and in some cases other services. The chronic long term issues confronting the sector in Scotland will require greater collaboration in future.

Conclusions

Despite many seemingly intractable issues, employers in Scotland's more sparsely populated areas have sought to undertake a series of innovations to maintain and/or improve service delivery. Nonetheless, it is recognised that there remains a range of entrenched and intractable issues around cost containment in the face of increasing demand for services, often associated with the long-term chronic health conditions of an ageing population, demand for unscheduled care, retaining appropriate numbers of staff to ensure the maintenance of expertise and managing continuity and succession issues, in addition to day to day service delivery.

Health Board representatives pointed to the potential of ICT to assist with diagnosis and decision making, minimise patient and staff travel and improve training and CPD options. However technology infrastructure at present limits the potential solutions available to some Health Boards, with some (large) parts of the more remote areas being effectively still without broadband coverage.

Recruitment problems seen more generally across the UK are exacerbated in remote areas. There are additional ways of addressing these challenges that do not appear to have been tried and which could be considered, such as subsidies for travel for those located in rural and remote areas, sponsorship for trainees and the provision of free housing to facilitate the rotation of staff into remote settings.

Maintenance of professional expertise depends on exposure to sufficient throughput of patients to ensure adequate clinical experiences. Given that sufficient opportunities to practise specialist skills are not readily obtained in remote settings, leading to difficulties in maintaining clinical skills, it must be acknowledged that to some extent, professionals are making rational decisions in avoiding rural placements.

Across the UK there are indications of better outcomes for patients in larger centres of expertise. Given this fact, and the difficulties for clinicians in maintaining specialist skills in remote locations, it is questionable whether trying to maintain specialist services in remote areas is always in the patient's long term interest. Interviewees pointed to the fact that some services are already available only in the 'central belt'; it would be worth considering whether further centralisation of clinical services might be optimal. This would need discussion and planning across the Health Boards.

Given the issues relating to difficulties in recruiting some clinical specialisms and fears about the outward migration of young professionally-qualified staff we recommend further research to analyse the flows of young people in Scotland into nurse, allied health professions and medical initial training and from initial training into first posts in Scotland to inform understanding of the workforce development challenges of the Health Boards and Scotland more widely.

1. Introduction

In January 2011 Skills for Health commissioned the Institute for Employment Studies (IES) to undertake a study designed to help in identifying solutions to skills development and utilisation for Scottish health care employers working in sparsely and densely populated areas. It also explored whether solutions developed in one setting might be effective in the other, and vice versa.

As a UK wide body it was also of interest to Skills for Health to understand what lessons might be learnt from approaches currently being adopted in Scotland, which is one of the most sparsely populated countries of the UK, and potentially transferred to other sparsely populated areas in the regions of England, Wales and Northern Ireland. The project would also help direct the development of Skills for Health's geographical information system in Scotland and the UK more widely.

1.1 Design of the work

The project had three main components:

- a literature review and analysis of current workforce statistics
- interviews with workforce development managers and other individuals well-placed to comment on skills and service delivery issues within the Territorial Health Boards and NES
- two case studies of innovative practice.

The work took place between January and May 2011.

1.2 Structure of this report

Chapter Two sets out the findings from the literature and data review. Chapter Three reports the outcomes of the interviews with workforce development or human resource directors within the 14 Territorial Health Boards and a representative of the NES Remote and Rural Health Education Alliance. Chapter Four summarises the findings overall from this work and compares the situation now with that described in previous reports. The approaches currently being adopted more widely across Scotland to tackle service delivery challenges are also described in this chapter. The two case studies are presented at Appendix 1.

1.3 Acknowledgements

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2. Literature Review

2.1 Introduction

2.1.1 Scope of the review

A starting point for this work was to conduct a review of work conducted on the skills and employment issues associated with providing health care in urban and rural settings in Scotland. The literature review would examine available data and intelligence relevant to urban and rural issues in Scotland, with specific reference to the health sector.

To obtain the relevant literature a search was made of the following on-line databases: the British Nursing Index, the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and EMBASE. The following search terms were agreed for use in the search for relevant literature:

Scot* plus the following:

- health*
- service delivery
- service model
- service innovation
- service demand
- GP
- hospital
- commissioning
- nurse
- allied health professional

Rural plus the same list (health* etc.)

- Urban plus the same list
- Skills gaps plus Scot* and health*
- Skills shortages plus Scot* and health*
- Hard to fill vacancies plus Scot* and health*

The databases were searched during the last week of January 2011. A total of 61 potentially-useful articles were identified through this process. After an initial inspection of content, 38 were reviewed and included in the chapter. A pre-print copy of the Skills for Health Scotland Skills and Labour Market Intelligence Assessment¹ was also provided and used to provide background information for the review.

¹ <http://www.skillsforhealth.org.uk/planning-your-workforce-strategy/understand-your-future-labour-needs/baseline-reports/>

The review is organised into the key themes on which urban and rural issues may impact. These themes include the availability of labour; attractiveness of employers; skills acquisition of existing employees; and models of service delivery and access to services.

2.2 Overview and definitions

This review focuses on urban and rural settings in Scotland and therefore to begin it is sensible to clarify these geographical terms. The Scottish Government's Urban Rural Classification states that settlements can be grouped into the following categories:

Large Urban Areas - populations greater than 125,000

Other Urban Areas - populations between 10,000 and 125,000

Small Towns - populations between 3,000 and 10,000

Rural Areas - populations less than 3,000

The Urban Rural Classification is based upon two main factors: population and accessibility, with drive times being used to differentiate between accessible and remote areas in Scotland. There are two classifications: a 6-fold classification which distinguishes between urban, rural, and remote areas through six categories, and an 8-fold classification which distinguishes between remote and very remote regions. These categories are defined as:

Accessible - Areas within a 30 minute drive time of a Settlement with a population of 10,000 or more.


Remote - Areas that are more than a 30 minute drive time (6-fold classification), or areas that have a drive time between 30 and 60 minutes (8-fold classification) from a Settlement with a population of 10,000 or more.

Very Remote - Areas that are more than a 60 minute drive time from a Settlement with a population of 10,000 or more (8-fold classification only).

(Scottish Government, 2010e)

The latest statistics show that about 5.2 million people live in Scotland and almost one million live in rural areas (Scottish Government, 2010). The greatest increase in the population has been in accessible rural areas, with a 10.1 per cent increase between the years 2001 and 2008, compared to an increase of 5.3 per cent in remote rural areas and 0.7 per cent in the rest of Scotland (ibid.).

Models of service delivery are discussed in more detail in section 2.6, below; however, across Scotland there are 14 territorial Health Boards responsible for the planning and delivery of NHS services. In addition there are eight special Health Boards including the SAS Board, NES and NHS Health Scotland. At a local level there are Community Health Partnerships and



Community Health and Social Care Partnerships covering all Scottish regions. These are 'subcommittees of NHS Boards and are responsible for planning and delivery of community services' (Skills for Health, 2011a).

There are large differences between the population and geographical characteristics of Scottish NHS Boards (Lockhart et al., 2010). For example, NHS Greater Glasgow and Clyde is a largely urban setting serving a population of 1.2 million and has vastly different characteristics to NHS Shetland, which is remote rural and serves a population of about 22,000 (Lockhart et al, *ibid.*). Whilst there are large differences between Scottish Health Boards, there is a centralised structure of health services, which assists with workforce planning (Lockhart et al, *ibid.*).

2.3 Availability of labour

Workforce size

The latest labour market statistics showed that there are an estimated 227,300 people employed in the health sector in Scotland, which accounts for 12 per cent of the UK total (Skills for Health, 2011a). Scotland, compared to the other UK countries, has experienced the largest proportional growth in the health workforce over the past ten years (*ibid.*). Skills for Health (2011a) have suggested that this higher growth rate could be attributed to the 'higher incidence of illness or greater health needs in Scotland', alongside 'lower life expectancy and the rural nature of large areas of Scotland which require greater 'outreach' into the community than other UK areas' (Skills for Health 2011b, p.143).

Across Scotland the health sector accounts for 9 per cent of the country's employment. However, at a sub-regional level, the health sector can account for between 3 per cent of all local employment (in Midlothian) to 14 per cent of all local employment (East Ayrshire). Scotland has the largest ratio of health sector employees to population of all of the UK countries (Skills for Health, 2011a). The largest concentrations for health sector employees are within Glasgow City with 19 per cent of the healthcare workforce serving 11 per cent of Scotland's resident population and the City of Edinburgh, with 13 per cent of Scotland's health workforce serving 9 per cent of the Scottish population. Aberdeen employs 9 per cent of Scotland's health workforce, serving only 4 per cent of the resident Scottish population, compared to Aberdeenshire with 2 per cent of the workforce serving 5 per cent of residents (Skills for Health, 2011a).

The independent sector accounts for approximately 19 per cent of the total health sector workforce in Scotland (Skills for Health, 2011). England has the highest proportion of the workforce employed within the independent health sector, accounted for by the 'policy drive for increased plurality of health provision' (Skills for Health, 2011b, p.144). Northern Ireland and Wales have a higher proportion of the total health sector workforce employed in the independent health sector at 21 per cent and 23 per cent and this is attributed to the 'higher levels of prosperous consumers found

within Northern Ireland and Wales in comparison to Scotland' (Skills for Health, 2011b, p.144).


With consideration of settlement size in Scotland, the sector classification 'Education, health, social work and other community, social and personal services' accounts for 10 per cent of employment in remote rural Scotland, 11 per cent in accessible rural Scotland and 14 per cent in the rest of Scotland (Scottish Government, 2010). Across Scotland there is one health employee for every 23 people resident in the country (Skills for Health, 2011a). At September 2007, there were 162,139 staff employed by NHS Scotland and almost half (42 per cent) were employed in the Nursing & Midwifery staff group (Skills for Health, 2011a).

Women make up the majority of the health sector workforce in Scotland at 82 per cent, compared to 51 per cent across the whole economy (Skills for Health, 2011a). This feminisation of the labour force may account for the relatively large proportion of part-time workers in the sector; with 50 per cent employed part-time (30 hours or less a week). Ratios of part-time workers vary at local level, for example in Aberdeenshire some 70 per cent of the workforce is part-time but in Dundee City only 34 per cent work part-time (Skills for Health, 2011a).

Statistics show that economic activity rates are higher in rural Scotland than in the rest of Scotland, with higher rates of self employment in rural areas (Scottish Government, 2010d). Consequently a lower proportion of the working age population in rural areas is economically inactive than in the rest of Scotland. However, rural areas have a much lower percentage of the population in the age bands 16-24 and 25-34 and a higher proportion in the older age bands, especially at pension age (Scottish Government, 2010).

Research by the Scottish Government, looking at population statistics from 2008, showed that in some local authorities more than half of the resident working age population travelled to another local authority to work. This practice was most common in East Renfrewshire and East Dunbartonshire, where 77 per cent and 68 per cent of employees travelled out of the council area to their place of work (Scottish Government, 2010c). In local authorities bordering the larger cities of Glasgow or Edinburgh, just over half (55 per cent) of the working age population travelled out of the council area in Midlothian, East Lothian (51 per cent) and South Lanarkshire (50.1 per cent). Unsurprisingly, the five largest cities in Scotland had the greatest net inflow of workers between January and December 2008. In Glasgow City, there was a net increase of 165,000 workers (67 per cent of the resident working age population) Similarly, in Aberdeen City the net increase was 46.6 per cent of the working age population; Edinburgh (27 per cent); Dundee City (28 per cent) and Stirling (20 per cent) (Scottish Government, 2010c).

Of the populations in remote rural areas, over two-thirds (68 per cent) of the population also work in the area in which they live. For those living in accessible rural areas, 46 per cent work in the same area, and 52 per cent work in the rest of Scotland. Of those living in the rest of Scotland, 9 per cent



work in rural areas (Scottish Government, 2010). In six local authorities more than 90 per cent of the working age residents worked in the same local authority. These included the Highlands, Shetland Islands, Orkney Islands, Eilean Siar, Dumfries & Galloway, and Aberdeen City (Scottish Government, 2010c).

Workforce growth

In May 2003, the then Scottish coalition government stated that *'we will increase our programme to train, recruit and retain nurses and midwives bringing 12,000 into the NHS by 2007...'* (Scottish Executive 2003, cited in Buchan 2004). Whilst data shows this goal was not quite achieved, with increases in headcount between 2000 and 2007 of only 9 per cent in the number of qualified nurses and midwives (equivalent to a growth of 5,785 employees); predictions for growth across the health sector in Scotland were good prior to the recession at approximately 7 per cent between 2007 and 2017 (Skills for Health, 2011a). There had been steady growth in the health sector workforce in Scotland prior to the recession, with the number of consultants increasing between 2000 and 2007 by almost 27 per cent (855); General Dental Practitioners (GDPs) grew by 27 per cent (544); General Practitioners (GPs) increased by 3 per cent (116) and Allied Health Professionals (AHPs) grew from 2,497 to 10,981 (Scottish Government, 2010d).

Alongside this workforce expansion some 100,000 people in Scotland are expected to retire between 2007 and 2017 (Skills for Health, 2011). Jarvis (2007) stated that on average, 16 per cent of district nurses and health visitors (G-grade² and above) could retire by 2012 (in comparison with acute sector registered nurses, all grades, where the figure is 7 per cent). Jarvis also noted that half of the nurses in some specialties could retire by 2012 in some smaller NHS Health Boards (Jarvis, 2007). Workforce issues generated by retirements are magnified in more rural areas of Scotland - a study of all permanent consultant surgeons practising in remote/rural Scotland in 2001 (13 in total) showed that the majority of surgeons were over 50 years of age (Sim 2001, cited in BMA, 2005).

The ageing population and the diminishing numbers of the working age population in Scotland have significance for the development of the health workforce and also for the availability of unpaid carers. This demography will have significant impact in rural areas where the workforce is smaller (NHS Scotland, 2007, p.11). NHS Scotland stated that succession planning will be a particular challenge as the workforce within rural areas is ageing and the 'maintenance of skills also poses challenges, whilst there is a requirement for a wide breadth of expertise; but skills will decay, where practice exposure is low (2007, p.11).

² Note these are the grades that preceded the introduction of Agenda for Change; Grade G is equivalent to Band 6.

Vacancies

Health sector vacancies have been an issue in some rural areas of Scotland, with the BMA stating in 2005 that the proportion of allied health professional vacancies open for more than three months illustrates the 'vulnerability of services in remote/rural areas' (BMA, 2005, p.6). The BMA cited statistics from the Information Services Directorate (ISD), Scotland, which showed that in some rural areas there are more longer-term vacancies than in the urban areas of Lothian and Greater Glasgow (see Table 2.1 below). Long-term vacancies for allied health professionals can be a major concern in rural areas, particularly in small practices run by one or two individuals. Vacancies affect workloads and can subsequently result in the loss of a service (BMA, 2005). A case study of Argyll and Bute, also by the BMA, showed that of nine GP surgeries closed in the region between 2004 and 2009, the majority (seven) were located in remote rural areas, with one closure in an accessible rural area and one in an urban area (Scottish Government, 2010b).

Table 2.1: Number of vacancies for allied health professions in selected health board areas of Scotland in 2003. Data expressed as a percentage of total positions and the number of these filled within three months

| Health Board | Vacancies as percentage | Percentage of vacancies of total positions filled within 3 months |
|-----------------------|-------------------------|---|
| Orkney | 9.0 | 0.0 |
| Shetland | 7.8 | Not Available |
| Western Isles | 2.5 | 0.0 |
| Highlands | 10.4 | 38.0 |
| Borders | 4.4 | 82 |
| Dumfries and Galloway | 8.0 | 74.0 |
| Lothian | 6.3 | 52.0 |
| Greater Glasgow | 9.7 | 65.0 |

Source: Information Services Directorate, Scotland cited in BMA, 2005

A review of the number of NHS dental practitioners in Scotland also emphasised the recruitment difficulties in rural areas, with shortages in these areas compared to urban settings, see Table 2.2 below (BMA, 2005).

Table 2.2: Number of dental practitioners providing NHS treatment per 100,000 population in selected health board areas of Scotland in 2003

| Health Board | Dentists per 100,000 population |
|-----------------------|---------------------------------|
| Orkney | 15 |
| Shetland | 13 |
| Western Isles | 25 |
| Highlands | 32 |
| Borders | 26 |
| Dumfries and Galloway | 33 |
| Lothian | 44 |
| Greater Glasgow | 44 |

Source: Information Services Directorate, Scotland cited in BMA, 2005

Retirements and recruitment difficulties have led to skill shortages in the health sector in Scotland. In 2008, a MAC (Migration Advisory Committee) report revealed that 17 per cent of health establishments in Scotland reported skills gaps in their current workforce. MAC also identified 35 occupations (within the whole UK healthcare sector) with skill shortages including specialist consultants, pharmacists, dental practitioners, specialise nurses and therapists (cited in Scottish Government, 2010; SfH, 2011).

Service provision in rural areas is greatly dependent upon the availability of local labour which can be particularly vulnerable to recruitment and retention pressures. BMA research (2005) cited an example of a study of two small consultant-led acute hospitals in the West Highlands. It found that service provision at these hospitals was considered 'very fragile' due to recruitment and retention difficulties amongst healthcare professionals, with resignation and retirement or long-term sickness causing severe staffing difficulties. It also stated that 'the consequences of the trend towards medical specialisation, long working hours and a lack of support structures for key staff were also problematic' (BMA, 2005, p.41).

Multi-disciplinary working

NHS Scotland (2007) recognised that within the remote and rural communities of Scotland, there are a '*limited number of health and social care professionals, whose skills and expertise need to be shared if communities are to have local access to the widest possible spectrum of care*' (NHS Scotland, 2007,p.4). The report emphasised that services must be well co-ordinated with a focus on '*collective and collaborative responses within and across communities*' and that future models of healthcare delivery should be based on '*integrated teams, demonstrating a range of competencies, defined by patient need*' (2007, p.8).

It suggested that team working, integration and shared competencies are key to workforce planning for services within remote and rural healthcare.

'Many of the solutions to the development of sustainable and affordable health services will need to involve a range of doctors, nurses, midwives AHPs, and healthcare scientists and their support staff, working creatively to deliver new models of skill mix and interventions that are safe, effective and patient centred.'

(NHS Scotland, 2007, p.39)

NHS Scotland found that the care provided in primary care teams was typically fragmented and disparate which could lead to duplication of effort and disjointed care. The report suggested that all clinical resources within a community should be 'integrated, both in terms of teamwork and of location and that single-handed practices should be actively discouraged and, where possible linked to others' (2007,p.39). This new model encompasses a partnership approach between agencies and multi-disciplinary teams. In keeping with this the report also suggested that all nurses in rural general hospitals should be multi-skilled, generalist practitioners.

The BMA (2005) report agreed that multidisciplinary teams are key to service delivery within a restricted labour market:

'Collaborative and inter-professional working can be seen as a key element in improving rural health service delivery. Mutual understanding and collaboration develops effective multidisciplinary teams. This allows professionals to work across the boundaries of traditionally defined roles, and enables effective role substitution. This provides rural healthcare professionals with the vital support of skilled personnel, for example nurse practitioners, midwives and pharmacists.'

(BMA, 2005, p.46)

Cross boundary working would benefit rural areas where healthcare professionals often provide a broader range of services than those in urban settings.

Innes et al. (2005) illustrated the impact of recruitment difficulties on service provision, using the example of a qualitative study of service provision for people with dementia and their carers in remote and rural Scotland. The study found home care provision was influenced by a lack of availability of paid carers, particularly in more remote areas. They found the location of participants was also problematic as the travel time required for the service provider to travel to and from the user's home was added to the 30 minutes required to perform a care task, increasing the cost of quite minor activities. Innes et al. found gaps in services and highlighted a number of challenges for service provision in rural areas, including the '*availability of specific services, the availability of personnel to deliver services, and the tailoring of services to reflect local circumstances*' (Innes et al 2005, p.359).

The BMA (2005) report considered solutions to recruitment and retention difficulties and suggested that flexible working is an especially important issue to address in rural areas where the *'burden of duty is seen as a particular disadvantage to recruitment and retention'* (2005, p.28). It highlighted that opportunities for flexible working are available.

2.4 Attractiveness of employers

Recruitment and retention difficulties experienced in rural areas may in part be attributed to the attractiveness of employment in these areas. Research shows that working in rural areas is not seen as attractive to practitioners who have no experience of such settings (Ireland et al., 2007, Russel and Lough 2010). A variety of reasons for this reservation are revealed by the literature including differing workload pressures in rural areas (Iverson et al., 2002); professional isolation (BMA, 2005); and blurred role boundaries (Turbett, 2009).

However, the 2005 BMA report made some suggestions for addressing this issue. The BMA suggested that allowing individuals a 'safe trial' – the opportunity to try working in rural primary or secondary care, at various stages of the career, could encourage more people to consider taking up posts in rural practices. It reported that the GP Rural Training Fellowship in Scotland was *'designed to follow vocational training for general practice and has enabled young GPs to try rural practice without long-term commitment'* (2005, p.28). It suggested that similar schemes could be established for GPs approaching retirement and wishing to spend the final years of their career in a rural location or offered to GPs returning from overseas (BMA, 2005).

Workload pressures

Workload pressures experienced by both urban and rural GPs are felt in differing ways. The 'throughput' of patients varies in intensity and volume for urban and rural GPs, with urban GPs seeing many more patients. However the rural GP does many more tasks and because of isolation from other services, has responsibility for more and varied tasks such as minor surgery:

'I have no opportunity... to delegate work that I consider is medical and hands-on clinical work. I do all the blood-taking, all the smears. I do all the minor surgery on my own. I do all the accident work...'

(Iverson et al. 2002, p.20)

Rural GPs often also have to work longer hours. Whereas many urban GPs have opted out of providing out-of-hours care for their patients (Roberts et al. 2009), or are part of out-of-hours cooperatives with other local GPs, rural GPs are not able to join into cooperatives with other GPs due to the large geographical distance between each practice. This means that they are on-call more often than their urban counterparts. This is also the case for

consultants in rural hospitals who have been reported to be on call 24-hours a day (BMA, 2005).

Workload pressure is also heightened by a lack of locum cover in rural areas. This means that it is difficult for GPs and practice staff to find cover for holidays, conferences or other absences (Iverson et al. 2002 and West et al. 2004).

Professional isolation

For rural healthcare staff it can be difficult to keep up to date with CPD requirements and training. There may be few other professional staff in similar roles to act as mentors and inter-professional working opportunities are less frequent than those in urban settings (BMA, 2005), which may contribute to these settings being viewed as unattractive by practicing clinicians.

Blurred roles

Health professionals in rural areas can experience a blurring of professional and personal boundaries when working and living in the same area (Turbett 2009). Turbett (2009) describes this as the 'dual relationship' for health practitioners and service users, as clinicians in rural areas have a social role in the community as well as a 'worker-client relationship'. Nurses, too, often have blurred roles within rural GP practices, as they can often be employed as practice administrators in addition to their clinical roles.

Overcoming these barriers


The research does point to some ways in which working in rural settings can be made more attractive to outside recruits. Both Russel and Lough (2010) and Ireland (et al. 2007) highlight the importance of exposure to rural practice early on in medical training in order to familiarise medical students with the types of work expected of rural practitioners. Those who experience working in deprived or rural areas are more likely to work in those areas during their career.

2.5 Skills acquisition of existing employees

Remote and rural areas require different skills from medical practitioners than from those based in urban areas. Practitioners in rural areas are required to be generalists with a wide breadth of knowledge in order to be able to deal with 'anything and everything' (Iverson et al. 2002). However they also need specialist skills as they can be a considerable distance from hospital support services and hence required to act in the place of a specialist (NHS Scotland 2007).

Expanding roles

People now have longer life expectancy and some are increasingly living longer with chronic conditions. An ageing population means that there will be



fewer people of working age to provide health care. Whittingham (2009) believes it is therefore necessary to look at how health care is delivered and look at expanding the roles of existing registered employees and increasing the use of non-registered staff as well. In doing so, patient safety must be maintained, so this requires training in order to commence staff in new roles. The role of the AHP and Assistant Practitioner has been identified as one which could be expanded to deliver more health care services (Whittingham, 2009, Dunlop 2010). There is already some inconsistency across UK health services in Assistant Practitioner's roles and responsibilities, though Scotland has now developed standards and codes of practice. Dunlop (2010) recommended educational programmes for AHPs and Assistant Practitioners which focus on multi-professional learning and workplace mentoring.

In 2008 the Scottish Government published the 'Delivering for Remote and Rural Healthcare Action Plan'. The 'Remote and Rural Implementation Group' (RRIG) was established to oversee its recommendations for the delivery of a sustainable model of healthcare for remote and rural Scotland. The report had concluded that integration and shared competencies would be central to future staffing of services in remote and rural healthcare and the concept of a Remote and Rural Healthcare Education Alliance (RRHEAL) was established at the point. RRHEAL would provide a link between healthcare services and education providers in order to support rural education for NHS Scotland. The alliance is identifying the core competencies required by rural GPs and the appropriate training required to support nurses in newly emerging roles in remote and rural practices and is coordinating an approach to improving distance learning (RRIG, 2010).

Skills gaps

The Scottish health sector has a large proportion of highly qualified workers compared to the whole economy: some 61 per cent of the health workforce are qualified to the equivalent of NQF Level 4 and above, compared to 39 per cent across the whole economy (Scotland Skills and Labour Market Intelligence Assessment, 2011). However, in the recent Skills for Health report (2011), some 14 per cent of health sector organisations in Scotland reported having skills gaps. Skills gaps are defined as when existing employees have lower skill levels than needed to achieve business objectives. This compares to 14 per cent in Northern Ireland, 22 per cent in England. The most commonly cited reasons for skills gaps in the Scottish health sector were 'the introduction of new technology (49 per cent) and 'the development of new work practices' (39 per cent) (Skills for Health, 2011a, p.41).

In Scotland, the skills gaps most commonly identified in the health sector were planning and organising skills (64 per cent of employers reporting skills gaps); problem solving skills (56 per cent) and customer handling skills (46 per cent). Other technical and practical skills was also commonly cited with 43 per cent of employers reporting this to be a current skills gap (Skills for Health, 2011a). However, Table 2.3 indicates that in Scotland skill shortage vacancies in the health sector are less than in the wider economy, while in

the other countries of the UK skills shortages in the health sector are higher than in the wider economy.

Table 2.3: Per cent of Establishments reporting skill shortage vacancies

| | Health Sector % | Whole Economy % |
|-------------------------|-----------------|-----------------|
| Scotland (2010) | 1 | 3 |
| Northern Ireland (2009) | 14 | 8 |
| Wales (2005) | 6 | 4 |
| England (2009) | 4 | 3 |

Source: Skills for Health (2011)

Barriers to skills acquisition

Health practitioners are currently experiencing difficulties in identifying and accessing suitable and specific education provision in remote and rural settings. Research shows that rural GPs attend fewer professional development events and educational meetings than those from urban areas and Iverson et al. (2002) found that *'formal professional development activities were not an option for some GPs'*. Skills decay is an acknowledged issue where there is less exposure to training practice (NHS Scotland, 2007). The literature points to various barriers to skills acquisition that are specific to remote and rural locations:

- Less access to physical materials; libraries and equipment and inadequate internet access (Ireland et al. 2007).
- No personnel cover available to allow time off for training.
- Higher costs of attending training- travel and backfilling of posts.
- The current system relies on GPs following their interests and doing their own research using textbooks and journals in their own time (Iverson et al. 2002). The rural practitioner relies on textbooks more than journals (Ireland et al. 2007) and thus may not be keeping as up-to-date as those in urban settings with access to libraries and journals.

Drivers and recommendations for skills acquisition

The literature also highlights drivers that can aid skills acquisition for staff in rural healthcare settings. Clelland et al. (2005) looked at the training of allied health professionals in care homes and identified that for successful training, development and skills acquisition, the following needs to be achieved:

- a training culture needs to be cultivated
- all staff must be trained to maintain motivation and consistency of information/delivery

- training should be delivered and available at different times to suit people who work part-time, out-of-hours and evening shifts
- the venue in which the training takes place must be convenient, especially for those in remote and rural areas
- staff need to engage in training at the appropriate level for the member of staff, commensurate with their education and training levels.

A guide or framework for developing new roles was developed by the Scottish Executive Health Department (SEHD) in 2005, which is also applicable to nursing and allied health professionals. The framework, if followed, can help to ensure that the roles are needs-led, sustainable and meet governance requirements. The framework stresses the importance of a career structure within which the new roles should sit. Factors to consider include:

- job descriptions and appraisals
- investment in and sustainability of new roles
- evaluation of new role developments
- periodic role reviews
- building on e-health.

A pilot study used the National Incremental Competencies in Healthcare Education (NICHE) to help people adopt new roles. The pilot used this competency tool rather than SVQs. It was already a proven tool to develop new staff but the pilot used it to develop existing staff. This study demonstrated that learners needed a facilitated method and experiential co-operation with peers through six-weekly meetings, shadowing, mentor support and guidance. Even with this added cost of mentor support the training was cost effective. As with other studies, the learners made extensive use of intranet and internet resources.

Colthart et al. (2010) highlighted the experiences of trainees undertaking a two-year programme to become radiography assistant practitioners. The researchers found that the programme was demanding, in particular requiring 'reflective reporting': both the process of thinking reflectively and expressing their thoughts in writing. Trainees found this demanding and there was a need for longer notice for assignments and extended deadlines. Trainees also reported that they would have benefited from refresher training prior to the programme in areas such as IT skills, study skills and essay writing.

As indicated earlier in this chapter, both Ireland et al. (2007) and the BMA (2005) have emphasised the importance of early exposure of medical students to rural practice in order to overcome recruitment difficulties in these areas. A lack of experience of work in these areas can affect not just initial recruitment but may constitute a barrier to opportunities to maintain or

refresh skills. There also needs to be strategies in place to allow staff from rural areas to spend time in acute units on a regular basis to enable them to maintain their competence. However the researchers did recognise the difficulties with the practicalities of such arrangements, including issues already mentioned such as travel expense and a lack of available cover; such issues can make such secondment arrangements a difficult policy option. NHS Scotland (2005) raised the possibility of developing a specialist degree for practitioners working in remote areas stating *'there is the potential within the review of pre-registration nurse training by the Nursing and Midwifery Council to incorporate a generalist non-branch option'*.

One of the barriers to training identified was the higher cost of training for rural staff due to the expense of backfilling posts and travel time and costs. NHS Scotland (2007) reported that in some countries a CPD subsidy fund has been introduced to assist practitioners in remote and rural healthcare to participate in conferences and skills development opportunities relevant to remote and rural healthcare.

Extending the use of ICT to train rural and remote staff and enable skills acquisition through research is also a common theme in the literature (SEHD, 2005; NHS Scotland 2005), highlighting the potential use of e-libraries and portals. Ireland et al. (2007) also highlighted the possibility of using ICT to train existing care staff in rural settings.

2.6 Models of service delivery and access to services

One of the largest barriers to service access in rural and remote settings is the distance to health establishments. The increasing tendency to centralise services is further reducing patient choice and increasing the distance between service users and centralised services (Ireland, 2007). Increasing demand for health services in both rural and urban settings has led to changes in the healthcare model of delivery to try to help sustain local healthcare provision in remote communities (NHS Scotland, 2007).

Distance to services

Across Scotland there is one health establishment for every 1,360 residents. Sub-regionally this ratio ranges from one establishment for every 800 residents (Orkney) up to 1,978 residents (North Lanarkshire) (Skills for Health, 2011a, p.24-25). There is one health employee for every 23 residents across Scotland, which is higher than all other UK countries. Regionally, this varies from one health employee for every 11 residents (Aberdeen City) up to 147 residents (East Renfrewshire).

Within Scotland, there is one GP surgery for every 5,094 residents. By region this can range from one GP surgery for every 1,440 (Orkney) residents to one per 7,187 residents (Clackmannanshire). At local authority level 'drive times' (travel times by car) from home to the nearest GP surgery range from 2.46 minutes in Aberdeen City to 89.07 minutes in the Highlands.

However, data showed that patient satisfaction is high for access to GP surgeries despite rurality factors (Skills for Health, 2011).

Similar analysis showed that while across Scotland as a whole there is one NHS hospital for every 18,500 residents, by region this can range from one for every 8,285 people (Argyll and Bute) to one for every 89,023 residents (East Renfrewshire) (Skills for Health, 2011). The BMA reported that 89 per cent of the population in Scotland live less than 30 minutes drive-time from an acute hospital accepting acute admissions, whilst 1 per cent lives more than 120 minutes away. Some 84 per cent live less than 30 minutes drive-time from a hospital with a major accident and emergency unit and 3 per cent live more than 120 minutes away (BMA, 2005).

Given that remote and accessible rural areas are defined by their proximity to a settlement of 100,000 or more, it is unsurprising that there are differences in the distances travelled by residents in such areas in order to access GP surgeries and other health facilities. Residents in remote rural areas are less likely to live within a 15-minute drive to key services than are those in accessible rural areas and the rest of Scotland. Some 93 per cent of residents in remote rural areas live within a 15 minute drive time to a GP. This is compared to all residents of accessible rural areas and of the rest of Scotland (Scottish Government, 2010d, p.205). The proportion of residents who have convenient access to a chemist or pharmacist in remote rural areas is 60 per cent and in accessible rural areas is 71 per cent, compared with 89 per cent in the rest of Scotland (Scottish Government, 2010a).

There are differences in public transport times for residents living in accessible and remote rural when accessing GP surgeries: in remote rural areas, just 27 per cent of the population live within a 15 minute public transport journey of a GP surgery compared to 41 per cent in accessible rural areas (Scottish Government, 2010b). Shetland, Orkney, the Western Isles, Argyll & Bute and the Highlands have the longest public transport journey times to services (Scottish Government, 2010b) while Shetland, Orkney, the Western Isles and Argyll & Bute have the longest drive times to services.

Turbett (2009) noted that dependence on poor public transport systems can result in difficulties in accessing a range of services that are '*almost taken for granted in urban areas*' (p.508), such as employment, health care and social services and advisory services. He stated that '*transport disadvantage contributes to social exclusion in urban areas, but causes it in rural areas*' (p.508). Turbett noted that in health studies, this is described as 'distance decay' - the further the user is from the source of the service, the lower the take-up, with obvious negative health consequences for the populations affected (Asthana et al., 2003 cited in Turbett, 2009, p.508).

Centralisation of services

Within Scotland there are proposals to centralise many services, such as emergency departments and maternity care, by removing these from smaller hospitals (Christie 2005, cited in Ireland et al., 2007). The BMA (2005) also

stated that increasingly services are being centralised in larger cities, resulting in rural residents having to travel greater distances to access services. The BMA cited one example of a practice in remote Scotland which had 5,000 patients who lived an *average* of 130 miles away from the nearest district general hospital (DGH) (BMA, 2005).


Centralisation has particularly impacted upon maternity services in remote and rural areas (e.g. Farmer et al. 2003 cited in Ireland et al., 2007). It has reduced patient choice, quality of care, safety and sustainability of maternity services and created a shortage of trained staff and professional development (SEHD 2002, Fahey & Monaghan 2005, cited in Ireland, 2007, p.106). Ireland et al. (2007) described remote and rural maternity care as characterised by 'generalists' providing local care and requiring patients to travel distances to specialist care units (Ireland et al, 2007, p.106).

A study by Pitchforth et al. (2009) of women in the North of Scotland who faced considerable travel time and geographical barriers to access centralised services, noted that most women expected to have to travel for maternity care and were prepared to do so. This was accepted as being part of life in a remote and rural community. For women living on islands, concerns over geographic distance were further compounded by the possibility of adverse weather and reliance on air transport to reach referral hospitals on the mainland. While consultant-led care was perceived as being safer and able to cover every eventuality, women felt this was at the expense of the personal care received in local midwife managed units.

Smith and Campbell (2004) have discussed similar issues with the increasing use of outpatient treatment (where in the past treatment would have been as an inpatient) and the centralisation of cancer care in specialist units, both of which have resulted in greater travel for rural Scottish patients (Smith & Campbell, 2004). The rationale for centralisation of services is usually to ensure high quality treatment for all patients wherever they live. Smith and Campbell and others have argued that concentrating services can serve to reduce access to hospital care for patients living further away (Ferguson et al. 1997; Baird et al. 2000 cited in Smith and Campbell, 2004). Ireland (2007) has argued that overall, a service needs to take account of choice, safety and availability of transport in routine and emergency situations rather than focussing solely on quality (Ireland et al., 2007, p.106). Ireland et al. refer to a Scottish policy report produced by the Expert Group on Acute Maternity Services (EGAMS) which emphasised that there is 'no such thing as zero risk for women who are pregnant or giving birth, and that this must be explicit in developing local strategies and practice in remote and rural areas' (Ireland et al., 2007, p.106). However, the current National Framework for Maternity Services in Scotland has already recognised that not all maternity options will be available locally due to constraints of geography (Pitchforth et al., 2009).

Addressing healthcare policy

Pitchforth et al. (2009) have suggested that a more critical approach to the use of choice as a service development and analytical concept should be



used when agreeing current healthcare policies. While falling population growth, safety and medical workforce issues (such as the European Working Time Directive (EWTD) and consultant contracts) are contributing to decisions to increasingly centralise acute obstetric and neonatal services in the UK, nonetheless choice needs to be considered alongside other policy goals. The implications and potential impact of changing staffing and service structures are greatest in the rural areas (Pitchforth et al., 2009).

A look at the health profile of Scotland shows that the largest health group within England, Northern Ireland and Wales is classified as 'healthy'. In Scotland, however, the largest group is classified as 'possible future concerns' (Skills for Health, 2011). This indicates the need for a stronger focus on public health policies and initiatives. Scotland also has the lowest life expectancy of the UK countries, while a third of residents in Scotland households are classified as 'hard pressed', indicating that poverty and deprivation is a significant issue for those shaping health policy in Scotland (Skills for Health, 2011).

Scotland's remote rural population is ageing, and the attractiveness of the environment as a retirement locus has led to the influx of increasing proportions of elderly in-migrants (Williams et al. 1999 cited in Smith et al., 2004). Skills for Health (2011) stated that Scotland is predicted to experience the smallest percentage growth in overall population over the next 25 years but its population will age more quickly than other areas of the UK. Low income households and the elderly are more likely to suffer access problems to services (Cloke & Little 1990; Higgs & White 1997; Watt 1999; Sheehy & Jones 1999 cited in Smith et al., 2004), compared with more affluent groups who are able to adapt to increasing centralisation of services and declining public transport in rural areas. King et al. (2009) discussed the disadvantages associated with rural settings stating that access to social care is reported as being difficult due to fewer younger people to work or volunteer in these areas.

King et al. (2009) have also pointed to the implications that the ageing population in Scotland will have for the delivery of health and social care services, with particular challenges in rural areas which have higher proportions of older people compared with urban settings and where the provision of services is more expensive due to issues such as the longer lengths of time spent by healthcare staff in travelling to rural areas. In Scotland in 2002, the 15 per cent of the population who were aged over 65 years consumed 40 per cent of health and social care spending (King et al., 2009).

The RRIG found that the system of care in remote and rural communities is 'based on fostering community resilience, with integrated teams supporting self-care and anticipating health needs to avoid crisis in long term conditions' (RRIG, 2010, p.7). The Framework recommended a revised model of care in Rural General Hospitals (RGH) to ensure the sustainability of locally available services and promoted a local system that includes Obligate Networks, clinical decision support, tele-health and appropriate education delivery.

King et al. (2009) also reported on a new service model intended to create community nursing services that improve health, reduce health inequalities and develop career options. Central to the model is a generic community health nurse who will replace district nurses, public health nurses, health visitors and school nurses. King et al also commented on NES developing a capability framework for community health nurses to ensure they have the right skills. The core elements of the nurse's role include capabilities such as working in partnership, challenging inequality and promoting empowerment and self-care (King et al., 2009).

Alongside centralisation of services, in common with the rest of the UK, services in Scotland have moved to a greater emphasis on partnership approaches, away from 'internal markets' in the NHS, and compulsory competitive tendering for local authorities and replacing them with the 'Best Value Regime' (Campbell, 2007).


However, the question of how commissioning can achieve the goals of healthcare policy, such as self-directed support, in rural settings is not well researched.

Changing methods of delivery

McKinstry et al. (2009) noted the differences in healthcare delivery between rural and urban doctors. He stated that in rural areas doctors typically operate 24-hours a day availability and have practices located near to home, whilst urban doctors typically operate appointment systems which separate their work and free time. McKinstry et al. stated, however, that appointment systems, with a constant turnover of patients, have contributed to pressures during working hours for urban clinicians. Within urban areas, the excessive demand on health services and their staff has impacted the method of delivery, with moves away from traditional consulting towards telephone consulting seen as improving the efficiency of a practice (McKinstry, 2009,).

For GPs in rural practices, McKinstry et al. (2009) found that GPs reported that through necessity due to geographical barriers, health problems had to be initially managed by telephone. In support of this, research from the Scottish Government found that the total number of consultant outpatient attendances has declined in recent years (Scottish Government, 2010d). However, this may be partly attributable to service redesigns; for example, some return outpatients are offered a telephone consultation as an alternative to a clinic appointment (Scottish Government, 2010d).

McKinstry's research showed that urban GPs expressed concerns about telephone consultation methods of service, in particular that telephone consulting was simply providing patients with another method of contact when their workloads were already unmanageable, saying that it *'further increased access to an already overstretched service, reduced control over their workload, and postponed rather than resolved problems'* (McKinstry et al., 2009, p.212). However, in contrast, in rural areas, for both patients and staff, telephone consulting was used to overcome distance and it enhanced continuity of care (McKinstry et al., *ibid.*).



The researchers noted that concerns arose in urban areas, often due to appointment unavailability or 'late' calls, when *'there was a mismatch in expectation when patients wanting a face-to-face encounter found themselves managed by telephone. In these circumstances, often both the patient and the clinician felt unhappy about the quality and/or safety of the service offered.'* (McKinstry et al., *ibid*, p.214). McKinstry et al. found that for clinicians, the major drawback of telephone consulting was the loss of insight achieved through face-to-face consulting. Patients and health professionals both cited the loss of body language cues during telephone consultations as important, especially in the assessment of mental health. Administrative staff also reported unease at having to make 'priority-related decisions' with patients that were not visible (2009, p.213).

Despite these drawbacks, McKinstry's et al study concluded that telephone consulting was seen as an improvement to normal access to services by both healthcare professionals and service users. However, they stated that medical education needed to include strategies in training programmes for dealing with the limitations of telephone consulting (*ibid*).

Such limitations have largely been overcome by the introduction of video-based telemedicine initiatives. A case study by Bell (2005) also investigated the use of 'telemedicine' in remote rural Scotland, using the example of a service user residing on a remote island and referred to a Community Learning Disability Team. It was recognised that regular visits by team members to the island would be time and cost inefficient and would negatively affect other service users in other parts of the Health Board. Instead a video link was set up. Use of the video link had the advantage of saving time, money and travel for either patients or staff members (Bell, 2005). Such methods had been used in a wide range of medical, psychiatric and psychological areas and used for direct patient care, indirect work with care workers or relatives, and in staff training or supervision. Generally, the value of telemedicine was seen to be high and patients themselves reported satisfaction with the methods (Blackmon et al. 1997; Ghosh et al. 1997 cited in Bell, 2005).

It is perhaps unsurprising then that while telephone contact alone has been found to be effective, reliable and cost-effective, there is evidence that both patients and clinicians prefer audiovisual contact to telephone contact only (Ball et al. 1995, cited in Bell, 2005). In Bell's case study, the use of video links increased the number of possible appointments, allowing for briefer and more frequent contact which Bell reported would promote feelings of support from distant professionals. The encouragement was also thought to be similar for care-staff, provided occasional face-to-face visits helped cement the package of care (Bell, 2005).

Bell's (2005) study of working with service users in geographical isolation drew together some practical guidance for the method of care delivery. The guidance includes appropriate learning points for healthcare professionals working in remote and rural areas. Bell's recommendations included the following:

- Restrict visits to a limited number, perhaps for assessment and as a check on progress, and use a range of other methods and people for intervention.
- Use the telephone as much as possible for accessing assessment details thereby limiting need for visits.
- Access teleconferencing for client contact perhaps on 'every other appointment' or occasional basis which would limit cost and time spent in travel.
- Use videolinks for discussion with staff or carers.
- Use teleconferencing or videoconferencing for staff and/or carer training.
- Use e-mail for client queries.
- Use e-mail for staff queries.
- Train other people to manage aspects of your profession.
- Where possible work in a trans-disciplinary way so that others can deliver your input (Bell, 2005).

In the report from the RRRIG, the Emergency Medical Retrieval Service (EMRS) was discussed; this brings doctors to patients within remote and rural communities and also provides a telephone advisory service. In March 2010, it was announced that an EMRS would be established for all of Scotland from October 2010 and this was seen as a significant step forward in addressing 'the tyranny of geography experienced by those living in remote and rural areas' (RRIG, 2010, p.17).

NHS 24

NHS Scotland (2007) discussed the term 'community resilience', which is considered to be key in sustaining local healthcare in remote communities. It is defined as a:

'... collective and collaborative response within communities to promote independence. Communities are facilitated to look after themselves, utilising all resources available to them, encouraging self care and using volunteers and informal carers within the local community.'

(2007, p.11)

NHS Scotland sees NHS 24, the 'virtual network service for Scotland' (Roberts et al., 2009) as playing a lead role in the promotion of community resilience through '*working in partnership with NHS Boards, Community Care Teams and patients and carers*' (ibid.).

NHS 24 was launched in 2002 and was fully rolled out across Scotland by January 2004. Before the introduction of NHS 24 there was variation in the

delivery of out-of-hours healthcare across Scotland. During the late 1990s, GP co-operatives (groups of GPs providing out-of-hours care within a structured organisation) were in operation in about 75 per cent of Scotland. However, most co-operative services operated in urban settings because rural geography made co-operatives difficult to implement in remote and rural areas. Out-of-hours service delivery in rural areas is dependent on individual practices or managed rotas (Roberts et al., 2009).

Once NHS 24 was rolled out it became the only form of communication for patients contacting GP services after hours. It was introduced as a special Health Board with a national remit to provide 'accessible, high quality, consistent and sensitive healthcare service to the people of Scotland' irrespective of geographical location' (cited in Roberts et al., 2009)

Smith (2006) however stated that the launch of NHS 24 meant that nurses, with no direct experience of the services to which they were making referrals, had to rely on only computer software and a directory. She stated that an independent review, by former chair of the Scottish Ambulance Service Owen Clarke, found that the NHS 24 referrals were often 'inappropriate'. Therefore, in contrast to NHS Direct in England and Wales, NHS 24 has decentralised its services. It expanded to include five centres that support the core units. The satellite centres are in the health boards of Highlands, Lanarkshire, Tayside, Ayrshire and Arran, and Dumfries and Galloway. Smith (2006) has suggested that these satellites have been critical in widening the geographical pool from which to recruit nurses, providing additional resources and increasing the number of staff on duty at peak times. The satellites mean that NHS 24 can also employ local nurses with local knowledge. Smith's research showed that it had improved decision-making relating to geography.

2.7 Measures of productivity

Productivity is the relationship between outputs and inputs, including the mix of inputs. The higher this ratio, the greater the productivity. Although productivity in public services is important, measuring it is difficult (Crafts, 2004). Generally there are no prices for the activities and no obvious way to value one type of service in terms of another. There is a danger of focussing on outputs rather than outcomes, for example operations done rather than a satisfactory outcome of that operation.

Public service output is currently measured by the UK Centre for the Measurement of Government Activity (UKCeMGA) on a gross output basis. Input is measured using a volume index of labour employed. This uses two methods; full time equivalent staff are counted (Doctors and Nurses are counted separately and weighted according to their expenditure share), expenditure on staff is also deflated using an appropriate pay deflator. Healthcare is adjusted for quality; waiting times, short term survival rates, patient experience and some clinical outcome measures. This overcomes Crafts' concerns about not taking into account outcomes. However, it should be noted that the most recent UK healthcare productivity report (Penaloza et

al. 2010, based on 2008 data) does not include input and output from Scotland.

There have been some studies which have used productivity measures in Scotland. A Scottish national health service ophthalmic facility used a productivity measure (preoperative and postoperative data) to compare the service that was operating in 1997 with the service was offered following a redesign of the hospital space, investing in more cataract nursing staff and streamlining services. This showed that their productivity had risen substantially (Tey et al. 2007).

Field and Emrouznejad (2003) used data envelopment analysis (DEA) to measure technical and scale efficiency in comparing 22 neonatal units in Scotland. DEA uses observations of outputs and inputs to construct best practice and the performance of other organisations is then measured relative to this best practice. Their method used relative performance as benchmark which can then be applied when making decisions about budgets and expenditure.

For this study Field and Emrouznejad measured productivity in neonatal units by considering the number of cots available, number of staff, and number of cots occupied. There is no value-added outcome used in their measure, as such they state:


‘Using economic measures alone to judge the efficiency of health care units could be misleading; these units are aiming to provide high quality health care for their patients and should therefore not simply be concerned with quantitative results.’

Field and Emrouznejad (2003)

2.8 Conclusion

The literature and available data revealed that the demography of Scotland, in terms of an ageing population aligned with a decreasing working age population, will have a significant impact on health sector employment in rural and remote areas of Scotland and on the increasing demand for health services in urban areas. Increasing demands by service users and emphasis on patient choice and patient-centred service delivery have already led to the implementation of new service models, each with their advantages and disadvantages for the healthcare professional and service user.

The availability of labour differs widely between Scottish Health Boards and rural healthcare units are faced with recruitment and retention pressures related to distance and geography; ageing workforces; medical specialisation and heavy workloads. Urban practices are equally faced with skill shortages and ‘insatiable’ patient demands which place pressures on services.



In rural areas, the literature showed it is difficult to attract new practitioners to the area due to workload pressures, professional isolation and blurred professional and personal role boundaries. Different skills are also required of healthcare professionals in rural areas compared with those in urban areas. Rural practitioners are required to be generalists and often lack the support that exists in an urban practice. There is an emphasis on expanding the roles of existing employees in the literature and on developing cross-boundary working to improve health service delivery in both rural and urban settings.

An area which might be considered the primary focus for future research could be around the measures of productivity relating to the provision of health care in rural and urban Scotland. A search of the available literature revealed significant gaps in this area. In addition, studies such as those by Pitchforth et al. and Smith et al. have started to look at the nature of the skills needed in rural healthcare provision, but there is clearly scope for further research focusing on the nature of the employment and skills measures used in the various settings.

3. Interviews with the Territorial Health Boards

In the second part of the work interviews were sought with key individuals within the 14 Territorial Health Boards in Scotland. Individuals who were well-positioned to give an overall view on key service delivery, deployment of staff and workforce issues were selected and an interview requested. In the main these were Workforce Development Managers or Human Resource Directors within the Health Boards. Two Health Boards fielded two interviewees to ensure they could fully respond across the breadth of issues to be addressed in the interview. In addition, interviews were requested from the Scottish Ambulance Service (SAS) and NES; NES participated, SAS agreed to participate but in the end was unable to field an interviewee.

3.1 Procedure

Contact details for potential interviewees were compiled from a combination of Health Board websites, Binley's Directory, and some contact details provided by Skills for Health. All contacts were initially emailed to request an interview and, where they were willing, to ask for potential dates on which the individual was available for interview. All booked interviews were conducted by telephone between the 27th January and the 25th February 2011.

A discussion guide for the interviews was drafted and agreed with Skills for Health (see Appendix 2). In brief, the topics included:

- Factors affecting service demand in each region and any impact this has for the desired profile for the workforce; which occupations are growing in importance/numbers and which are declining.
- The availability of labour (including paid employees, volunteers or unpaid carers) and the factors affecting availability.
- Any particular shortage occupations and conversely any for which there is over-supply of labour.
- The perceived attractiveness of the NHS as an employer, and the factors affecting that attractiveness (e.g. availability of transport, competitor employment in the area, salaries in competitor employers).
- Methods of skills acquisition/CPD for existing employees and factors affecting skills acquisition (e.g. availability of appropriate training/education locally or through distance learning; accessibility of local training/education providers); any growth areas in provision and any notable gaps in provision/areas in which more provision is needed.

- Models of service delivery and access to services within the region covered by each Health Board and whether any models are viewed as particularly effective in a rural or urban setting; how the Health Board judges the effectiveness, and what measures of productivity they typically use in judging effectiveness.

At the end of each interview the interviewer wrote up notes from the interview for later analysis. Using the broad categories outlined above the interviews were thematically analysed and the outcomes are reported in this chapter.

3.2 Outcomes of the interviews

3.2.1 Location, housing, travel and access

We start by considering the infrastructure issues that can impact on access for service users, the service delivery decisions of the Health Boards and the employment decisions of staff. For service users infrastructure can affect their ability to access either primary or secondary services (or both); in turn, similar issues impact on decisions made about models of service delivery and hence, location of services. For staff, there are issues about the availability and affordability of housing and transport which influence their decision-making about whether or not they can move to and live in a region. A second issue is the availability of public transport and whether they are able to travel to the job without private means of transport; and lastly there is the issue of the geography of these areas, in particular the very remote areas and issues to do with the balance of decisions regarding how or whether to provide services in remote areas versus increasing centralisation.

As may be expected, and as is the case across the UK as a whole, in Scotland housing availability and cost varies greatly between areas. In some places the availability of housing is a positive draw to the area; elsewhere, though, housing prices have soared and is causing severe problems, in particular when trying to attract younger staff. While some areas may have affordable housing, these cheaper prices often reflect the lack of local services, which in turn can cause problems for staff:

‘There are quite a lot of issues. Housing is very expensive... for young staff the price of housing is an issue.’

‘There are no problems in the west of Scotland, there is a range of levels of accommodation and there is no shortage of social sector housing. It’s easy to stay and the public transport is good.’

'The school is an attraction, small classrooms, better quality of education but a high cost of living, possibly, is a barrier, we've got probably the highest cost of petrol in the whole of Scotland and to get off the island is extremely expensive. If you relocate to the island and you have family on the mainland it's going to be a costly exercise to go back and forth. So I know that is considered a barrier.'

'Housing is good, there is a lot of affordable cheap decent housing, so from that point of view it is good. Depending on where they live they may have difficulties with public transport, though.'

Some Health Boards had responded by providing housing, but often this was limited:

'Hospital accommodation is often provided for [medical] trainees because there is not much housing available, but they pay for it.'

'There is a small stock of Health Board housing and accommodation for new staff to use in the short term.'

Such accommodation was not always available, and this was felt to have longer term impact:

'One of the significant challenges we have in this area is that [while] in the past, our community hospitals would have had [staff] accommodation, they don't have that now.'

Where there are transport issues these may affect not just employees' decisions regarding whether or not to take a post but may also impact on employer decisions too:

'For the lower paid workers there are transport issue definitely... There are also issues around cost and timing of transport, e.g. there may be no bus home if they are on the late shift.'

[Interviewer: Do you pay for a taxi in those circumstances?]

'We have done. And this can impact on choice of worker for a post.'

'... public transport is very limited e.g. one bus a day, or a bus only on certain days of the week.'

'The terrain means that health care practitioners have to do a lot of travelling and need a car to get around.'

However, sometimes it is not the transport per se that is the issue but the prevailing cultural attitudes in the environs that inhibits hospitals' ability to recruit. Attitudes to travelling can differ between groups.

'In terms of recruiting to [the town] people are used to travelling so we attract people from the west of Scotland to work [there]. But in [some rural areas] they tend to recruit more from the local population, so people are more likely to live and work in the same area, as opposed to the city, where people do tend to travel as the normal way of doing things.'

Lastly, although staff may have factored in transport issues when considering whether or not to take a position this can subsequently become an issue when new policies are introduced:

'We are trying to encourage staff to be more 'green' and of course there are parking problems, there is not enough parking, [but] some staff live outside in the country and if they could not use their car it would not be feasible for them to come to work.'

Turning next to issues of patient access, there are many ways in which transport can impact on access to services by patients and therefore on the decisions to be made regarding optimal location of services (which in turn informs service design). Some Health Boards recognised that access to services was 'a big issue' in their area.

'The acute hospitals are in quite urban areas but a fair amount of [this area] is rural as well. So it does give rise to some issues - associated with public transport and people not being able to get to hospitals and GPs.'

'Access to acute healthcare in some areas is 'challenging'. Although there are three DGHs with A&E, in more remote places it can take 40 to 45 minutes to get to them, and it could be quicker to go across boundaries to [towns in other Board areas].'

One Health Board noted that their community hospitals act as hubs but there could be access problems on the peripheries of its region. To address access issues in areas of deprivation, the Health Board had put in extra resources (e.g. additional clinics, testing, outpatient sessions) in order to increase access options. Another Health Board noted that although there

were rural community hospitals to supplement the single acute hospital in their region, these offered only a limited service. People had to travel long distances for health care and in some places there is no GP, just nurse triage or a GP on only limited days of the week. For specialist services - and even for some of the more routine services - people have to travel to the large conurbations, sometimes outside the Health Board area.

Across the three Health Boards comprising islands or a combination of mainland and islands, access to a GP could be limited, with some of the islands not having a GP:

'There are health centres dotted around, some with Board-employed staff, others GP-led. Some islands have a resident doctor, some a nurse and a visiting doctor. There is an attempt to keep treatment local. Access to a GP can be a problem. Registering with a dentist has been 'the biggest problem'... and is being addressed by the clinical strategy.'

As mentioned above, in rural and remote areas public transport can be very limited indeed, although there is some effort to match the days and times when buses are available with GP visits/surgeries. Health Boards operating in these areas experience a conflict between delivering services locally, and minimising travel for staff:

'The Board is trying to deliver as many services as possible on the islands, e.g. using visiting consultants.'

'The Board tries to minimise travel for patients, which means that doctors and other staff have to travel to run clinics. The Board also provides some services to [neighbouring Board]. It's a balancing act, trying to minimise travel for both patients and staff, and some streamlining of clinics has had to take place to decrease staff travel; this can only be done to an extent, as there is a government priority to provide local services.'

However, in one case there was a view that people's perceptions of the difficulties of travel might be greater than the reality:

'I think we've got effective community and primary care access across the whole of our patch and there is quite a good out of hours services as well, particularly primary care, GP services, we operate those on a consortium basis. So one of our strengths would be ease of access, but we do have some issues regarding people not being willing to travel huge distances, but our geography is such that [people] are no more than 25 miles from our furthest hospital... so although some people might think the travelling is difficult the reality is it mostly is ok.'

3.2.2 Service demand and delivery

The location of the various populations has obvious implications for service delivery; in addition the nature of those populations also impacts upon decision-making. In many cases these two issues – location and nature of the population - are linked. For example, some of the areas have high densities of retirees, who, while they may be (relatively) affluent, nonetheless bring the health challenges of older age with them, with consequent implications for services:

‘The north [of this area] is the real area for retirement... around 18 per cent of the population is aged over retirement age; by 2021 it is going to be nearer 30 per cent. So the whole of the area has an ageing population. Although the population will grow by eight per cent, much of that will be the ageing population.’

‘The ageing population is a significant resource user and therefore hospitals and community health care centres are under pressure.’

At the same time, those retirees tended to live longer – possibly as a result of the move – which leads to increasing demand for services. This is due not just to people living longer, but in some cases arises because individuals are living longer with multiple health conditions.

Other Health Boards in remote and rural areas noted that their increasingly ageing population profile arose less from the inward migration of retirees and more from their younger people migrating away from the area (while the older generations are staying put).

However, just as with the Health Boards that were the destination of choice for retirees, these changes are resulting in skewed population profiles and healthcare challenges relating to the delivery of services to people with multiple and increasing health problems, living in remote areas:

‘The population is ageing, and the Board has the highest proportion of elderly females in Scotland. There is a lot of out migration, particularly young females (who would normally be a good source of supply for the caring workforce). The population is reducing year on year.’

‘The Board is doing a lot of current work on long term conditions management and is planning to develop its rehabilitation services – the overall aim being to minimise unnecessary hospital admissions and get

people back to their community as soon as possible if they have to be hospitalised.'

Many of the Health Boards commented on the impact of such trends on patterns of service demand. One Health Board reported that they were experiencing increasing levels of emergency admissions, notably elderly people with long-term conditions. Similarly, at another Health Board the interviewee noted that not only were medical admissions high in the acute sector generally, but they mainly involved elderly people, with lengths of stay also being high (i.e., long). Geriatric admissions were projected to increase along with demand for services. This Health Board was developing a strategy to tackle length of stay and manage demand. The Health Board had also noticed a correlation between the availability of health care and people accessing it, with GPs in the main conurbation referring more people to hospital than GPs in the remoter areas. The Health Board was working to find out more about the reasons for this state of affairs at the time of the research.

In some regions there is a continuing legacy from the coal mining operations that once predominated locally, with high incidences of chronic respiratory disease in the local population. In the deprived areas, as well as poor health and poor health outcomes, there can be high levels of teenage pregnancies. One Health Board was trying to take healthcare 'to the people', for example offering smoking cessation clinics in miners' social clubs and sessions in the community offering help with obesity and healthy eating.

There are further knock-on effects arising from these trends which impact on the Health Boards' ability to deliver services. The influx of older, wealthier people can serve to drive up house prices and price out younger people; this in turn reduces the number of working-age people in the locality, which then further impacts on staff recruitment and service delivery:

'[This area] is wealthy, it is beautiful but the property is expensive and there is a high density of over 65s that have come here to retire. And there are increased numbers in the summer due to tourism which leads to increased demand for services, things like minor injuries, that sort of thing. So it's affluent but there are significant areas that are more isolated, but because of the socio-economic demographics this group tends to be quite vocal... it is very middle class, people from England who want a good life, very vocal and demanding about all the services they think they should have... in the areas where we have a high density of over-65's we have a reduced labour market. So consequently we have a high density in the population but a lower labour market to look after them.'

In general then, and in keeping with trends across the UK, there is an ageing population in many of these regions. However, in some areas there are pockets in which there is a young population, and as might be expected where this happens, demand for maternity services is growing. One interviewee described the working population as 'squeezed and depleting'

due to the increasing numbers of both older and younger people. Sometimes the increased birth rate is linked to recent patterns of immigration:

'There is demand for older people's services, but there is also a high birth rate, a large eastern European population came in and stayed, add to the economic vibrancy of the area. We are currently reviewing most of our service delivery models to ensure sustainability.'

'For a while we did have a declining birth rate, around 4-5 years ago, but there has been a huge increase in birth rate more recently.'

'The midwives say there has been an increase in the number of births in the area.'

As a result, several Health Boards reported that they were reviewing provision of maternity services at the time the interviews were conducted. In addition, many of the Health Board interviewees could identify specific pockets of poverty, deprivation and ill health within their areas, with implications for the services required:

'It's generally quite an affluent area, and that's why our Arbutnott³ formula is [amongst the] lowest in Scotland: that's based on rurality and deprivation. But we do have areas in the north of [the] city where there is considerable

³ Although the interviewee referred to the 'Arbutnott formula' this was in fact replaced by the resource allocation formula in 2009/10. The Arbutnott formula was used to calculate each Board's target share of the national budget, with this being the product of the Board's population share (pop%) and three further separate adjustments. These are represented by three indices based on needs due to age-sex profiles (AS), morbidity and life circumstances (MLC), and excess cost due to remoteness (R) as follows: Target share % = pop% x AS x MLC x R where (Source: Buchanan, D and Boyce, J (2006) A Brief History Of The Arbutnott Formula Since 'Fair Shares For All'. Report to the NHS Scotland Resource Allocation Committee. The Resource Allocation Formula that replaced it in 2009/10 allocates around 70% of the total NHS Budget between the 14 territorial NHS Boards using a weighted capitation approach that starts with the number of people resident in each NHS Board area. The formula then makes adjustments for the age/sex profile of the NHS Board population, their additional needs based on morbidity and life circumstances (including deprivation) and the excess costs of providing services in different geographical areas. (Source: ISD Scotland).

deprivation, significant poverty, issues around drug usage, alcohol; but otherwise it is a fairly healthy population.'

It is not just retirees who are drawn to these beautiful and tranquil, but remote areas. In particular, one Health Board identified specific service demands starting to emerge because the remote nature of these communities has attracted parents of children with autism spectrum problems.

'The population with autism is rising and this is presenting problems in that the autism service can't cope with the levels of demand.'

As may be expected, and in line with what has been reported from the literature, there are continuing accounts of the challenges that arise from the dispersed and remote nature of some communities. There are specific access issues for these groups. In addition (or perhaps consequently), the terrain and the dispersed nature of these communities means that health care practitioners are required to do a lot of travelling and a car is essential:

'There are rural communities looking at the seaboard and in the central area, largely agricultural, market towns. There has been some industrialisation in some of those with high levels of unemployment as a result...and there are issues about equitable access to services. So it's quite challenging and the roads and travel networks [here] can be difficult for people if they don't have a car, and increasing numbers of them do not... There are some quite isolated communities in the glens, if you are providing district nursing services you can find yourself having to travel up a glen for maybe two hours to see just one person. So there are access issues and especially for out of hours' services.'

However, there was some feeling that despite such issues, services could nonetheless be better-organised, and in one Health Board they were trying to find ways to improve efficiency:

'Probably staff are not used as efficiently as they could be. We need to find out why they spend only 30 per cent of their time patient-facing. They say they go to someone's home and they're not in, and we say 'Why are you visiting people who are not in?' If they're able to go out they can get to you. It's about appropriate use of the service. There are huge inefficiencies in how we schedule people to visit, it's all paper based and it should all be handhelds. If people want a bandage they have to go to the GP to get the prescription and then go to get the bandage... it's all very inefficient.'

There are particular difficulties in some of the more remote locations arising from the transport links. If a physician has to go to one of the islands to run a half day clinic, s/he may have to stay overnight because of the ferry timetable; therefore providing a half day clinic can use up one and a half days of the physician's time. Emergency service access is challenging too:

'The outer islands don't have the same access to care as we do on Mainland, it is an ongoing challenge. And that's where we use volunteers on the islands to support the staff. A big challenge for us is the ambulance service, we used to have a plane locally that stayed on the island, so in the event of an emergency on the island the plane was here and went up in ten minutes and picked up the patient and either took them to the hospital here or to Aberdeen. But that was removed from us and so we now depend on a plane or helicopter coming either from Inverness or Aberdeen. The same plane serves the [other island group] as well and it is all done on a priority basis. It is not good at all. That causes us many challenges.'

Many of the recent initiatives were focusing on centralisation of services but some Health Boards had resisted such changes. In many areas the Health Boards had looked at how to maintain patients in their own homes and thus reduce pressure on beds: joint working with local authorities and social services was central to such initiatives. Maintaining people in their own homes can be cheaper than admitting to hospital and in some cases has also been shown to be clinically safer:

'The Board has formed community health partnerships with councils in [two areas] to tackle these issues. [There is] a brand new community hospital to take the pressure off [the town] and position services in the community (rather than expecting the community to travel to [the town]). There are financial benefits too, as it is less expensive to treat less acute conditions in a community hospital setting.'

'Probably the access to primary care is the one I would highlight [as being good], and the quite extensive community mental health services too. Our community and primary care services are probably quite strong. We have not centralised a lot of care into hospital centres and we have got quite a lot of care in the community and have worked to develop that over the years. A lot of work has been done in the city around long-term conditions and maintaining people in their own homes and trying to reduce hospital admission if at all possible. So there are quite a lot of protocols, e.g. joint working with social services, in order to try to maintain people in their own homes for as long as we can.'

One Health Board said that in urban areas generally they were placing more emphasis on child and family health, especially in the deprived areas where it is difficult to engage with hard-to-reach families. This required joint working with the police and social care.

However, maintaining people in the community can sometimes be a challenge. There was a view that together the local authority care teams and the health service ensured that patients received the care they needed, even if sometimes this meant the NHS sometimes covering areas of care which,

strictly speaking, were the remit of the Local Authority (LA). With the increasing cut backs however there were fears that this situation might change in the future:

'There is an issue re our ability to pick up where the LA falls down. This may end after the cuts. We cover where the LAs don't pick up. [At the moment] the patient gets the care irrespective, but whether that can continue...'

While there were differences in the extent to which Health Boards had centralised primary and community care, specialist services were nonetheless more likely to be found in the major conurbations. This in turn reflected on local patterns of staff recruitment:

'There is probably more specialist activity provision in the city. Regarding distribution of the workforce, there are more high skilled people working in the conurbation than elsewhere. Other sites elsewhere are probably more generalist so there is not the same degree of specialisation. So that reflects on the way our people are deployed and the type of skills that are likely to be used in different areas. For example if you are looking for a first post you are most likely to find some of the smaller DGHs than in a teaching centre, and then they go to bigger places for promotion.'

There is one further issue worth noting here. In remote areas people often work single-handedly. Lone working is an issue due mainly to the geography and the weather, although there have also been a few instances reported of violence against staff.

This section has shown that the nature of the population poses a range of challenges for Health Boards: firstly in terms of the services required and second for the Health Boards' attempts to recruit to the service. The ageing population poses particular challenges, as does the dispersed nature of some communities. No interviewees mentioned any particular challenges in meeting service demands in urban settings. The interviews also indicated that models of service delivery have implications not just for the staffing required but also for the employment and progression opportunities available for staff.

Before moving on to consider models of service delivery it should be noted that many of the interviewees reported that there were both changes to services currently in progress (e.g. large building projects to improve and centralise services) and service reviews underway at the time of the research. The situation is therefore currently fluid and the interviews present a snapshot of what was effectively a work in progress at the time of the research. It is likely that further significant changes to service delivery models will be seen in the near future.

3.2.3 Service redesign

Most Health Boards felt that they were delivering good, although perhaps sometimes patchy services. Several Health Boards reported that they were using LEAN methodologies (with several mentioning that they had been supported by GE Healthcare in this) to make their services as efficient as possible. However, there was recognition that many of the current arrangements will have to change in order to make more effective use of resources:

‘With regard to Podiatry I think a lot of their problems are because they tried to spread themselves thinly by having clinics all over the place in the back of beyond and they do not get the economies of scale that they could get if the public were travelling to a centre. That’s been one of the blockages I think. And they are now saying that yes we’ve been really good at providing a service but we could maybe rationalise it a bit more than at present.’

It should be noted that a range of issues, not solely geographic or population considerations, had led to service review and redesign. It was almost inevitable that, given the economic situation at the time the interviews were conducted (in early 2011), economic constraints were mentioned by several as a factor driving service redesign. However, other, arguably more positive, factors had informed redesign initiatives: access issues had led some areas to redesign service delivery, challenges from the introduction of the EWTD for doctors was a factor and elsewhere the difficulty of replacing specialists working alone was driving change and in the introduction of new ways of working. In some Health Boards the physical layout and flow process had been changed to give a more joined-up service for patients; in remote areas technological initiatives were being introduced to improve access:

‘The Ambulatory care hospitals have significantly improved the way we can move people through the system. Outpatient activity is now concentrated, testing etc. in two major locations. People can go to the same location for a variety of tests whereas they might previously have had to travel around to get the various bits of provision; that is probably the most important part of service redesign over the past few years.’

‘We have a number of telecare arrangements in place, we have done for some time, for instance in the hospital we have patients coming in to speak to consultants in [the hospital on the mainland] over the videoconference rather than bring the consultant over.’

One of the Health Boards had undertaken a lot of development work to develop a telemedicine network. Rather than start with a focus on the technology the Health Board had started by thinking about how they could get the necessary expertise to the ‘first responder’ – these are local contacts


who have been trained to assess individuals and determine the treatment they require. The other key component of the system in addition to the first responders is the network of experts who provide the expert medical input, included in this is NHS 24⁴. The technology is used in two ways: to locate where experts are in the region; and to facilitate communication between the 'first responder' and the appropriate medical experts.

'Our aim, our philosophy is to get the expertise to the first responder. Now the expertise you get to the first responder is dependent on what the first responders are faced with. The first responder can be faced with somebody who's got severe back pain and cannot get out of bed or can also be confronted with someone with severe chest pain and whose ECG is very suspicious and indicative of a myocardial infarct. The type of expertise that the first responder needs is very different in those two situations. The traditional system for both was the same, ship them into the vehicle and then start a long and bumpy journey to the nearest hospital and then you'd be very dependent on whether they had the right expertise in that hospital.

'So there are particular challenges at the point of seeing the patient. It's very important to determine the expertise that is needed and what serves to make that expertise available. So how does that work? You need what we call an information platform, in our case that will be NHS 24. And they are very well set up to a) do telephone triage, and b) know what services are available within the region, because they've got their databases. Also, they are well-set up to hold clinical information. So the information platform can triage depending on the call of the ambulance person or other first responder – this could be ambulance person or even a GP who comes upon an emergency situation in their practice. So we are defining the first responders, and then we want to set up a system to let the first responders get access to the right level of expertise, which could be in the emergency medical practitioners, these are mainly GPs, but also medics who are not A&E consultants but generalists who are specifically trained in emergency situations. The vast majority in the north are general practitioners. Emergency practitioners and emergency nurse practitioners we have as well. So we then put the first responder in contact with the emergency practitioner or emergency nurse practitioner who can either advise the first responder and make a decision to go and see the patient or make travel arrangements for the patient to be transported to a local place where there are radiology services, for example. And then for the emergency nurse or practitioner to make their way there also, or be there already. Knowing who is where and who is available at any one time has to be co-ordinated through the information platform.

'So telemedicine plays a very important role in that, because telemedicine should be applied at home. The whole idea is that the ambulance person spends a lot more time deliberating about the treatment to give the patient and much less time driving.'

⁴ The equivalent service to NHS Direct in England.



The principle is to get the person connected up with the expertise and link people up. The actual equipment required may often be simple. Video equipment is needed in order to be able to show the patient to the expert, plus equipment such as ECG equipment, oxymeters, blood pressure measurement equipment, temperature, the sorts of basic items that would be found in any consulting room in a GP practice. The vital signs of the patient can then be transmitted to the expert. But the most important thing is bringing the expertise to the first responder to authorise them and give them the confidence and the governance to actually do something other than drive.

However, while telecare may help in some settings, in others the opportunities to use such approaches are restricted by infrastructure factors. For example, in one Health Board the use of tele-healthcare was limited by the lack of broadband over much of its geographical area:

‘Video-conferencing... tends to be used more for meetings; even then, it depends on available bandwidth so can’t always be used.’

Other issues that had contributed towards rethinking service design included the changes to doctors’ training arrangements and working arrangements brought in partly on the back of the EWTD. There was also a recognition that provision needed to become more sustainable, especially in light of the economic situation pertaining at the time of the interviews. There were different models in use for how best to achieve this. In one Health Board this had led to the decision to centralise all inpatient services on one site; in another, the Health Board had decided the best way to move towards more sustainable services was to try to provide more care in people’s homes:

‘A lot of workforce issues are being led by the re-shaping of the medical workforce at the moment, and the implications that that had as they changed the training and numbers of trainees that we will get over the next few years. We are having to look at how that service will be provided. So that’s having the biggest impact but it is early days yet in determining how we’re going to deal with it. But that’s probably one of our key drivers at the moment. That’s also one of the reasons why we are moving all inpatients onto one site.’

‘The biggest impact has been the economic situation and the need to shift the balance of care. So the two big drivers are finance and shifting the balance of care. How you make the NHS sustainable in the long term. We need to transfer activity close to people’s home, treat them in their own home, and making sure there are the support packages to support people in their own homes.’

‘Reshaping the Medical Workforce’, a national programme throughout Scotland, is reducing the number of doctors in training. This is for two main

reasons. In part it is because the system has been overproducing doctors. However, it is also partly due to a desire to deliver services by a predominantly trained medical workforce: in the recent past there has been concern that the high numbers of trainees in hospitals, which reduced the likelihood that people would be seen by a trained doctor. In the interim, the practical result has been that there are fewer medical trainees to deliver front line services. One interviewee described this as 'contentious throughout Scotland'. In remote and rural areas, even if the reduction of doctors in training is quite small in numerical terms, a reduction of one or two can impact significantly on rotas in small hospitals:

'The planned reduction in junior doctors will bring challenges e.g. running the hospital at night.'

Typically, interviewees in these areas reported that doctors in training were easier to recruit than trained doctors. Trainees knew they would be in post only for a limited period and also appreciated the variety of work and the responsibility they would encounter during their rotation.

Both economic and pragmatic factors had led some Health Boards to move towards an increasingly centralised model of service delivery within their own area. However there was some feeling that Health Boards were also being encouraged to further centralise, by moving a range of services into the Health Boards that are more centrally-located within Scotland; however, this was not felt to be in patients' best interests:

'There are big issues around distance from the central belt. There is pressure to have everything brought down to the central belt, in terms of service delivery. Audiology would be an example of that but obviously we're trying to resist that, to retain a centre here.'

While there was resistance to centralisation on such a scale as that indicated above, nonetheless there was an acceptance that there was a need to find ways of delivering services in a more cost-effective and sustainable way than previously. In exploring the optimal way in which to reduce costs and plan changes a range of factors had been examined and taken into account in planning service re-design:

'We have analysed what we call the frequent flyers, the 500 people who are the most frequent returners into the [hospitals], how to support them so they don't have to be re-admitted, if they have another asthma attack or whatever. [Looking at] how do we support them in the community.'

'One of the reasons why we are moving all inpatients onto one site is because at present we run two rotas [at the two hospitals] and if we have everybody central we will only need to run the one rota which will help deal

with some of those issues and the working time regulations too... we do not have the numbers at the moment to be viable in two sites. Because the numbers of doctors are going down, it is not going to be viable. One of the first ones to hit us was Accident and Emergency, we're having great difficulty running two A&E departments. We've taken the decision, that we had [previously taken] on an ad hoc basis when e.g. doctors went off sick, or maternity leave, about changing one of our sites to minor injuries only, but we've now bitten the bullet and decided that [imminently] we will have only one A&E department and the other one will be minor injuries.'

'The acute services strategy is to reduce the number of sites we work from and achieve greater efficiencies and economy from centralisation. So the build of the new [hospital] in the south of the city will significantly change how we provide services and we opened two new ambulatory care hospitals in the past three years, one in the north and south of [the city] and so a lot of our day case provision is offered outwith traditional acute hospitals, and I think that will continue as we move to the new hospital. So I think our acute services will become some of the most modern in the UK.'

One Health Board had used the Productive Community⁵ approach in trying to reduce the number of inpatient admissions. One of the key benefits claimed for the Productive Community approach is that it will increase the 'patient facing' time available and reduce travel time⁶. In this Health Board they had started to investigate how to develop district nurses to take on a wider range of skills; they were also examining the health visitor role to determine the extent of overlap of that role with that of the district nurses.

'We are trying to get our district nurses and health visitors doing more patient-facing activity, up from 30 per cent of their time, the rest is admin and that sort of thing. So we have a big project looking at that. The three things the district nurses are doing is wound management, bloods and injections. And there's a huge amount of double-handling – the GP will visit and then says 'Call the district nurse to take bloods'. So we need to be clear with the GPs about what do we need our district nurses to do? What can you guys be doing when you are with the patient? Equally what is the difference between what the district nurse is doing and the health visitor is doing? Because it could end up the district nurses could do some of the stuff the GPs do and vice versa with the health visitors. So there's a spread of activities. And there are also issues with the local authorities, with the tighter budgets there is

⁵ http://www.institute.nhs.uk/quality_and_value/productivity_series/the_productive_series.html

⁶ http://www.institute.nhs.uk/quality_and_value/productive_community_services/frequently_asked_questions.html

less care at home, and this can lead to bed blocking. So we need to work with them more closely and this is what the Change Fund⁷ money is being used for.'

One interviewee also noted that two capital schemes currently being considered by the Scottish Government might have some impact: 'front door services' at both DGHs, which would provide triage on arrival; and the proposal to redevelop one hospital site, which would involve moving mental health facilities. Another pointed to the fact that service redesign, with the new roles often associated with these (see following section), can be challenging both for staff, who may not have the necessary skills, and also for employers who can find it challenging to meet the need for staff development, as education and training tends to lag behind such developments.

One Health Board stressed the need to redesign services with the local population and in partnership with the local council:

'A consultation with the community about the clinical strategy, focusing on perceived value and priorities, has just finished... The Board is working closely with the council to deliver services in the community, via community teams.'


Another Health Board commented on the age-old difficulty of keeping the local population happy while also delivering services efficiently:

'There is currently a lot of scrutiny around maintaining local services (outside the... major acute sites). There is a lot of political and public interest, and it's quite a challenge to manage because people tend to think in terms of buildings rather than services – 'a hot potato'.'

3.3 Skill mix

The focus in many of the service re-design initiatives has been on skill mix, and an awareness that new ways of working need to be found in order to deliver existing or new services cost-effectively. Changes to skill mix can

⁷ As part of the Scottish draft budget announcement on 17th November 2010, the Cabinet Secretary for Finance and Sustainable Growth announced the allocation of £70m in 2011-12 to a Change Fund to enable health and social care Partners to implement local plans for making better use of their combined resources for older people's services. The Change Fund will provide bridging finance to facilitate shifts in the balance of care from institutional to primary and community settings, and should also influence decisions taken with respect to the totality of Partnership spend on older people's care.



allow for more cost-effective provision of services. In particular the use of extended roles/advanced practice and changes in skill mix were seen as ways of extending the service that could be offered in remote areas where there was no permanent access to a GP or secondary services:

‘That would be the first thing we would do [introduce any new roles or change the skill mix locally to address local skills shortages]. We would always look at local expertise first and what we have in the organisation and what training and development we could put in place, rather than go and recruit permanent staff.’

‘Extended role nurse practitioners are used in different areas, and receive extra training to give them specialist skills. Nurses, for example, run minor ailment clinics.’

It should be noted though that there is a balance to be achieved; while advanced practice and specialisms were useful, what was more important was for staff to be flexible - although specialist skills were welcomed, the ideal staff member seems to be a generalist with some specialist skills/interests (such as stroke or diabetes).

To some extent, service redesign was being driven in remote areas by medical recruitment difficulties and reduction of the numbers of doctors in training:

‘Doctors are hard to attract and this has led to the development of different kinds of roles to maintain services. Extended scope nurses (‘emergency nurse practitioners’) were introduced to support junior doctors in running the emergency hospital service at night, and worked so well that A&E is now nurse-led during the day and night. This extended role is proving its worth now that the number of doctors in training is being reduced throughout Scotland. There are also extended role band 4s to support AHPs, especially in physiotherapy and occupational therapy: there are two trainee posts for band 4 foot care assistants... There is a health care support worker group to look at the development of the role.’

Much of the work had started with looking at nurses taking on extended scope of practice but there was increasing interest in exploring the extent to which the AHP workforce could take on extended roles and new roles could be introduced.

Some Health Boards had clearly moved further with this approach than had others. One reported that it had been looking at skill mix and tasks for the past two years, in particular identifying tasks that did not need to be done by a skilled (professionally qualified) person. There had been a complete review of nursing establishments in each area, based on an analysis of optimum skill mix. The same Health Board had undertaken similar work with AHPs

using the six step process⁸, and establishments had been agreed with those staff groups too. There were many mentions of the use, or at least the trialling, of advanced and assistant practitioner posts.

'In orthopaedics and general surgery, the Board is introducing, after a trial, 'physician assistants' who work with doctors. These have been recruited direct from a course in Birmingham and from the States. There are also Advanced Practitioners in critical care, ie nurses providing a minor injuries service.'

'So far we have only looked at orthopaedics and physiotherapists and them picking up some work from orthopaedics but probably more will be looked at in time. We have introduced Physicians' Assistants (Anaesthesia)... we are looking at skill mix as well... it's getting the balance right [that is important]; we've been looking at trained support, nursing auxiliary type roles and health care assistants and trying to have more support. Historically people have thought we should decrease the numbers of trained staff and increase the numbers of support staff but it's not been that straightforward. Because of the effect of the doctors [reduction in numbers and working hours] we've been having to increase the numbers of trained staff as well, or we haven't been able to reduce it. There is a piece of work going on at the moment with the Allied Health Professions, because they have a high number of trained staff... [there are] areas where there's far more we could do introducing support staff. [interviewer: In any areas in particular?] It's across the board but some areas such as podiatry and speech and language therapy where we have not really had support staff and we feel that there's probably scope there.'

Developments had received mixed responses. One Health Board was two years into a three year plan to replace out-of-hours doctors in acute paediatrics with Advanced Practitioners. However, to support this development the Health Board had had to enrol the trainee Advanced Practitioners onto a course at a university in London because the numbers required did not justify development of a local course. However, the feeling was that this had worked well so far and was helping to overcome the shortage of junior doctors and provide a sustainable, maintained service.

Not all views were positive on such developments. One interviewee felt that impact had been less than expected:

'Advanced practitioners, yes we have introduced Clinical Nurse Specialists, consultant level AHPs, there have been quite a lot but less in the past few

⁸ See <http://www.skillsforhealth.org.uk/planning-your-workforce-strategy/six-steps-workforce-planning-methodology/>

years. There's a debate about the extent to which they are effective – some say they are very effective but others say they do not add so much to front line delivery as they might. Anecdotally though people say they make a difference. [Interviewer: In what sorts of areas do people say they make a difference?] Well the heart failure nurses, they were widely viewed as making a difference.'

Another mentioned that the introduction of advanced practitioners could be controversial:

'In acute paediatrics, the Board is two years into a three year plan to replace out-of-hours doctors by Advanced Practitioners. The Board has had to enrol people onto a course at the University of Manchester because the numbers couldn't justify a local course. It has worked well so far and is overcoming the shortage of junior doctors and providing a sustainable, maintained service. It hasn't gone down well in some areas, however. There is a conflict between the appointment model for big teaching hospitals and for DGHs in rural areas, which tend to be 'doctor light'.'

There was also considerable interest in the use of assistant practitioner staff (Agenda for Change Band 4) and other support workers at Bands 2 and 3. Use of assistant practitioners and support workers had been prompted for a range of reasons. Introduction of assistant practitioners at one site had been driven through re-design of Acute services but also as a means of attracting more young people directly into the NHS, with their development supported through on the job learning, rather than recruiting young college leavers or university graduates. The age profile of the population was a further factor influencing this decision:

'The age profile is leading to increasing competition in recruiting young people. We need to look for ways to open up NHS careers... The area there's been most work on is how to support young people coming into the NHS. We have put together a HNC in healthcare and the first intake will be in August this year. We are working quite hard with the colleges to see if they can in bring staff in a more general way and give support to these roles from nursing.'

'Very much looking at band 3 and band 4 posts – there's a huge amount of work on that as there's a huge bulge at band 5 with a rich skill mix. But we need people doing the more basic stuff.'

'We've done some work on how we can deliver services in our islands, what can we do with for instance a lower grade than a nurse on an island, if for

example we could employ a health care support worker, what could they do for us, can we put in a career pathway for them and learning and slowly enhance that role. So we are looking at the development processes we could put in place.'

One Health Board had been particularly active in expanding the numbers of support workers, with over 1,000 people having been trained via the support worker programme over the past five to ten years, and there was still significant work ongoing at time of interview to expand this. That Health Board reported that while they had a lot of support workers in Bands 2 and 3 they did not currently have many in Band 4; this was in part due to lack of career pathways for support workers and the Health Board had a new project looking at this at time of interview.

Several Health Boards commented that service redesign and skill mix changes were hampered by low staff turnover. One noted that while their Board was looking at 'task shifting' some tasks from professionally-qualified staff to support workers, this was likely to take some time because staff turnover was so low. Another commented: *'Whole system change isn't possible because of low turnover'* and a third pointed out that *'Service redesign, with associated new roles, can be challenging to staff who don't have the necessary skills. For example, the review of surgical services revealed a skills gap; education and training tends to lag behind'*.

In remote areas the introduction of Advanced Practitioners is not without its challenges, in particular the question of how to maintain or refresh skills in remote areas in the face of little or no access to continuing development opportunities or even the opportunity to meet with professional peers. Issues regarding training, skill maintenance and CPD for Advanced Practitioners – especially those in remote locations - are considered in section 3.1.3.

3.3.1 Employment, retention and recruitment

There is a varied picture regarding turnover: while it remains an issue for some regions, (mostly with regard to particular staff groups in the rural and remote areas, more generally on the mainland - or at least, in the less remote parts of the mainland) turnover was not widely viewed as a problem, especially in the context of the current economic climate. Staff turnover issues had largely decreased during the recession (estimates varied from 0 per cent to around 10 per cent), and previous recruitment difficulties had mostly eased or disappeared.

Indeed interviewees at two Health Boards noted that low turnover could have a negative impact. At one Health Board the interviewees pointed to their relatively high rate of turnover (10 to 11 per cent a year) as being one of the factors that had previously helped them to implement the changes they wanted to make; conversely, in another Health Board, the drop in turnover from 12 per cent a few years ago to around eight per cent now was starting to cause some problems with implementing change:

'This is lowish and makes change difficult, but it is not as bad as it could be.'

Overall turnover figures reflected a range of turnover rates, with the highest rates being seen largely amongst non-clinical workers such as clerical, kitchen, domestic and finance staff, for whom there was competition both from companies within the private sector and also from the Local Authority. Another area where high turnover was seen was amongst dental nurses and hygienists, who could easily move into the private sector:

'Where they recruit them they do not manage to hold onto them.'

Amongst nurses and AHPs, however, turnover rates were believed to be closer to five per cent (that is, low). It should be noted that most interviewees believed the situation with retention was changing rapidly in the current economic situation, and turnover rates were reducing as people decided to stay in a (relatively) secure job.

Many interviewees pointed to differences in the employment/retention patterns seen within different areas within the same Health Board. In specific locations – primarily rural and remote – turnover of staff could be problematic, primarily because of the widespread difficulties in recruiting replacement staff: the major factors identified were the cost of housing and of relocation, and remoteness. As we noted in the earlier section on infrastructure issues, the cost of return trips to the mainland could act as a significant deterrent to recruitment efforts on the Islands:

'We have had people pull out at the interview stage because they realise they can't afford it. So it's definitely a barrier⁹... There are huge challenges around retention at the moment. Coming to the islands isn't an attractive pre-retirement move. So it's challenging to get young people in specialist fields. And when consultants come to the island they are expected to deliver to the same level as on the mainland and keep up their CPD.'

'It can be difficult to attract people, despite the relocation package which is available for band 5 and above (there is no difficulty recruiting locally for the lower bands).'

⁹ It is perhaps worth noting that, in a separate project underway at the same time as this work, an interviewee on another Scottish island group made exactly the same point, saying that they had in the past selected people for interview but once they realised how costly the fares were to and from the mainland they withdrew their application.

While in the more remote settings there were real challenges for recruitment, many of the interviewees in more accessible locations believed there were few problems with recruitment, except perhaps with some specialist positions. Despite issues to do with the ageing workforce and the shrinking proportion of young people, in general they were not experiencing recruitment problems:

'In common with the rest of the UK we tend to have an ageing workforce. The majority are in the age ranges 40-50 and 50-60. So the age profile is shifting. We are not a huge employer of younger people. It is young people from colleges that tend to come to us rather than from schools. So while we have an ageing population we haven't had any particular recruitment or retention issues we're able to fill posts without too much difficulty, with the exception of some specialities.'

The nature of the surrounding population and the nature of the jobs on offer, for instance generalist versus specialist positions, could interact in their impact on local employment patterns:


'We do have issues around, but they are not necessarily driven by young people moving in but we do tend to have an ageing workforce. There is a slight difference between [one town] and [another], they have different workforces, in [one] the people tend not to move on, and are heading towards retirement, whereas in [the other] there is a younger workforce who are also therefore likely to move on to jobs in [a neighbouring Board].'

Shortage occupations

A small number of specialist positions were identified for which some Health Boards struggled to recruit. Community nursing and health visitors were one such group, and in one area this had led to a review of community nursing:

'We have a whole review of community nursing going on at the moment... We have had some problems with staffing more on the health visitors' side, health visiting has been an area we've had difficulties with [in the past]. [Interviewer: Do you mean difficulties with recruitment?] Difficulties with recruitment, yes. Health visitors tend to be recruited from more mature staff. I don't know if there is a general problem in that there are not so many trained people in health visiting out there these days. But I think we've been moving away from having health visitors and district nurses to having community nurses. But we are looking at the whole issue of community nursing.'

Some Health Boards reported current recruitment difficulties with medical staff, with one believing that this was a national problem due to imbalance between supply and demand arising from the impact of the EWTD and changes in immigration law. Locums were being used to address this. Similarly, another reported pockets of recruitment difficulty with some



medical roles and in particular with specialised roles in mental health. Again they reported a large use of locum coverage as a result. The absence of senior registrar rotations was thought to cause a particular problem in recruitment for that Health Board.

Remote and rural Health Boards reported generally having difficulties in recruiting trained doctors due to their not wishing to move to remote areas and/or having concerns that they would lose their specialist skills because of the lack of sufficient numbers of patients with specialised conditions. Examples given were ophthalmology, psychiatry, oral surgery and maxillo facial – often specialities in which there are national shortages. In some cases, vacancies had been carried for several years.

Several Health Boards, all in remote and rural areas, reported shortages of pharmacists and other scientists, although lower graded posts, such as medical laboratory assistants, presented no difficulties as they could be recruited locally. One Health Board reported that a recruitment and retention premium had just been granted for pharmacists and was now trying to recruit to a rotational post to be shared with Glasgow.

The general trend then was for people to report few problems in recruiting generalist staff but to identify a small number of specialist positions to which they had problems recruiting:

‘Primarily it’s the specialisms we have difficulties with. If we advertise for an administrator we are inundated. Actually if we were recruiting now for a nurse we would probably be inundated. But recruiting a Theatre Nurse, who had those specialist skills we would struggle. Similarly if we advertised for a HR [person] we’d be inundated.’

‘So there are few vacancies, but we do get an increasing number of applications. We do have a few areas where we have difficulty recruiting, technician posts in ECG, audiology technicians. There are not the trained people at basic level, newly-qualified level, out there to recruit. So we’ll recruit a trainee.’

However, while it was relatively easy to recruit to trainee posts there could be challenges in providing appropriate training for the trainee. Where there was only a small number of specialist trainees it was not economic to run training courses just for trainees from within the one Health Board and, in addition, the lack of qualified staff meant that it could be difficult to provide the mentoring and supervision required to allow trainees to practice in the clinical setting and reach the appropriate level of competence. For some professions managers had to send their trainees to work alongside qualified staff in neighbouring Health Boards, where sometimes the pull of the large conurbations could act as an irresistible lure for the young employees:

'In some areas there are not the numbers of trained staff available to do the on-the-job training. And other professions have to go away to train in Edinburgh or Glasgow. It's not that far but what we find is that if they go there they stay there. They don't want to come back. And some managers have said that they have to send some people to England to train and they don't want to do that, if they've got families or whatever, so it can be a problem for the smaller boards. We have tried to do things in conjunction with [a neighbouring Board], our trainees in ECG and audiology and neurophysiology technicians would go there to get the experience.'

Specialist science staff were also amongst the groups that were reported as hard to recruit. In keeping with the rest of the UK there were shortages of dental staff. Competition for some jobs from the Local Authority accounted for some recruitment difficulties; for payroll and finance staff the oil industry was a main competitor for staff:

'Neurosciences on occasion. And some of the smaller healthcare specialist laboratories, the more technical and scientific areas. These are where there are the most recruitment difficulties and there we tend to have to recruit from a UK market as a whole rather than the Scottish market... but this does not cause any real problems. If people are serious about making a real career choice and moving then we are seen as a reasonable area to move to.'

'Dentists, we compete with private dental practices, otherwise, for some staff the council do compete a bit, for office based staff, occupational therapists, home care.'

'Oil is doing well, there will be competition for a while yet. They tend to compete for payroll staff.'

While there were currently few complaints of general problems with recruitment some interviewees foresaw problems on the horizon for particular areas of health care. Young people, they felt, viewed certain jobs in health as 'not sexy'.

‘Another issue around that reduced labour market is that the young people, for them elderly care is not ‘sexy’. When they train and are newly qualified, they want to go and work in ‘sexier’ jobs like A&E and the high acute areas. And probably in truth we want them to work there because we want them to get that experience but we want them to come back.’

However, there were varied views regarding the extent to which the NHS (or parts of it) was viewed as an attractive job option. In remote and rural areas, the NHS was typically the second largest employer after the local council, and pay and conditions were seen as competitive. However, it was evident from the interviews that people were unsure as to how the recession would play out in terms of impact on the public sector. Some interviewees felt that the NHS was viewed as a safer bet now than the private sector, and hence more attractive, while others felt that the public sector would become even less attractive as the job cuts fell.

‘That has changed in recent times, they do [see it as attractive] now, it is led by the way the private sector was hit in the recession and now people are more interested in jobs in health and the public sector, the terms and conditions are seen as being better, we still have final salary pension and we are seen as a safe bet. Entry level posts we are being inundated with applications.’

‘The NHS is seen as an attractive employer, especially at the moment, because of job security. Agenda for Change pay rates are good and competitive. There are no obvious competitors for staff, apart from perhaps local government and social care generally.’

‘The NHS is seen as a good employer and is the second biggest employer in the area, after local government. The NHS offers job security and a range of best employment practices, such as annual leave and Agenda for Change pay rates- pay is more competitive now. There was a crisis two or three years ago, when lower paid staff such as domestics and porters deserted the NHS to work in the expanding retail sector (eg in 24 hour supermarkets). Over the Christmas period in 2007, rosters weren’t being filled. This isn’t the case now, as the retail sector has contracted with the recession.’

‘I am not sure if any public sector jobs are seen as attractive. Yes, they are always seen as a good employer, we get lots of applicants, have a positive image here but that will change as the government downsizes the public sector.’

For the more remote regions, one specific infrastructure issue was mentioned as militating against their ability to recruit:

'I have spoken about establishing rotations into these areas because one of the things about getting people to work in areas that are hard to recruit is unless you give people exposure to these environments they're never going to make those career choices. But at the moment we can't rotate them because we can't give them accommodation. Say I had a staff nurse that was quite willing to go and work in a rural community but her mortgage was in Perth city, she's not going to go and rent another house, so I think one of the strategies around this – and it will be controversial because there will be a price tag – is that we need to look at establishing accommodation that will allow people to rotate into rural communities. Allow them the accommodation that allows them to get the exposure that allows them to make those career choices. Because the house prices are extortionate in some areas, so people at the start of their careers can't afford to go and live there. The young people who go away to train can't afford to come back, so the accommodation issue is a significant one.'

What also emerged from the interviews was an awareness not only of the low proportions of young people in some areas from whom to recruit, but also in some cases an awareness that in some communities the isolated and socially impoverished nature of the working age population poses real challenges for education and employment. Consequently, in some cases Health Boards had started to explore novel ways of encouraging the entry of younger people into the health sector, sometimes in partnership with the Local Authority:

'We do a lot of work in conjunction with [the] Council as there is a relatively high unemployment rate locally and we do some work in trying to get the long-term unemployed into work, we do work experience, we take them on for six months to give them usually entry level work experience but it gives them something to put on their CV and get to know what goes on in a hospital as they tend to forget the other things that go on in hospitals, people think it is all doctors and nurses but there are all the other jobs too [admin, maintenance, etc.]'

One interviewee had started to think through a range of new approaches to job design and recruitment. These had not yet been implemented but would seem to hold a great deal of potential:

'A lot of health care roles have a gender focus around women, and in rural communities why don't we start to look at the potential gender issues around roles for men? And look at that as a way of opening the labour market up. Because if you look at the profile around the increases needed in dementia care, around increases in rehabilitation, these are the kinds of jobs that we can attract men into, the more technical aspects of roles supporting people, moving away from the aspect of personal care which a lot of men would find

difficult, but they'd be able to do roles like assisting people to live independently in their homes. There are other jobs, potentially maintenance jobs around buildings and so on that we could start to look at, around looking at our out of hours service, looking at technical type roles that would be accessible to people when they come in and would all attract a male population, because I don't think we do that enough. And if you look at the older populations, there are issues around prescribing and pharmacy care - a lot of their needs are pharmacological, so in those areas we will need pharmacy technicians, pharmacists in order to make sure they are managed, polypharmacies, those sorts of things. And again they are the sorts of roles that could be attractive to men.'

To some extent, whether a Health Board could recruit trained practitioners easily or not depended on the presence of an educational establishment running the appropriate courses:

'There are constant problems recruiting highly qualified professionals... There are no problems recruiting nurses, because the University of Sterling has a campus in the hospital in [main town], so nurses are trained there; this ensures a good supply of trained nurses.'

Oversupply

The main job categories for which interviewees reported a current oversupply of trained staff were nurses and (previously) physiotherapists. One Health Board believed there was currently also an oversupply of midwives. Interviewees from almost every Health Board were concerned at the over-supply of nurses, with one, in a remote and rural Health Board, commenting:

'Recently it has been a challenge to offer new qualifiers suitable posts. Often, nurse students are older and already settled on the islands, so they tend to want to stay once trained.'

3.4 Training and CPD issues

Interviewees noted that, with fewer staff, it was all the more important to ensure that those in post had the right skills to do the job. However, they felt that with the cuts, the training budget was typically the first thing to go.

'We want to improve quality - if you are not investing in skills then quality and productivity go down. The money for training is not there. We do have great tools like the KSF [but not the training to get people there].'

'In house SVQs, we used to do them but not with the cuts. The HCSW programme is being done in house.'

More of the training was now being conducted in the workplace and there was less use of external trainers. One interviewee noted that while there was a lot of training and development activity, it tended to be on the main hospital sites. Consequently there was a lower take-up of courses and events in the rural areas. There is increasing use of online resources and open learning centres to reach staff in outlying locations and interviewees pointed to more and better use of distance learning and use of the web. Blended learning was also used where possible, and some creative approaches were being adopted to reach far-flung individuals and teams.

'There is also a 'skills bus' for clinical skills which comes once or twice a year and travels round.'

However, even with improved use of the web this does not and cannot address all training needs – only a proportion of training and development is suitable for remote delivery and often there is a need to practise skills under supervision. While those in larger institutions might have a sufficient staff profile to provide supervision for trainees, for those in remote sites supervision could prove a challenge:

'The Board is 'making the most' of e learning which is cost-effective if face-to-face contact is not necessary. Existing staff are also used to train others, and this role is being made part of their job; this is quite popular with people as it adds interest to the job.'

'Isolated practitioners working remotely and rurally have real issues when it comes to training and development. This is partly because it's hard to get time off, but there is also a supervision issue about practising new skills. Backfilling is a major problem when isolated practitioners are on a course. Supervision and mentoring of students generally can be a problem when students are in a small unit.'

'We encourage them to make use of the internet and the technology at our hands. We do offer staff the opportunity to link into courses on the mainland. We try to bring courses up to the island. We have a weekly medical training programme that focuses on a particular topic each week. So we have to do a number of things that we try and do locally. But we do expect that people will have to go away. And we use our close working relationship with [another Board] to develop staff and give them some exposure to a bigger hospital and the skills there.'

However, for some skills, group work, face-to-face contact and assessment of hands-on activities were needed and there were problems with release, backfill and achieving cost-effective group sizes:

'Sometimes it can be hard to release people for training, if they're on their own or in a small team. Another difficulty is that courses need a minimum number, and this can be hard to achieve.'

Doctors in training in their F2 year can be based in very remote rural hospitals, so the requirement for them to attend for hands-on training sessions once a month (with associated travel time) puts additional pressure on rotas.

Where in-house training was used there could be issues with accreditation: one interviewee noted that in their region, while there was an education framework for Health Care Support Workers (HCSW), there was no accreditation, which meant that the in-house training which many staff had received had not been accredited. However, other interviewees gave accounts of working with local colleges and universities to resolve such challenges and develop new forms of delivery and routes to qualification that avoided people having to leave their workplace:

'We are working with them on more in service and on the job, accredited learning to accredit their learning that takes place without their having to leave the workforce. We have partnership working with all further education colleges, we are using the FE sector more proactively. We have an internal SVQ centre. If we need to significantly re-skill people we can use these.'

Interviewees in remote and rural Health Boards reported quite extensive use of blended learning and distance learning, although there was an acceptance that hands-on training, and/or group learning, was also necessary. The University of the Highlands and Islands was particularly noted as being adept in delivering learning to people based in remote areas, via distance learning methods and having campuses based in different areas, for example in hospitals.

There could be particular challenges in providing training and CPD as a way of facilitating skill-mix development and routes into/from assistant and advanced practitioner roles. There are also issues about maintaining those skills once developed. These challenges are particularly acute for those in remote areas:

'Regarding workforce profile, yes, there are issues, for instance until two years ago we did not have a renal unit. Now we are asking 'do we need a CT scanner?' And if we get one, there is the question of whether we can maintain [the radiographer's] skills as there is not a big need for it. Skills retention is a big issue; where a hospital in Aberdeen does a number of things in one day, we may only have a big RTA [road traffic accident]

occasionally... And skills updating is an issue, especially on the smaller islands and what we do is we try to rotate them, into a hospital or into another practice.'

Many of the interviewees acknowledged that there were gaps in training provision but recognised that this was to be expected where there were only small numbers of potential trainees in a region, and that some centralisation of provision was necessary:

'It's very difficult in a small island. I mean we could say there are a number of gaps, the college here doesn't do professional training of any kind, they don't do nurse training, training for physiotherapists, dentists, etc., etc., but realistically they are not going to get enough nurses on a course to justify running it, so there are probably a number of gaps but we have to be realistic.'

Some gaps in provision were identified. One was local provision in clinical skills decision-making, for which staff had to travel to Edinburgh. There were accounts of some programmes only being available in England. Training for Physician Assistants in anaesthesia was only offered in Glasgow and Lanarkshire because the volume of trainees did not justify the establishment of other, more local courses. Consequently, many people had to travel significant distances to access training – F2 doctors in training, for example, who are based in remote areas often have to travel distances each month for this, with one Health Board in particular mentioning a 400 mile round trip. In one case the Health Board had tried to negotiate a blended learning arrangement, with video-conferencing, but 'it didn't fit the syllabus' and 'the Deaneries didn't support it'; there was also an acknowledgement that distance learning 'isn't suitable for everything'. One interviewee noted that:


'There is a real concern about the well-being of these staff, in that they are being subjected to possible risk, driving for long periods in the dark, on icy roads.'

Another remote Health Board, however, reported with regard to medical training:

'As much training as possible, including some postgraduate training, is done via the [university] campus [by] the hospital, or via videoconferencing.'

One Health Board felt a big gap existed with regard to management training:

'There are, however, gaps in training provision, in particular with regard to management development. This is part of future plans, but the Board is unsure how to deliver because it lacks in house resources. Currently, NES is funding a leadership course for fourteen Band 7s and 8s, which is working extremely well; NES is coming [here] to deliver the training.'



A general point to be made here is that often, service redesign comes about because of either local need or government policy, with implementation action having to be taken before the education solutions are in place.

3.4.1 Facilitating open and distance learning in rural and remote settings

We should of course acknowledge the fact that the difficulties of delivering education and training to practitioners in rural and remote settings have been recognised for some time. The RRHEAL was set up by NES to help support providers of distance education and ensure that provision is of appropriate quality¹⁰. Nationally across Scotland there are difficulties in delivering and enabling accessible, affordable and sustainable education for the remote and rural workforce. The RRHEAL programme is working towards ensuring that most - or at least more - educational opportunities are developed in such a way that they are inclusive and accessible not just to the urban workforce but to remote and rural and island workforces as well.

In part RRHEAL is working as a change agent to ensure that the education landscape does improve. They are producing programmes that serve as models of affordable, accessible and sustainable programmes; RRHEAL is also working in collaboration with education and training providers to try to change the ways in which future programmes are delivered and to increase the number of programmes that can be accessed at distance.

A further role for RRHEAL has been in supporting improvements to the quality of distance programmes. They have produced guides and quality standards that describe how distance education can best be designed to meet the needs of those in rural and remote settings¹¹. A long term aim is to help support the development of programmes that meet these standards and move towards a larger volume of high quality blended education. NES also recognises the importance of team and peer support and is encouraging the development of the tools necessary to consciously support remote learners.

It should be noted that these changes potentially will benefit not only those in rural and remote locations: with the problems noted previously of small numbers of potential trainees in some urban locations, necessitating travel over significant distances to a single site that is delivering the required training, any attempt to improve distance learning opportunities is likely to have a very wide impact.

RRHEAL has developed a video-conferenced education training programme and pack aimed at increasing skills and confidence in using videoconferencing as a model for delivering and receiving education at

¹⁰ See RRHEAL Education Platform at www.rrheal.scot.nhs.uk

¹¹ Note that these are available from the RRHEAL website address given previously.

distance. This training programme has been rolled out across four Health Board areas to date and the training pack is available via the RRHEAL platform¹². Many people use this guide to increase confidence in alternate modes of communication, in parallel with developments in tele-medicine and tele-healthcare.

In addition to developing guidance and support materials RRHEAL is also involved in developing the occupational competences required by individuals in the types of specialist, often advanced practice, roles that are beginning to be introduced across a range of disperse locations. There are just small numbers of these roles at the moment, but RRHEAL is capturing the competences required in order to feed this information into the development of future training and provide safety assurance for the training and CPD that is delivered to these practitioners.

One of the roles that has been identified is that of Rural Practitioner, a nurse who has been trained to have additional acute care competences. Because of these developments in rural and remote settings some Health Boards have started to identify a need for education for these individuals that would be set at a level just below that provided for a GP and which would enable nurses to work in remote settings where there is perhaps no permanent doctor employed, or in hospitals at times when consultants were not present. In addition, for GPs the RRHEAL team is helping to develop a tailored Rural GP Acute Care training and education programme to provide an affordable and sustainable means of equipping GPs with additional competences required to provide care within rural hospital settings.

The challenges that arise from small numbers of staff with particular training needs scattered over a large geographical distance have already been noted. The small numbers of staff in any one Health Board means that often it is not feasible for training to be developed or delivered locally. It can also be difficult to gain an accurate assessment of what training is needed, and where. As a result, RRHEAL has adopted a strategy of mapping priority needs across the Health Boards to find commonalities and therefore, potentially, economies of scale. RRHEAL is now exploring the possibility of publishing these updates of the priority education needs and priorities on their website¹³.

They are also mapping the training provision that is already available and/or could be further adapted. RRHEAL is also assisting where with development where gaps have been identified. They are also starting to direct education providers to the types of provision that is needed in the various locations and

¹² www.rrheal.scot.nhs.uk/resources/video-conferencing-education-guide.aspx

¹³ At the time of publication it was anticipated that NES would be in a position to report this information in October 2011.

topics. This will hopefully help speed the development process and reduce the 'lag' between a need being identified and provision developed.

3.5 Use of the private sector and volunteers

There is only limited use of the private sector to deliver services. Services in which the private sector was used included private nursing homes, mental health and orthopaedics. One interviewee pointed out that the Golden Jubilee Hospitals National Waiting Times Centre could be used to provide extra resource if it was needed.

Use of volunteers varied widely. On the islands, they were an essential part of the strategy to compensate for decrease in air ambulance service. Volunteers worked as 'first responders' to triage and liaise with the air ambulance service. The first responder assesses the person and is responsible for arranging to get them to a GP or the hospital.

Elsewhere there were different levels of approach to the use of volunteers: in one Health Board there was:

'...a strong voluntary strategy in longer stay settings, mental health, medicine for the elderly. A strong tradition in the WRVS, volunteer drivers, befrienders, we use these quite a lot.'

Another Health Board reported that they had over a thousand volunteers who helped with transport to hospital; another, though, said that volunteers were never used for patient transportation.

In some Health Boards, interviewees knew that the volunteers, other agencies and families played a large part, but had not quantified this:

'Currently, there is a lot of reliance on families to provide care and support. Rural GPs 'know everyone', as do practice nurses, the police, and social care workers.'

'Anecdotally, volunteers and unpaid carers contribute a lot, but this isn't quantified.'

3.6 Compulsory redundancy

There is a no compulsory redundancy policy across the whole of the NHS in Scotland. Although in general there were not strong feelings about this policy, there were mixed views, with some interviewees reporting no problems and others identifying the different sides of the argument:

'It is absolutely a two-edged sword. On the one hand it allows us to restructure and the staff have confidence in the knowledge that they will not lose their job. It gives them the security to engage in restructuring. But redeployment with no detriment – staying on the same salary and benefits for ever - means you cannot make the savings you want. But deals will have to be done. The terms and conditions are very generous and we may have to look at stopping increments.'

Others pointed to the time that is spent in redeployment discussions:

'We spend quite a bit of time in redeployment. We deal with that through a redeployment procedure, we have a weekly redeployment panel with the trade unions and that meets to look at the opportunities coming up and we see if there are any jobs that can be allocated to people who need them before they go out to advertisement. And we discuss the issues re the changing skills that are required.'

Some though were explicit about the problems that the current situation was causing them:

'[This] has caused us quite a few problems, even basic things like we have a lot of people who are on short term or fixed term contracts with ring fenced money – who might be here long enough to qualify for redundancy [two years] – how are we going to get rid of those people... and that's the problem for us, we've got quite a few people in that position, and because there just are not the opportunities to redeploy them, it can be a bit of an issue. What we often find is if they might be quite high grade and therefore the chance of something coming up at that level is more limited.'

3.7 Performance measures

There is national specification of the performance measures that Health Boards are required to collect and report; these are the HEAT measures (Health, Efficiency and Access Targets). All Health Boards are assessed against the HEAT targets and 'if anything is amiss then action is taken quite quickly'. Therefore there is a strong performance management framework and many Health Boards felt that they did monitor their effectiveness as closely as possible:

'There is a HEAT monthly performance scorecard (month 9 currently on website), and an infection control scorecard.'

'There are regular reports to the Board, and HAI reports. The Board is fairly well sited. There are a whole lot of matrices around theatre utilisation, HEATs, etc.'

Several interviewees mentioned that they benchmark their performance, either against local competitors or nationally:

'Length of stay is being examined in detail. [We] benchmark with [neighbouring Boards] and with [another Board] and others for our DGH.'

'There is a balanced scorecard and an accountability framework. There is some benchmarking e.g. the DGH in Inverness with other DGHs and general hospitals, and community hospitals with each other. There are various indicators in place (see 'Delivering for Remote and Rural Areas') which are compared with other remote Boards.'

Expectations regarding travel times differed in rural and urban areas. This was taken into account in judging performance. There were several mentions of the use of LEAN to improve performance and of support being used in such initiative:

'There is an ongoing LEAN programme, working with GE Healthcare. The Board is also working with PWC on best value in support services.'

'A LEAN redesign process is in place, working with GE Healthcare, looking at patient processes.'

'The Board is in the second year of a big LEAN initiative, working with GE Healthcare. It's 'making an impact'. This will be taken forward within the Board, using staff's own skills.'

It is perhaps worth noting that one site said that this was an area in which they could use more assistance:

'We could do with support around LEAN, research to help pump prime the redesign initiatives, people to help us implement, we're really up against it financially.'

3.8 Future issues and conclusions


The first thing to note is the timing of the interviews. The work commenced at a time when the Health Service was threatened with significant cuts in finance and therefore personnel. In parallel with this, the economic downturn had also meant that there were many people seeking jobs, a high proportion of whom were previously employed in the private sector; many of those who would not previously have done so were now seeking work in the health sector.

The changing financial situation or climate had made Health Boards focus more on the use of skills and the use of staff than they perhaps had in the times when resources were rather more plentiful. As a result, several interviewees pointed to the importance of workforce planning in such times, along with an increased focus on how best to deploy the different skillsets. One interviewee saw the issue of retraining and redeployment needing to become more focused than it had been at any time previously over the past 10 to 15 years. There also needed to be a continuation of the redesign agenda, in order to bring in more efficient working arrangements. The Skills for Health '6-step method'¹⁴ was one of the vehicles used to support this process, as was LEAN and the Productive Community.

This means that the situation was quite anomalous to that which had prevailed just a few months earlier. The public sector was going through significant changes and many of the issues relating to staff recruitment and retention were significantly different from the situation seen in previous years and from that reported in the literature. Therefore, the conclusions need to be viewed as falling into two broad groupings: those that are likely to need addressing irrespective of the economic situation (we refer to these as 'universal factors') and those that are influenced by the economic situation (we refer to these as 'transient factors')

There are significant universal issues relating to geography, population densities, distance, and cost. The main question here is how best to deliver services for patients whilst making cost-effective use of staff and physical resources. Two main trends appeared to be emerging: greater centralisation of acute/inpatient services, supplemented with rural community hospitals or regional clinics; and greater efforts to sustain people in their own homes. As part of this there had been some interesting work investigating the reasons for some individuals being repeatedly re-admitted ('frequent flyers') and ways of addressing this; and an investigation into why GPs in conurbations were more likely to refer patients to hospital than those in more rural and remote areas. More information on these initiatives would be valuable.

¹⁴ Available at <http://www.skillsforhealth.org.uk/planning-your-workforce-strategy/six-steps-workforce-planning-methodology/>



The combination of financial pressures, difficulty in recruiting specialists in some remote and rural areas, decreased numbers of doctors in training, and a wish to deliver the best possible service locally, are all combining to drive service redesign in every Health Board. Typically, this is resulting in the introduction of extended and advanced roles, with some services becoming nurse-led and with remote practitioners having to acquire specialist expertise as well as their general skills.

There are also long-term issues with the provision of training and development. There are real challenges in terms of infrastructure that cause particular problems in terms of access for those in remote areas. While technology is being used, it is not appropriate for all types or areas of training activity and again infrastructure – primarily the availability of broadband – can restrict access to online training. Release and backfill, travel costs, and the time taken up in travel were issues here, as well as the (lack of) availability of staff to supervise individuals while undergoing training.

Individuals were realistic about the likelihood of gaps in provision being remedied in the near future. Small numbers for specialist training programmes militated against programmes being provided in all Health Boards in the near future or indeed ever. It is cost-effective and sensible to locate some training more centrally; however, some problems emerge from this approach. In particular, some individuals were being required to travel very long distances in order to train; others, once they had trained in the city were loath to return to their rural workplaces, further reinforcing the staffing issues they may have been recruited to address. The work currently being undertaken by the RRHEAL team at NES is likely to be of significant value in helping to improve provision of high quality distance and blended learning approaches. Their mapping of priority training needs across Scotland is likely to be of real value in informing decisions about the provision to be developed during times of economic stringency.

There were other, more transient, issues that may be expected to resolve as the UK moves out of its financial crisis. The low levels of turnover being seen at the time of the interviews were leading to 'job blocking' and were impacting on Health Boards' ability to encourage job evolution. The ban on compulsory redundancy was felt by many to not help with this process; however, equally, some felt that the job security enabled them to work more constructively with staff to achieve change.

The low turnover rate indicated that there were far fewer problems with retention at this point than in previous years, reflecting the employment picture across the UK as a whole. Once this period passed, though, it was likely that there would be problems with attraction and recruitment of staff. It was particularly difficult to attract some specialist staff groups, but in the remote areas and in some pockets with poor public transport systems there might be more widespread difficulties in the future, especially in areas where the age profile of the population is rising. Some interviewees were starting to think of new or alternative jobs into which individuals (who might not

otherwise consider a job in the health sector) could be recruited and staff and trained.

Some of these points were taken up in the case study phase of the research, which are shown as appendices to this report. We discuss the emerging issues in the next chapter.

4. Summary and Conclusions

The research consisted of a review of the literature and data, interviews conducted across the 14 Territorial Health Boards and with NES, followed by two in-depth case studies of initiatives aimed at service improvement. In this last chapter we discuss the extent to which there has been any significant movement in service delivery issues from the position reported in the past literature and data; following that we draw conclusions and make recommendations.

The main focus was on service delivery and improvement. A starting point for considering such issues therefore was an understanding of the nature of the local population (and its health profile); in responding to such challenges, however, workforce issues can exacerbate or ameliorate the situation confronted by Health Boards. Therefore a range of contributory factors (including the potential recruitment pool, housing and transport and access to training and development) can contribute to challenges in service delivery and therefore were explored in the work. We summarise the findings from the research below.

4.1 Population profile

Many of the Health Boards were facing challenges arising from an ageing population. This is attributed to three main trends: outward migration of younger people; inward migration of retirees; and (linked to the loss of younger people) reduced birthrates. The trend towards inward migration has been on going for some time and the attractiveness of the environment as a retirement locus has led to the influx of increasing proportions of elderly in-migrants (Williams et al. 1999 cited in Smith et al., 2004).

The literature points to the twin problems this situation can bring. First, ageing populations typically make greater demands on the health service than do other groups; perversely, this is exacerbated by the great gains made in health treatments, which mean that people can live for longer with chronic health problems. Second, the reduction of numbers of those below customary retirement age reduces the pool of potential recruits and thus makes recruitment more challenging. The individuals interviewed confirmed that these challenges exist in the majority of the territorial Health Boards, and in most of the remote settings.

However, other workplace factors also serve to exacerbate the challenge of retaining the current population of working age people. Given the limited provision of training and development (see section 3.4) many managers in remote and rural areas have no option other than to send their staff to the central belt or further for training; they find that many of the younger workers decide to relocate to the major cities after such experiences.

4.1.1 Availability of labour

The availability of labour is affected by a range of factors, with one, the pool of potential recruits, having already been described above. Reports have attributed the recruitment and retention difficulties experienced in rural areas in part to perceptions of the unattractiveness of employment in these areas and suggested that practitioners with no experience of such settings do not see working in rural areas as attractive (Ireland et al., 2007). The current work supported this idea, and in addition suggested that even those who may be attracted to the more remote and rural locations can nonetheless be discouraged by infrastructure issues, in particular the costs of travel to the mainland or the time required to travel to major conurbations.


In the towns and cities, cost of accommodation can be a barrier to re-location. Additionally, the lack of public transport, especially outside of the rush hour, can impact on the feasibility of employment in some locations, even when in principle the distances to be travelled are not too great; this is particularly an issue for staffing out of hours services. The infrastructure of public transport services has implications for decisions about the siting of services also.

Restrictions in the availability of staff in the more remote settings, in particular on the islands, has been one of the prompts to developments in role extension and job re-design initiatives. In remote settings the small numbers of health professionals has led to increasing demand for people who combine generalist and specialist skills. This topic is addressed in section 4.4.2.

The economic downturn had impacted on many areas; while in principle this could make larger numbers of people potentially available as recruits, the feasibility of recruiting and re-training people depended on the extent to which the local infrastructure supported such development attempts. While some hospitals were set up to provide and accredit internal training, others were not.

4.2 Staff recruitment and retention

Although the review reported growths in many categories of staff over the preceding few years (for example the Scottish Government (2010d) reported that the numbers of GPs had grown by 27 per cent between 2000 and 2007; GPs had increased in number by 3 per cent and across the AHPs there had been an increase of over 400 per cent) there remained recruitment difficulties with specific groups of staff: While there had been steady growth in dentists, shortages were still reported. Pharmacists and ECG, neurophysiology and audiology technicians were all mentioned as being shortage groups. In rural and remote areas it could be difficult to attract specialist medical staff: ophthalmology, psychiatry, oral surgery and maxillo-facial were mentioned. One of the reasons given for the difficulties in recruiting such staff was that they feared they would lose their specialist



skills due to the lack of sufficient numbers of patients with specialised conditions. Often these were specialties in which there are shortages nationwide, meaning it was especially difficult to recruit to rural locations.

There is currently an oversupply of qualified generalist nurses but a lack of specialist nurses. As the result of a policy decision taken by the Scottish Executive to increase the numbers of nurses trained and recruited and, after 2007, to maintain training and recruitment at the same level, Health Boards were now reporting having excess numbers of nurses and recent graduates being unable to find work. This is perhaps the only profession for which there was little difference in the accounts given in the rural and urban Health Boards. However, while there is no current shortage of newly-trained nurses, there could be high demand for nurses with advanced practice/specialist skills. Community nurses could be hard to recruit, and similarly theatre nurses.

The economic recession had led to unprecedentedly low levels of staff turnover. While this helped minimise the effort that needed to be put into recruitment, this situation also brought with it challenges for organisational development: some level of turnover can help when new roles or new ways of working need to be introduced.

One of the Health Boards is currently involved in research looking at remote and rural areas that are hard to recruit to. This work is being conducted across the Northern Periphery Area (comprising the Northern Scotland Highlands and Islands, Iceland, Greenland, Norway and Sweden).

4.3 Attractiveness of the NHS as an employer

The NHS is the largest employer in the majority of these areas – in most areas the Local Authority is the only other large scale employer. The relative stability offered by the NHS – in comparison with the experiences of some employees in the private sector during the recession - was making it look a relatively attractive employer. This mainly related to the non-professional posts (i.e., below Band 5 on the Agenda for Change scale). However, for those in professional roles there could be challenges.

4.3.1 Workload pressure and professional isolation

The literature points to workload pressure and professional isolation as factors influencing individuals' decisions to avoid working in rural areas (Iverson et al., 2002; BMA, 2005). Professional isolation – and in particular the fear that specialised skills may atrophy in the absence of sufficient opportunities to practise those skills – was mentioned as one reason for difficulties in recruiting to specialised roles in rural areas; however, there was little mention of workload pressure as a particular issue either in urban or rural areas. Rather, it may be the balance of work that is the issue: due to the large distances currently travelled by some staff in rural communities, their patient-facing time can be significantly reduced over that seen in more

urban locations; given that for many staff, patient contact is a prime attraction, this may lead to some dissatisfaction.

Neither was there any mention of blurred role boundaries, another factor that was identified during the initial literature review as affecting decisions about working within remote and rural settings (Turbett, 2009). The drive towards advanced practice and specialist roles has meant the evolution of many more of these roles in the last few years, with more underway or planned, and the evidence suggests that in many cases these provide welcome progression routes for practitioners.


4.4 Training and CPD

4.4.1 Skills acquisition

There are few problems with initial training for the main professional roles: there were local education programmes for nurses, allied health professions and the majority of medical professions. There are, however, some professions for which there remain supply problems, and these are largely professions for which there are staff shortages nationally. A shortage of trained staff can further impact on a department by acting to prevent the further development of staff in the required area because there are insufficient staff to provide on-the-job training to support such development attempts. This is similar to the finding by the BMA in 2005 that the lack of individuals to serve as professional mentors in remote settings may contribute to these settings being viewed as unattractive by practicing clinicians.

The dispersed nature of post-registration training opportunities – and in particular the tendency for such training to be concentrated within the central belt – means that those departments who wish to train their staff have to send them some distance in order to obtain the requisite training. Interviewees in remote areas referred in particular to the problems of releasing people to go on courses, and backfilling for them, because where there are only a few people delivering services it can be hard to spare even one. Lastly, and as noted earlier, after training in the conurbations some staff decide against returning to the rural lifestyle.

While the Health Boards recognised that it was neither realistic nor feasible to have professional development programmes delivered locally to small populations of trainees, nonetheless it was at the least inconvenient and sometimes dangerous for staff to travel long distances to attend training programmes. For this reason there has been increasing attention paid to development of good quality distance education. Here, the RRHEAL has been playing a key role with its attempts to drive up standards and enhance the quality of distance education programmes; in addition several of the interviewees based in the more remote Health Boards mentioned that the University of the Highlands and Islands (based in Inverness but with



campuses/member colleges dotted around the remote areas of Scotland) was a good source of provision.

ICT is seen as key to the expansion of distance education. Extending the use of ICT to train rural and remote staff has been a common theme in the literature (e.g. SEHD, 2005; NHS Scotland 2005; Ireland et al. (2007). NES and the University of the Highlands and Islands have been influential in promoting the use of ICT, but a major barrier to developments remains the absence of an appropriate infrastructure in many parts of Scotland. Until broadband is available across Scotland, providers and NES will be limited in what they can offer in the geographical areas in which this option is most needed.

For bands below Band 5 (i.e., the non-professional grades) there have been attempts at some sites to ensure the accreditation of any training provided in house. This is likely to be increasingly an area of activity given the increasing reliance of the NHS on assistant practitioner and health care support worker roles. At present, though, not all training is externally accredited; this is an area in which there could be further action.

4.4.2 Multi-disciplinary and cross boundary working

As elsewhere in the health service there is multi-disciplinary and cross-boundary working. Perhaps the strongest evidence of increasing reliance on multi-disciplinary teams comes from the work to develop telemedicine. However, it is in cross-boundary working that most developments are seen.

In 2009 Whittingham recommended that there should be increasing attention paid to how the roles of non-registered staff health care could be expanded to play a larger part in how healthcare is delivered, as well as expanding the roles of registered staff. In particular Whittingham (and also Dunlop, 2010) identified the roles of the AHP and Assistant Practitioner as suitable for expansion to deliver more health care services (Whittingham, 2009, Dunlop 2010). Many of the more remote islands were already reliant upon Nurse Practitioners to provide a service in the absence of a resident GP; there is now work ongoing to provide further development to equip GPs in remote communities to work in hospital settings. NES is involved in developing the occupational standards for these various cross-disciplinary roles and for quality assuring the education programmes to support the development of these additional competences.

The need for increased specialist expertise in the majority of cases has to be balanced with maintaining a good general service: in several remote areas the key requirements amongst their staff was flexibility. Although specialist skills were welcomed this could not be at the expense of maintaining more general competence. In other words in remote settings the ideal staff member is a generalist with some level of specialist skills or interests. Little has changed in this respect since the earlier research that reported that practitioners in rural areas were required to have both a wide breadth of knowledge in order to be able to deal with 'anything and everything' (Iverson

et al. 2002) while also needing specialist skills in case they are required to act in the place of a specialist (NHS Scotland 2007).

A guide for developing new roles was developed by the SEHD in 2005 and this stressed that any new roles developed should sit within a career structure. However, given the isolated nature of these roles – and the fact that often they are developed in acknowledgement of the skeletal nature of the service provided in very remote areas – often there appears to be little real option for further progression, other than by moving to the mainland.

4.5 Models of service delivery and access to services

4.5.1 Centralisation versus local delivery

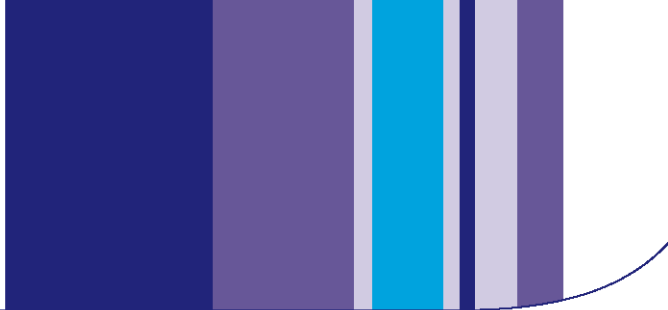
A key focus for the work was to consider the distribution of the population across Scotland and the implications for service delivery. Many of the Health Boards struggled to provide a service for widely-scattered small rural and remote communities. For those on the islands this challenge is further exacerbated. Challenges with staffing in one case had led to such difficulties with staffing rosters at separate sites, that this had led to service re-design to consolidate staffing patterns.

There is evidence throughout of the conflict between meeting the priority to deliver services locally with the efficiency priority, which can mean reducing the number of service points. In contrast, other Health Boards had adopted strategies of 'taking health to the people', with health services (often of a more 'health promotion' nature) being taken out to supermarkets and community centres in a 'health bus' or similar.

There remain concerns about the time spent by practitioners in travelling to visit people in remote settings. In particular there was a wry observation that often, these people are not in when the visiting practitioner calls; if they are well enough to be out, then it was suggested that they would probably be well enough to visit a clinic. Having one clinic in the middle of a cluster of villages for a day could lead to reductions in staff time. Similarly, there were questions raised about multiple visits from different individuals to a single patient, and a feeling that some cross-boundary training could reduce time and costs significantly.

4.5.2 Changing methods of delivery

The changes reported during the interviews largely reflected the debate outlined in the previous section. Local conditions, local staffing issues, local geography (and the extent of the terrain covered) and, in some cases, local transport had been taken into account in re-designing health service delivery. Some sites had decided that centralising diagnostic and elective services on one site was the best way to provide a joined up service to



patients; others had prioritised the maintenance of large numbers of community hospitals.

One of the major developments in recent years has been the attempts to examine the reasons for frequent re-admission to hospitals. Again, while a major driver may be to bring down the costs associated with a hospital stay, ensuring that patients do not need re-admission is focused on attempts to better characterise their illness or condition and ensure stability (ie minimise acute episodes or relapses). In parallel with this there is more evidence of joint working between health and social services to develop treatment and support plans that will enable individuals to be maintained in their own homes for longer.

In the very remote areas telemedicine is revolutionising models of healthcare. The initiative derives not just from addressing the absence of medical staff in person at these remote locations, but also from a re-examination of the optimal way to provide health care to very ill or injured individuals. In common with the efforts to maintain individuals in their own homes there is an increasing realisation that taking sick people on long journeys may not be the optimal treatment plan.

4.6 Measures of productivity

Previous commentators have noted that measuring productivity in public services is difficult (Crafts, 2004). In the past there had been a tendency to focus on outputs rather than outcomes, for example operations done rather than a satisfactory outcome of that operation. This has changed in recent years with the focus on patient outcomes, re-admissions and mortality rates.

Most of the Health Boards now reported productivity measures. While these might differ in detail between the Boards, there was consistency at the core of their measures, arising from use of the national specification of the HEAT measures. All Health Boards are required to collect and report these and they are assessed against these targets. Where a Health Board's figures are amiss then action is usually quickly taken. With this performance management framework many Health Boards felt that effectiveness was monitored as closely as possible. In addition some Health Boards reported benchmarking their performance against either local competitors or national figures. LEAN was being widely adopted to improve performance. The Skills for Health 6 step guide and the NHS Institute's Productive series were in use.

There was acknowledgement though that figures for patient-facing time varied depending on location, allowances were made for staff travel times in more rural and remote areas.

4.7 Improving service delivery – some observations


As we have noted above, there is a conflict between the govt priority to deliver services locally, and the efficiency priority which may mean reducing the number of service points. Clearly there is wide variation in the approaches taken by the Health Boards to resolving this tension: for example, some Health Boards are consciously trying to take services to the people, others are cutting down on service points for efficiency. All appear to be trying to cut down on the need for shortage/expensive professionals, by using nurse practitioners, support workers etc.

One challenge for healthcare providers is that people tend to think in terms of buildings rather than services. While people may resist the closure of sites near to home, changes to service design may mean less travel overall. Communicating such benefits can be a challenge.

Several interviewees admitted that the main driver of their service reforms was financial. However, as this necessitates thinking-through design of the service overall – including the types of staff needed for optimal delivery of service, consideration of the ways in which the various different staff groups are or can be deployed, access points and the nature of the patient journey (and indeed, whether a journey is itself optimal from the point of view of the patient) – often this resulted in a radically improved service to the patient's/service user's benefit. Indeed, some of the things that the Health Boards were undertaking were imaginative and resourceful; credit should be given to NHSScotland for tackling at least some of the issues.

One of the key issues identified was the need for more joined up communication between the different 'arms' of the service. This was perhaps exemplified in the Grampian unscheduled care example, which showed how the Health Board had set about linking up existing resources better, and rethinking how best to use their resources. Improved connectivity was central. There is improved use of data to inform developments, often supported by the use of tools such as the NHS Institute's *Productive* series.

New roles have been evolving in the NHS for some time (facilitated in recent years by the introduction of Agenda for Change and the skills escalator) but in Scotland responding to the health needs of people in remote and rural settings is accelerating these developments. Almost all the Health Boards had introduced, or were considering introducing, some form of Advanced Practice role. In keeping with developments elsewhere, Assistant Practitioner roles were being introduced to release advanced practitioners from activities that did not need qualified staff. Nor are such developments restricted to only those staff who sit within the Agenda for Change framework; there have been developments in the role of the GP too in recognition of the need to provide adequate cover in very isolated settings. RRHEAL is supporting these developments by developing occupational standards for extended roles and ensuring that good quality, consistent provision is available to support development in these roles.



That said, there remain considerable barriers to further development. ICT infrastructure is almost non-existent in the very places where it could most help extend access to education and training and teleconferencing. This will almost certainly limit the extent to which the exciting developments in telemedicine and the Unscheduled Care Network reported in Grampian can be extended to more remote settings in Scotland. This is an issue that needs urgent attention.

LEAN and the Productive series are starting to help improve productivity. Importantly there is increasing recognition of the value of data. However, Health Boards may still need help before the appropriate systems and information resources are in place: there has been much reliance on consultants to help with the implementation of LEAN and evidence that more assistance is required.

Achieving critical mass is essential if the provision of training and development is to be made initially worthwhile (i.e., economic) for providers to offer, let alone sustainable on a longer term basis. Where such needs are distributed across isolated communities there needs to be an overview to support decision-making about the types of training required. At the time of completing this report NES was exploring the possibility of publishing the outcomes of their regular round-ups of training need priorities across the 14 Territorial and eight special Health Boards. This would go some way towards helping providers plan future programmes to support development needs. The NES guidance on the design of high quality distance education should also help ensure a more inclusive approach to the development of education in future.

4.8 Good and innovative practice

Two Health Boards were selected as case studies of innovative practice. These are reported in Appendix 1. However, in all Health Boards there were elements of new approaches to health service delivery. Some examples are given in this final section.

Several sites were trying to reduce the number of sites from which they work and achieve greater efficiencies and economy from centralisation. One Health Board had introduced 'Ambulatory care hospitals' with outpatient activity, testing and so on being concentrated in two major locations. This had significantly improved the way people move through the system: now people can have a variety of tests at the same location whereas previously they may have had to travel around several sites in order to access the various services.

Elsewhere, Health Boards were looking at how to 'take healthcare to the people'. For example, one Health Board was offering smoking cessation clinics in miners' social clubs, and sessions in the community offering help with obesity and healthy eating. Another has a bus that travels around the area providing podiatry services; this Health Board also has a 'men's health bus' run by a nurse that travels to county fairs, sheep shearing events etc.

One Health Board had noticed a correlation between the availability of health care and people accessing it: GPs in towns referred more people to hospital than GPs in the remoter areas. That Health Board is currently attempting to find out more about this relationship and will feed the findings in to their strategy to tackle length of stay and manage demand. Another Health Board was investigating long term conditions management and was planning to develop its rehabilitation services, with the overall aim being to minimise unnecessary hospital admissions and get people back into their community as soon as possible if they do have to be hospitalised. Another Health Board was looking at the patient journey in remote regions to identify where potential problems might occur.


Several Health Boards reported more joint working with the local authority to support people in their homes. While this is cheaper than admitting individuals to hospital, more importantly it has also been shown to be clinically safer. One Health Board was working with local social services and the police.

Another Health Board was working in conjunction with the local Council to try to get the long-term unemployed into work by offering six month work experience: usually offering entry level work. A secondary benefit was that this gave them some knowledge of the wide range of jobs within a hospital, such as administration, maintenance, etc. as well as the clinical jobs and encourage them to consider the health sector as an employer

One site was had re-designed their Acute services and as a result were now looking to extend the use of assistant practitioner level people; in turn it was hoped that this would attract more young people directly into the NHS and into on the job learning. This was being supported by an internal SVQ assessment centre. There had been further development work to create an HNC in healthcare, with the first intake planned for August this year. Again, this was aimed at encouraging and supporting new cohorts of young people coming into the NHS.

Clearly a wide range of actions have been adopted by the Health Boards in seeking to maintain and improve health care services in remote and rural areas. Despite the range of activities, there appear to be certain features in common across the various responses:

- greater collaboration between health and social care and other agencies in supporting individuals
- greater use of technology to enable communications between different staff groups, including for training purposes
- greater use of technology to bring expertise to the patient (and conversely, to minimise unnecessary travel by patients)
- analysis of optimal entry points and routes through the system for patients
- analysis of the optimal deployment of different grades of staff

- 
- development of new employee roles and extension of existing roles to meet identified emerging needs and fill skill gaps
 - use of tools such as LEAN and the Productive series to assist with redesign efforts.

These are all sound components of attempts to re-design services to improve or at least maintain services in remote and rural areas during an inclement economic climate. They are also in line with the sorts of observations that were being made a few years ago by NHSScotland and the BMA.

Although the work was conducted in the context of Scotland, and in particular the challenges confronting health care providers in remote and rural settings there, these actions are nonetheless typical of the sorts of re-design activities going on across the UK at present; there would appear to be no intrinsic reason why such approaches could not be transferred to, or tried out in, other settings. It should also be noted that the guidance materials produced on role re-design by NHSScotland and on developing good quality distance teleconferenced education and training developed by NES are available as open access resources on their respective websites and are likely to be of use to any individuals involved in such activities, irrespective of where they are located across the UK.

5. Appendix 1

5.1 Case Study - NHS Greater Glasgow and Clyde

5.1.1 Background

NHS Greater Glasgow and Clyde is by far the biggest Health Board in Scotland, with a remit covering some of the most complex and embedded health issues in the UK. Its formation by merger between Argyll and Clyde and Greater Glasgow in 2006 brought together a range of approaches to 'whole-system' clinical redesign which had been developed to address the unsustainability of local service provision and clinical staffing shortages.

This case study looks at smaller, practical initiatives that have been introduced to help secure the type of systemic change and integration on which a sustainable future for healthcare in Scotland depends.

5.1.2 The Problem


Both emergency and planned services in Glasgow and Clyde at the time of merger relied on models of 24/7 clinical cover over too many sites, reinforced by referral and patient support processes which could be described as complex and at times uncoordinated. Services were becoming increasingly unsustainable and some local hospitals difficult to staff safely, but public support for small hospitals as the base for local services remained as strong as ever.

Although the merger, perhaps inevitably, brought into focus differences of approach between the two Health Boards it also provided the opportunity to address a number of embedded problems of supply and demand affecting services and staffing – not least by resolving which services could be provided safely, with the right staffing, for both scheduled and unscheduled care across the whole of the Glasgow and Clyde.

As well as this overall and highly-charged clinical strategy, it was clear action was also needed to manage demand and improve service quality and access - to help maintain more people in their own homes, to improve co-ordination and provision between different agencies and professions, and to increase the understanding and use of existing support amongst the public, especially those with complex social needs.

5.1.3 The Approach

Achieving major service redesign often depends on small pivotal changes. The fundamental building blocks of clinical redesign within Scotland's healthcare systems have remained the same for the last decade - namely



the separation of unscheduled and scheduled care, creation of new patient pathways, the pooling of clinical expertise and the streamlining of rehabilitation, community and diagnostics to avoid unnecessary hospital admission.

Originally in Glasgow, separation of unscheduled from scheduled (planned) care was based around two trauma centres plus one other non-trauma inpatient centre, with other hospital stock, including two new ambulatory care hospitals, being used to provide local access for streamlined pathways of care. Over time this has evolved so that there is now increased emphasis on local access to a range of day care and outpatient services (where it was safe to do so; this included urology and rheumatology within Clyde) and on greater integration of rotas across the whole of Greater Glasgow and Clyde for key specialties like vascular, renal and urology (i.e. reducing the number of inpatient sites at which specialisms are offered).

These large scale changes continue to be built on the back of smaller enabling projects, such as the four featured here, which break through some of the most embedded blocks to progress.

Single Point of Access to Rehabilitation Services. This Renfrewshire initiative has tackled silo working between social care, health and other agencies head-on. Prior to introduction of a single point of access, referrals for rehabilitation and enablement services were made separately to the various individual services including social work, mental health teams, multi-agency care teams, specialist nursing services, physiotherapy, speech and language therapies and the community disability service. No service was offered 24/7. Services both inside the NHS and in its partners had grown up, were funded and largely continued to operate in silos, working to different protocols. The situation was confusing to professionals and the public alike. Above all the situation lacked overall coordination.

The Single Point of Access set up in 2009 now offers a single entry referral point¹⁵ and access to service provision for rehabilitation services through a telephone triage point which is serviced by the NHS and Renfrewshire Care 24 on a shared basis over each 24 hour period. The initial focus was on out of hours support for all home care. The service has subsequently developed significantly over three years to embrace a broader co-ordination and brokerage role on critical path issues such as discharge from Glasgow Hospitals, transport from A&E and 24 hour support between different agencies, using telehealth and telecare. The new approach was developed jointly between social work, health, a telecare provider, the police, fire and rescue, and housing associations and has delivered:

¹⁵ Note that this refers to the administrative process for access, rather than a physical access point.

- better coordination and management of referrals and services, bringing together rapid response services and community support initiatives such as community alarms and smoke detection
- greater sharing of information and intelligence between agencies
- more responsiveness to patient need and active management of home care, especially out of hours, which avoids unnecessary admissions and increases continuity at points of handover between professionals and services
- clearer pathways and easier access for patients.

The project, which is now being placed on a permanent footing, has overcome problems of liaison and connectivity by:


- growing naturally out of existing relationships and services – adopting a ‘can do’ attitude from the outset to what seemed to local managers as the ‘next logical step’
- showing the benefits in a relatively modest first phase before moving to a more comprehensive service involving more complex mental health issues in 2010
- consulting and communicating widely to increase buy-in and reduce misunderstandings.

The Health Support Worker Project is designing new roles to provide more capacity to tackle issues of communication, support and patient behaviour within GP practices. The project has emerged as part of the work of the Long-Term Conditions Collaborative to identify pivotal changes in 100 of the most deprived GP areas – many of which are in Glasgow. Initial diagnosis showed that not enough face-to-face time was possible between GPs and socially-challenged patients presenting at GP surgeries. This led to the LINKS research project being developed in six practices, which has focused on:

- introduction and evaluation of a new role of Health Support Worker which in effect prepares patients and families prior to seeing the GP and also takes over from the GP to ensure follow up
- development of a repository of local health care/voluntary information, contacts and advice which can be drawn on by both health professionals and the public.

This project focuses how to provide cost-effective additional capacity at a critical interface between the system and the public could provide a model to be rolled out across Scotland. It is currently being evaluated.

The Standardised Sharable Assessment project has addressed longstanding differences in assessment processes and protocols across the whole of the NHS in Greater Glasgow and Clyde and the six local authorities



in the area. The local Data-Sharing Partnership, part of a Scottish-wide e-care initiative covering social work, health, police and education, undertook a quantitative analysis of over 100 different assessments to identify common elements which could be built on to reduce duplication and provide the basis for greater professional sharing and improved outcomes for the public. Amongst the many obstacles to progress were high levels of commitment to incompatible systems and business processes, different definitions and terminology (on fundamental issues such as what to call the client) and traditions in each geographical, disciplinary and care group area.

After three years the core standardised paperwork and processes have been agreed, providing the basis for more consistent means of recording and manually sharing assessments between different professional groups, care groups and organisations. The project has been described as both 'hugely problematic' but also 'absolutely pivotal to progress'. There are three main reasons the breakthrough has been made:

- good governance structures adopted 'without compromise' from the outset, which have connected senior staff to action and engendered sustained commitment at all levels of each partner organisation and professional group
- a bottom-up approach built on respect for practitioners, recognition of the practicalities of multi-professional practice and a focus on outcomes and what makes a good assessment
- the hard graft and resilience of a highly-involving, resourceful and determined project leader, perceived not to be biased towards any one of the constituent groups.

The next step will be to solve the challenge of different IT systems which currently prevents electronic sharing.

The ALISS project, 'Access to Local Information for Supported Self-Management', is tackling issues of signposting and support which help the public navigate the health system in its widest sense. The aim is to help individuals gain greater control over their health and lives and thereby reduce dependency the NHS and hence reduce costs. The project is still embryonic. The focus of the project is on self-management by people with long term conditions through the use of new and emergent mobile technologies. Patients are being helped to use these technologies to support each other by accessing, co-creating and sharing health-related information.

5.1.4 The Outcomes

All of these projects are at an early stage and there has not yet been a full evaluation of these new approaches. However, changes in the provision and outcomes in relation to local hospital care models are being carefully tracked through SMR data on:

- number of local appointments

- number of patients using local pathways.

For the more major service changes other measures of impact include the resilience of staffing in the local hospitals (seen in reduced staff turnover and cost of cover) and the extent of staff engagement in pathway design and changes.

With the Single Point of Access project, although this new approach is still being developed and refined, in terms of the 'patient experience', early signs are that it does offer a clearer pathway for each person, sign-posting the referral to the most appropriate service provider and improving the person's journey through the system.

5.1.5 Key Learning

There are two different sets of learning here.

Firstly it is clear that smaller initiatives can be a source of real innovation, supporting and informing larger-scale change, but they need a clear route forward if full benefits are to be realised. The projects featured have different origins and sources of funding – including national funding (for telecare), research monies and resources targeting collaborative working. Each has been developed by individuals within the system to address practical problems in their environment. What is less clear is how they will be mainstreamed. The national Change Fund process in Scotland, which releases top-sliced monies to Health Boards to enable systemic change on a non-recurrent basis, is potentially a source of innovation funding but not, however, of recurrent resources.

Secondly the projects highlight the importance of communication, good governance, local ownership and space to develop relevant solutions as the basis for innovation and breakthrough on embedded issues.

5.1.6 How could it have been done better?

Each project was started without clarity about longer-term funding. Whilst this might seem understandable given the financial climate, there is a danger that such local enabling initiatives are seen as discretionary or that they fail to secure continuing senior-level support. How such innovation is developed further, resourced and mainstreamed is something which it is recognised needs to be considered as part of the initial scoping discussions and integral to the decision to proceed.

It is also interesting to see the role of relatively small amounts of national resources in unlocking problems. Are these innovative projects something which should have needed to rely on external funds or should enabling funds be built into financial planning and support more routinely?

5.1.7 Next Steps

The Clinical strategies for Glasgow and Clyde look set to be refreshed in 2011-12. This reflects the need to capture changes which have been developed since the merger between the Health Boards, to reflect significant new facilities and related changes which are coming on stream (not least the new Southern General Hospital in 2015) and to look to develop an overarching strategy for all of Glasgow and Clyde, considering the needs of the population, good practice guidance and future service models to ensure services are fit for purpose and deliverable within the financial context facing the public sector. It is to be hoped that there will be proper recognition and support for enabling initiatives in that strategy.

5.2 Case Study - NHS Grampian

5.2.1 Background

An internal analysis in 2001 had indicated that Grampian's health services were unsustainable without fundamental change. The review has since led to many different change programmes - each with their own histories, funding sources and problems; each pursued in the context of national as well as local policy; but each confronting the same challenge: how to make a significant shift in service delivery from hospital to community whilst maintaining service quality and public confidence.

This case study describes two of the actions Grampian is taking to improve service delivery: the Unscheduled Care Network, aimed at reducing admission rates and which uses which uses a network of professionals supported by telemedicine; and creation of Productive Community teams to reconfigure community services. These two key initiatives are symptomatic of the approach adopted in Grampian, which has been to examine ways of improving services whilst containing costs.

5.2.2 Unscheduled Admission

In remote and rural settings a major challenge is to get medical expertise to the patient when there are large distances between them. Until now, the options have been either to transport the clinician to the patient – which can render the clinician unavailable for several hours - or transport the patient to the clinician. A long journey by road – or, for those resident on islands or oil rigs, by helicopter or plane – is not optimal. The challenge then is to get the expertise to someone close at hand – the 'first responder'.

'The big danger in anything you set up, anything you try to do, is that you set up almost a transport chain before starting treatment. And that doesn't work. If it's a car it takes a lot of time, and for the patient's condition that is not advantageous; or it costs a fortune, but even if you sent a helicopter or plane

actually it takes a lot of time, to get someone with a suspected myocardial infarct off an oil platform can take six hours.'

In addition an evaluation of repeat admissions had identified 'frequent fliers' – a large number of patients of all ages being admitted more than twice in any six month period, often presenting into different parts of the system. The analysis showed that often these readmissions occurred because professionals did not have the right information they needed – in some cases the decision to admit was taken as a safety precaution because the clinician lacked some critical additional information needed 'on the spot'.

Two further factors served to drive development of the Unscheduled Care Network (UCN):

- **the strategic need** to make 24/7 care less dependent on resident medical cover in rural and smaller health facilities.
- **a new Emergency Care Centre** due to open in Aberdeen in 2012 which will co-locate all emergency services, enabled by innovative new care pathways and based on an integrated emergency service delivery model for Grampian.

5.2.3 The Approach

There are several key roles within the Unscheduled Care Network:

- **The 'First responder'**: this is a trained individual close at hand. They may be an ambulance paramedic, a GP who comes upon an emergency situation in their practice or, for people on oil platforms, a colleague trained in first aid.
- **The Information Platform and Triage System**: NHS 24 provides both a telephone triage service and can provide information on the services that are available within the region.
- **Decision Support Clinicians**: clinical expertise can come from a range of people: emergency medical practitioners, emergency nurse practitioners or expert clinicians in Accident and Emergency.

The network requires emergency care practitioners and first responders (including paramedics) to be able to link instantly with the clinical experts who would provide the information and support they needed to be confident in their decisions. Connection and communication between the different actors within the network is central to the design (and success) of the UCN. The link is provided by the telephone support centre NHS 24 and telemedicine is the backbone of this new way of working.

Three key changes were required in order to ensure professional resilience and improve patient experience:

- **Information transfer** – all staff whatever professional background can access key fields in patient and clinical records providing ‘customised information’ covering not just clinical information but information on carers, contacts and community support
- **decision support system** –first responders can share data easily from remote locations and use NHS24 to triage calls to other appropriate professionals to give expert advice and on the spot support
- **coordination of key support systems** – transport, facilitation of admission where required (preparation of bed for admission) and rapid support system links and follow-ons to community teams

The Network is also involved in the Health Board's response to the frequent flyers analysis. The same network of local responders, telemedicine and instant access to expertise is required to maintain people in their homes and minimise re-admission rates.

The outcomes

The patient benefits envisaged for the Unscheduled Care Network are obvious: treatment at the point of need, less moving about of patients, avoidance of unnecessary admission, better connected services and information, clarity of pathway and reduced bed hunting. However, use of this approach is starting to impact not only on the way in which Grampian responds to health emergencies but is changing how people think about the optimal way in which to deliver services more widely:

‘Many transfers are arranged to allow observation as an inpatient (head injuries, asthma, falls at home etc). However if the network was able to say: “Now we have given a nebuliser at home, your relative is here, we will reconnect in an hour’s time”, it would be possible to provide appropriate treatment and reassurance without observation in hospital.’

The Productive Community – Releasing Time to Care in the Community

The initiative to create **Community teams with an emphasis on quality and efficiency** grew from a mixture of grass roots initiatives, including a long-term care collaborative, and national policy and wider evidence. This Programme involves the reconfiguration of community services across Grampian on a team-by-team basis, using the Productive Community approach developed by the NHS Institute¹⁶. The programme is due to complete in March 2012.

¹⁶ The approach enables teams to decide, with guidance, their own areas for improvements. The ‘Productive Community’ series was designed as a tool for releasing time to care and can be used by any community team, whether they are district nursing, health visiting or multi-disciplinary, (eg intermediate care team, a care pathway team, rapid response unit). Further

The main aim in undertaking the work was to design and deliver improved quality and efficiency through innovation and changes in system working. Momentum for the programme was generated by

- a desire to shift from hitting targets to a solid cultural **foundation for sustainable change**
- **staff perceptions** that they had ‘no capacity to do anything more’ – they knew that things were not right and wanted to do something about it, but lacked the space to implement change, while at the same time maintaining service delivery
- **growing interest** in applying systemic change processes such as LEAN into community settings
- **greater use of data** in framing change - both ready-made (such as the NHS Institute measures for percentage of patient facing time) and bespoke (using a workload measurement tool and a two week collection window to provide a snapshot of core data, collected and owned by staff)
- **a national and local decision to invest in Productive Community** by the Productivity and Efficiency Team and the Long-Term Conditions Collaborative in the Scottish Government.

5.2.4 Approach to Implementation across both Initiatives

PDSA, spread and sustainability. Productive Community started as a pilot initiative with three nursing teams and has now been rolled out across more than 40 teams of different professional backgrounds. The decision was taken to roll out change progressively to every team from the outset. The programme was to be facilitated using internal capacity drawn from across the organisation and targeted to achieve a rolling programme of change and would be implemented for all community resources. The overarching organisational aim was to create ‘agility’ and address the belief that time and capacity was not available and to equip front-line teams to see change as part of the day-to-day job.

Enabling approach. Grampian believed it had the right raw material in its front-line teams – what was lacking in them was the know-how about how to keep services going whilst getting momentum into change. The change programme focused on generic clinical development, but critically also on helping specific team leaders to develop their abilities, confidence and ownership, developing shared expectations on what could be done and linking these to their roles and responsibilities. The teams had leadership from the Modernisation Department, staff in various positions already had

details can be obtained at: <http://scottishhealthcare.co.uk/community-services/productive-community-services/>

core LEAN training and some 6 Sigma, and also drew on the capacity of people trained in basic change techniques from previous initiatives over the years. The initial focus was on developing middle management leadership and partnership working with the public, independent and charitable sectors.

Training and Capacity Development. In respect of the Unscheduled Care Network there was early recognition of the critical importance of developing confidence and skills in professionals to make the system work, to spread burdens and to reduce reliance on unsustainable 24/7 medical presence—thereby increasing the resilience of small peripheral units. Although still being developed as a comprehensive package, current training includes decision and support training days for groups of specialists (such as joint sessions for cardiologists and radiologists), telemedicine use, paramedics and system training for community teams.

Targeted Resources. One notable feature in Grampian is the belief that national funding has been helpful but not decisive. ‘Change would have happened in Grampian anyway’, according to one leader, but it has been supported by enablement funds especially for Tele-health, Productive Communities and the Change Fund, which is providing non-recurrent support to implement change (with an initial £6.9m flowing into Grampian in 2011-12) and is set to be rolled on into future years. The key contribution so far from national funds has been enabling ‘double running costs’ needed to turn plans into action, such as investment in **two additional short-term community physician appointments** pivotal to the wholesale move from hospital to community services. Otherwise ‘external’ resources, in fact top-sliced funds, have been used to support a small number of Productive Community box sets, training the trainer places and support for coordinator roles. The rest has been generated internally.

Partnership-based leadership and clarity of approach and communication. The Health Board tasked the Service Improvement Leadership Group (comprised of Health Board Directors) and a middle management partnership group involving Local Authorities, public health, finance, service heads and change leads, with driving through the change programme. In addition, champions for each change programme were identified at executive level to raise the profile of the work.

5.2.5 The outcomes

The Productive Community work has not yet been evaluated but it is already clear that those clinical teams involved have been able to focus effectively on systemic issues in the way they work, initially around inefficient practices and waste. By supporting leadership responsibility at team leader level and emphasising the importance of local data, a sound basis for longer-term, locally-owned change has been provided which will make further changes to clinical practice and pathways of care more likely to succeed in future.

5.2.6 Summary

This study of NHS Grampian offers insight into how sustainable momentum can be generated to support the move to more cost-effective services through investment and disinvestment. The main lesson is positive, revealing how local momentum for change can be generated quickly, provided it is ***built with conviction on what is already in place, is clear about the structure and supports required*** and is realistic about ***what can be achieved from existing resources***.

Key to recent success has been:

- clarity of clinical vision, based on analysis of future sustainability of services
- long-term relationship development with public sector, voluntary and private sector partners
- investment in training and design of new roles
- development of internal change expertise and team leadership
- judicious use of government financial support to effect local change.

Public and staff engagement emerges as a critical issue; this was a key feature of the approach taken by Grampian and it is important not to underestimate the impact of this key component.

5.2.7 Key Learning

Creating a compelling local clinical vision is important to 'work the culture of the clinicians' as much as provide a top-down framework

Make data central – help teams to use data to work out their own story and link this to continuous measurement

Workforce planning and development are central to sustainability including mobilisation of all internal change expertise, middle management development and development of new roles as an integral part of change programmes

Ensure there is sufficient compatibility between systems on patient records, measurement data and communication to support joint change

Involve the public in co-design at the earliest opportunity, not just in terms of formal consultation

Key role for the Scottish model of partnership working which emphasises and delivers greater staff buy-in and trust

Use of non-recurrent money to implement strategy without encouraging a 'bid culture' allows 'double running' costs involved in 'invest to disinvest' to be covered

National ring-fenced funding can help unlock local change provided there is a long-term plan already in place

5.2.8 How could it have been done better?

The Grampian approach is right for Grampian and reflects its history and politics. However there are a few specific issues where things might in retrospect have been strengthened:

- more involvement by the public in redesign and by staff in the creation of the clinical vision
- more financial modelling to ensure the long-term sustainability of the whole system
- greater external validation of processes and impact.

5.2.9 Next Steps

On the Unscheduled Care Network the next steps depend squarely on the opening of the new Emergency Care Centre in 2012, the implementation of new pathways which are currently being developed and the financial impact of the new facility on the balance and availability of resources.

New roles are emerging as a direct result of the Network. In 2011 a partnership between the University of Aberdeen and NHS Grampian is seeing 15 graduates from life sciences and pharmacy being trained in a 2 year programme with a further 1 year apprenticeship as physician assistants. This builds on the philosophy of growing your own to tackle underlying problems of supply.

On Productive Communities initial evaluation data are being analysed. Although the programme only started at end of 2010 information from teams is being analysed to sort out which issues are specific to teams (and therefore best left to be worked through in those teams) and the more generic issues which lend themselves to longer-term systemic change (such as pharmacy and stock issues).

The implementation of the enabling, national Change Fund awaits confirmation of purpose and funding levels following the re-election of the Scottish Nationalist Party as a majority government and the impending completion of the Comprehensive Spending Review latter in 2011

6. Appendix 2

6.1 Discussion Guide

Discussion guide for use with Workforce Development Managers within the 14 Territorial Health Boards

Introduction and purpose of work will have been outlined in initial contact prior to arranging interview. Therefore interview starts with brief recap of aim/sponsor of project, assurances of confidentiality/anonymity.

Introduction/Service demand

Could I start by asking you to describe the area in which your Health Board operates? Would you describe it as primarily rural or urban or a mixture? Are there any particular issues for health service delivery that arise from or relate to the geography of the area? For Highland, Grampian, Ayrshire and Arran, Lothian, Fife, and Tayside, add: are there any differences in health profile or delivery issues between coastal and inland communities in your area?

Are there any particular issues arising from the age profile of the people in your region? (If yes) are there any particular issues arising from this [profile] for health service demands in your area?

Are there any other factors that are affecting service demand in your area?

If yes, what impact is this having on service demand? For what services in particular is there increasing demand? For which services (if any) have you seen declining demand?

Are there any particular issues relating to, or demand for, health service provision in Gaelic in your area?

Service delivery

Have these changes in pattern of demand had an impact on the workforce profile or skill mix that you require in your area?

If yes, which occupations are growing in importance or in the numbers required? Are any declining in importance or in the numbers needed?

Are you seeing any difficulty in recruiting people into these expanding areas?

If yes, what do you think are the main reasons for that?

How about other occupations (ie not the ones for which you've seen a particular expansion in demand); do you experience difficulties in recruiting to any of those?

(If not mentioned as an issue affecting recruitment), Are there any issues regarding the age profile of people in your area that have implications for recruitment of health service personnel? Is there any evidence of people migrating away from the area? (If yes), are there any particular groups of people who are migrating away?

Are there any occupations for which you believe there is currently an over-supply of labour?

Have you attempted to introduce any new roles or change the skill mix locally to address these issues? If so, how have you done this (what changes have you made?)

(If not mentioned in response to previous question) Have there been many attempts to introduce Advanced Practitioners? Assistant Practitioners? (If any knowledge of such actions) Do you have any knowledge of how those projects have worked out?

(Only ask in areas who have mentioned significant rural areas) Is there any evidence that it can be difficult to justify Advanced Practitioner roles in rural areas?

Thinking about the occupations that you've identified as being what we might call 'shortage occupations', do you find that volunteers or unpaid carers help fill any gap in staff capacity? Are there any in particular in which you feel the service would experience difficulties without volunteer or unpaid assistance?

Do the independent or private healthcare sector make any contribution to healthcare provision in this area?

If no, why do you think this is?

If yes, in what way is it usually involved in health care provision?

What level of contribution does the independent or private sector make to healthcare provision overall?

The NHS as an employer

What are retention rates like in your area - do you have any staff groups for which retention is an issue? If yes, which staff groups are these? Is there a reason why they are difficult to retain?

In your area, do you think that the NHS is seen as a particularly attractive employer? Yes No

Do you think there are any particular factors that affect the attractiveness of the NHS as an employer? (Free response; follow up with the following prompts if not mentioned in initial response)

Are there any other organisations that compete for employees in the area? (If yes) what sorts of employees would they usually be competing for? (Clinical; admin; maintenance; technical; managerial?)

(if yes) Do you know if the salaries in those competitor employers are viewed as better or worse than those in the NHS? Is there anything else that makes those employers look attractive to potential employees, in comparison with the NHS?

How about infrastructure issues? Is the availability of transport and issue for staff in the NHS? Housing?

Are there any other issues likely to affect retention or recruitment in the near future? (e.g. impact of economy on other local employment; local developments that may attract staff away from NHS)

Do you have a non-redundancy clause in employment contracts in your area? Does this have any implications for redeployment or recruitment of staff to achieve the correct workforce profile required for effective service delivery?

Skill development

Do you think there are any particular issues locally relating to skills development for existing employees?

(If clarification is needed) Is this an issue for any particular groups of staff, or is it across the Health Board?

(If clarification is needed) Are there any particular factors locally that affect opportunities for skills development? (Free response; follow up with the following prompts if not mentioned in initial response)

Is there any difficulty in rural areas in providing sufficient developmental experience for staff who wish to train and advance, for example to Advanced Practitioner posts?

Is there sufficient availability of appropriate training/education locally or through distance learning;

Are there any issues regarding the accessibility of local training/education providers?

Do you know if there have been any growth areas in education and training provision locally? If yes, what are these areas?

Has this growth been driven by local demand, or local policy, or national policy? (If yes, please explain)

Do you think there are any notable gaps in provision or areas in which more provision is needed?

Is this need for additional provision driven by local demand, or local policy, or national policy? (If yes, please explain)

Do you expect provision to meet that gap in requirements soon? Are programmes currently in development to meet that need?

Who are your main providers of E&T? What programmes do they provide?

Models of service delivery/access to services

Are there any issues relating to the way in which people are distributed across or concentrated in certain areas that have implications for the way in which health services are delivered in your area?

Thinking about community and primary healthcare services, are there any particular aspects of your service delivery models that you feel work particularly well in your setting? Are there any particularly innovative approaches being used (if interviewee asks for an example, give as examples: telecare, travelling medical teams, the 'travelling bus' or 'health bus')

Any that you feel do not work so well and may need re-considering in future? (i.e. re-designing)

(If not clear from the above) Are you thinking about making, or have you made, any recent changes to any aspects of community and primary healthcare delivery?

And now thinking about secondary care services, are there any particular aspects of your service delivery models that you feel work particularly well in your setting?

Any that you feel do not work so well and may need re-considering in future? (ie re-designing)

(If not clear from the above) Are you thinking about, or have you made any recent changes to any aspects of secondary care delivery?

What's your view about access to primary and secondary services within the area covered by your Health Board? Are there any services or areas for which you feel access can be a problem? (If yes) Which areas or services are these? Which service users find access a problem?

Who is primarily responsible for deciding what models of service delivery to use? (Health Board Heads of Service ? Heads of Service in Hospitals?)

Does your Health Board judge the effectiveness of the various service delivery models in use across your area?


(If yes), How do you do that? What measures of productivity or performance would you typically use in judging effectiveness?

End

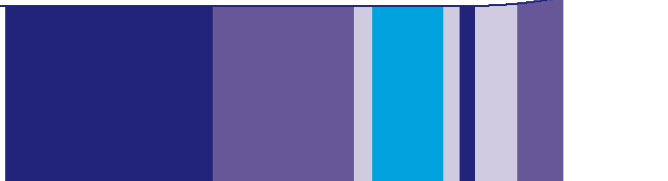
Are there any other comments you'd like to make about the factors that affect service delivery, or staffing requirements, or skill needs in this Health Board? Would any type of external support help with these issues? What would need to happen? Thank and close.

Glossary of Terms

| | |
|--------|---|
| A & E | Accident and Emergency |
| AHP | Allied Health Professional |
| BMA | British Medical Association |
| CINAHL | Cumulative Index to Nursing and Allied Health Literature |
| CPD | Continual Professional Development |
| DEA | Data envelopment analysis |
| DGH | District General Hospital |
| EGAMS | Expert Group on Acute Maternity Services |
| EMRS | Emergency Medical Retrieval Service |
| EWTD | European Working Time Directive |
| GDP | General Dental Practitioner |
| GP | General Practitioner |
| HAI | Healthcare Associated Infection |
| HCSW | Health Care Support Worker |
| HEAT | Health, Efficiency and Access Targets |
| ICT | Information and Communication Technology |
| IES | Institute for Employment Studies |
| KSF | Knowledge and Skills Framework |
| LA | Local Authority |
| MAC | Migration Advisory Committee |
| NES | NHS Education for Scotland |
| NICHE | National Incremental Competencies in Healthcare Education |
| NQF | National Qualifications Framework |
| RGH | Rural General Hospitals |
| RRHEAL | Remote and Rural Healthcare Education Alliance |
| RRIG | Remote and Rural Implementation Group |



| | |
|---------|--|
| SAS | Scottish Ambulance Service |
| SEHD | Scottish Executive Health Department |
| SMR | Scottish Morbidity Records |
| SVQ | Scottish Vocational Qualifications |
| UKCeMGA | UK Centre for the Measurement of Government Activity |



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