

Avon, Gloucestershire and Wiltshire



Strategic Health Authority

Workforce Development Confederation

Diagnostics: Key Issues for Workforce Planning

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EXECUTIVE SUMMARY

This report has been commissioned to support the Local Delivery Plan with innovative service and workforce approaches to diagnostic services. The purpose is to highlight issues for a workshop on this topic.

New technologies

- What transformation of diagnostic services is likely to take place over the next 10 years?
- How can a SHA wide strategic approach be developed to diagnostic services, particularly where economies of scale can be achieved?
- How can new technologies contribute to reducing transaction time, increasing the efficiency of transactions?
- What changes would be needed to make the most of existing home-based technologies?
- What is the potential for near patient testing/ point of care testing?

Developing patient centred services

- What is the likely impact of patient choice on where and how to access services?
- What would be the impact of patient involvement, e.g. taking films/results with them, reducing the number of visits, timeliness of appointments?
- How do the plans for diagnostic services fit with the plans for the development of primary care based services (in general practices, one stop primary care centres, pharmacies, ophthalmic opticians, dentists)?
- How will the development of DTCs/ISTCs, and Walk-in Centres affect the demand for diagnostic services?
- What are the workforce implications of providing 7 day, 24 hour services?
- Are there any on call services that would be more efficiently provided by a shift system?

Increasing demand

- What analysis has there been of the data on available capacity and how this could be used to match demand?
- How can the most efficient use be made of diagnostic equipment?
- What are the opportunities for collaboration, networking (with other Trusts, with the private sector)?

Recruitment and Retention

- What scope is there for international recruitment, assuming that this has not already been undertaken?
- What is the likely impact of the increased use of the independent sector, anticipated by government, on NHS staff retention and recruitment?

- How can Trusts ensure that they are able to retain staff where private sector providers offer higher salaries? What is the anticipated impact on demand for treatment?
- What is the age profile of the current workforce?
- How can extended roles be developed to enhance career progression, staff job satisfaction, and aid recruitment?
- What scope is there for competency based promotion? Previously, staff would progress from radiographer to senior 2 in two years, based on time serving, in North Staffordshire NHS Trust. This has been replaced by competency based promotion and able staff can be promoted after six months.

Radiology

What analysis has there been of capacity and demand data, process mapping and more efficient use of helpers, porters and capacity as a way to reduce waiting times?

To what extent have role redesign and extended roles for radiographers been explored as ways to free up radiologists, reduce delays in reports, retain and enhance staff:

- radiographers reporting (CT, ultrasound, plain film, mammography film reading)
- radiographers undertaking specialist examinations (barium enemas, video fluoroscopy, venography, dacrocystograph, sialography, breast ultrasound)
- radiographers, radiology nurses, assistants taking on other roles (inserting venflons, injecting contrast media, requesting x-rays, vetting x-ray requests)
- clerical and administrative staff booking complex appointments previously done by radiographers
- developing assistant practitioner, advanced practitioner and consultant practitioner roles (assistant practitioners undertaking mammograms, plain films, assisting with CT, MRI, nuclear medicine).
- Advanced practitioners in Ultrasound
- Consultant Radiographers

Could training and support be offered to non-medical referrers, e.g. nurses, extended scope physiotherapists (requesting X rays, MRI and ultrasound scans under protocol) to reduce delays, streamline patient pathways and care?

An operation requiring radiography intervention can involve a radiographer in 10 to 15 minutes work interspersed over three hours. Could ODPs be trained to undertake this work?

What is the scope to release radiographers' time by handing over administrative tasks, such as booking in patients and giving them to clerical staff?

Pathology

- How are Pathology services currently organised?
- What is the likely demand for near patient testing?

- What analysis has there been of capacity and demand data, process mapping and more efficient use of helpers, porters and capacity as a way to reduce waiting times?
- Are there protocols agreed for managing the demand for pathology?
- To what extent has role redesign and extended roles for different groups of staff been explored?
- What role could local 'high street' pharmacies play in near patient testing?
- What is the role of biomedical scientists in relationship to clinical scientists?
- Are the commissions adequate for clinical scientists, and do trusts provide them with jobs after training, or are they considered too inexperienced?
- What impact could automating services (e.g. blood testing) have on staff roles?
- What would the advantages be of taking a Strategic Health Authority wide approach to developing a pathology network (or networks)?
 - What model would most increase efficiency and quality of services?
 - Are there opportunities to share in the purchase and use of new technologies and IT?
 - Are there opportunities to consider developing sub-specialisations across a group of Trusts?
 - What model would support point of care testing in secondary care and/or in primary care?
- What impact will new technologies have on staffing roles, e.g. order communications, electronic patient record, electronic results reporting, intelligent analysers, automated analysers, telemedicine?

Endoscopy

- What analysis has there been of capacity and demand data, process mapping and more efficient use of helpers, porters and capacity as a way to reduce waiting times?
- What demand management approaches have been used eg use of evidence based guidelines, pooling of lists?
 - To what extent has role redesign and extended roles been explored?
 - Has consideration been given to developing and extending nursing roles (including the consultant nurse role): nurse led clinics, pre-assessment, waiting list management, scheduling of patients
 - Can non-clinical people be trained to perform flexible sigmoidoscopy?
 - What would be the local training requirements?
 - Are there sufficient places at the training centre?
- What would be the impact of near patient testing?
- Has consideration been given to developing GPs/other practitioners in primary care with a special interest in Endoscopy?

- What will be the impact on staffing needs of the new Bowel Screening programme?
- What will be the impact of new technologies such as the electronic patient record, development of still and moving images?

1. INTRODUCTION

Background

The Avon, Gloucester and Wiltshire Workforce (AGW) Development Confederation commissioned Shared Solutions Consulting to produce a report to assist the LDP workforce group on Diagnostics.

This paper sets out issues to be considered in developing and modernising Diagnostic services across Avon, Gloucester and Wiltshire Strategic Health Authority, and the implications for workforce development. The objective is to identify the future workforce challenges, such as a much more competitive labour market that will have a profound impact on the NHS's capacity to recruit and retain staff. In addition, issues that pertain to key staff groups for this care group will be identified. National and local examples of good practice are cited, where services have been developed to meet changing needs and demands, in order to stimulate discussion about options for the future.

Key issues

- Increasing demand for services
- Staff shortages, aging workforce
- Lack of career progression
- Developing patient centred services
- New technologies

The profile of Diagnostic services (including Radiology, Pathology and Endoscopy) has been raised over the last few years with the realisation of the central role they play in the care pathways for patients, and the recognition that diagnostics are key to achieving waiting time targets; there is considerable scope for reducing bottlenecks in the system and for improving communication and choice for patients and job satisfaction for staff. It is worth emphasising that the collective term 'diagnostics' refers to a number of disparate services organised in different ways to contribute to the care of patients.

The increasing pressure on services was an issue raised by all those who were contacted within AGW and across the country. Key challenges identified were the need to improve access, minimise delays in admission and discharge attributable to diagnostics, and avoiding unnecessary follow-ups. Diagnostic services have been under increasing demand from the impact of new technologies, new screening programmes, the pressures to achieve targets (in particular the cancer screening targets) and meet NSF requirements, speedier access to results from patients and from GPs, and patients wanting more convenient access to diagnostic testing.

At the same time there have been significant staff shortages, posts have been difficult to fill and there has been a need to examine different ways of working and the potential for skill mix. The Department of Health Diagnostics delivery plan seeks to improve the patient experience by reducing waiting times for diagnostics and by moving services from hospital nearer to patients. What is clear is that the status quo (seeking to develop more of the same) will not hold. There is an urgent need to find ways to transform the delivery of diagnostic services, build on the experience of others and develop local solutions to meet local needs.

Diagnostic services have had a history of long delays, fragmented services, concern about whether the right equipment was in the right place, and whether there would be sufficient staff to make the most of the available capacity. There has been concern about how to meet the staffing needs in all branches of diagnostics. However, there are now significant developments taking place in diagnostics, often in direct response to local difficulties in delivering services. The modernisation programme for diagnostics has made a great deal of progress through its pilot sites, some of which are within AGW. Even so, planning has often been piecemeal, for example the National Framework for Radiology points out that there are 13 modernisation agency programmes working with radiology departments (including the Emergency care programme, cancer services collaborative, hospital improvement programme, 'action on' programmes). There is an opportunity to take a strategic approach to the 'whole system', to engage a range of people, especially clinicians, in thinking about how to organise services differently to meet the new demands. It is clear that it will not be feasible to grow more of the same fast enough: different ways of organising, staffing and managing services need to be taken into consideration. Further, new technologies, including new IT developments have the potential to transform the delivery of diagnostic services.

Key questions which could be addressed to stimulate discussion on the options for service development in AGW are set out in the sections below. Examples are cited of different ways of providing and delivering services, such as integrating services, collaborating across services and partnership arrangements, including partnerships with the private sector.

Approach

The paper draws together information gathered from phone conversations (with lead clinicians and managers, both within AGW and across the country) and information readily available, in particular the NHS Modernisation Agency websites.

The Modernisation agency has identified the main factors which need to be in place to develop and sustain service development as:

- strong clinical and managerial leadership
- putting patients at the centre
- working with others – SHA, WDC, Networks, collaboratives
- robust data collection on capacity and demand
- process mapping of systems
- reviewing skills and staff roles
- sustainable redesign
- local trust

2. EXAMPLES OF INNOVATION

This section draws together examples of innovation cited in the literature and discussed (where possible) with the lead clinician.

Radiology

The increasing demand for radiology is across all modalities. The service has seen a 2% annual increase in demand over the past 5 years, along with an increasing requirement to provide intervention treatment for conditions previously undertaken in surgery. Progress in addressing this demand and developing new ways of working is widely evident. There are numerous examples across the country of good, and improving practice (see the Modernisation Agency site for details of the pilot sites www.modern.nhs.uk/radiology), and also the Changing Workforce Programme (www.modern.nhs.uk/cwp) However, current capacity does not yet support 24 hour 7 day per week access and this impacts adversely on patients' experience of care pathways.

Extensive work has taken place in many Trusts to develop and extend roles to create a 4-tier structure for Radiography:

- Assistant Practitioner
- Practitioner
- Advanced Practitioner
- Consultant Radiographer

The Changing Workforce Programme (on the Modernisation Agency site) contains examples of role redesign (search the Role Redesign database by job role – search for 'radiographer').

There are numerous examples of extended role practitioners in post and increasing numbers of Consultant Radiographers. There are Consultant Radiographers in post:

- in CT (St Richards Hospital, Royal West Sussex)
- Fluoroscopy (Frenchay Hospital)
- A&E (Pinderfields Hospital, Wakefield)
- Breast services (North Tees and Hartlepool NHS Trust)

Breast screening units across the country have been developing extended roles. The Avon service was one of the Modernisation Agency pilot sites, other units have been implementing extended roles without additional funding out of the urgent need to find ways to meet increasing demand and contribute to achieving targets for the Cancer programme.

Local example of role redesign/extended roles

Avon Breast Screening, United Bristol Healthcare NHS Trust

Dr Elisabeth Kutt, Clinical Director. Elisabeth.kutt@ubht.nhs.uk

The service is making progress in introducing advanced practitioner roles for radiographers. Staff have welcomed the changes and the opportunities offered by advanced roles; doctors have been supportive and keen to help with training. As a pilot site, the service received funding from the Modernisation Agency to support staff training, backfilling of posts to release staff for training, pay for enhanced roles.

Achievements have included:

- training radiographer to do core biopsies
- radiographer performed phantom core biopsy
- doctor support for training
- waiting times for core biopsies have reduced by four weeks to one/two weeks, achieved by decreasing the number of cancelled sessions, due to consultant radiologist availability

Outcomes include: reduced waiting times, improved staff satisfaction and released radiologist time.

The Avon, Somerset and Wiltshire Cancer screening network did a detailed piece of work (in 2001/02) examining the demand for CT and MRI scanners across all the Trusts within the area and assessed the available capacity. The analysis showed that no additional machinery was needed at that stage, but that there was an urgent need for more staff and for better usage to be made of the available capacity to meet local demand. Significant progress has been made since then in Dorset and Somerset to reduce waits for CT scans (from 40 weeks to 7 weeks) and to reduce waits for routine MRI scans to 10 weeks.

There has, however, been limited progress in AGW on reducing waiting times for scanning, which may be attributable (perversely) to the pressures which the Trusts are experiencing. There appears to be an urgent need to revisit collecting demand and capacity data and to work with clinicians and departmental managers in the hospitals to assess the potential for matching capacity with demand and the opportunities which extended roles may offer.

One Trust where significant progress has been made is the Royal United Hospital in Bath, which was cited as an example of good practice by several respondents.

Local example of reducing waiting times/extended roles/partnership working

Royal United Hospital NHS Trust, Bath

Craig Forster, Clinical Manager, Radiology. Craig.forster@ruh-bath.nhs.uk

The impetus for change has been the increasing demands on the service, in particular CT and MRI scanning, and the need to reduce waiting times.

- The service introduced 7 day working (3 years ago) and flexible working patterns (which has resulted in the service being almost fully established).
- Radiographers have been trained to take on advanced roles.
- In X ray they have additional out of hours cover by a support worker.

The service provides a mobile MRI scanner on a regular basis to another Bath Hospital (through a contract arrangement).

They have successfully argued for a second static MRI scanner at RUH to meet the increasing demand and are seeking to make maximum use of capacity by working with the University and the rheumatic diseases hospital (this will also help fund the revenue costs).

There is general agreement that the development of extended roles has been a great success wherever it has been introduced, opening up opportunities for staff to develop their skills. The point was made that it is important for radiology/radiographer teams to identify what their local issues are and to work together to develop local solutions. Extensive work has taken place on accrediting training, working with Skills for Health to develop the roles, set occupational standards and ensure that professional standards were maintained. The Society of Radiographers has worked closely with the Modernisation Agency to lay a stable foundation on which local initiatives can develop.

New technologies offer significant opportunities for developing radiology services. There is, however, a need to address the lack of trust between clinicians and managers about their imaging requirements so that agreement can be reached on best practice for meeting health needs. One new development, which offers potential for transforming the delivery of services is Picture Archiving and Communication System (PACS) which makes digital images of X-rays available. As a result health professionals can call up radiological records within minutes of X-rays or scans being taken. The records are then available to everyone simultaneously, and should not get lost in the system. Princess Royal Hospital, part of Shrewsbury and Telford NHS Trust, has invested in PACS. Additional benefits cited are the reduction in the number of internal phone calls seeking to track down results (a fall of 90% in calls was quoted). There is a saving in the need for storage of films, in the time which was formerly needed for the movement of films from place to place. A central fund of £60 million has been made available to support the introduction of the equipment.

Local example of use of new technology - PACS

Great Western Hospital, Swindon – Picture Archiving and Communication System (PACS) www.swindon-marlborough.nhs.uk

The PACS has reduced delays in reporting, reduced waiting times for some examinations, improved access to reports and images for clinicians, and saved clerical and administrative staff time thus releasing staff to undertake different roles. The PACS has speeded up diagnosis for patients.

Other sites which have introduced PACS include Blackpool, Frimley Park, Norwich and Norfolk, Calderdale Royal Hospital, Royal Glamorgan.

Another example of the potential impact of new technology which was cited was Positron Emission Tomography which could offer benefits in the treatment of cancer. Introducing this across AGW would need to be underpinned by centralised (SHA wide) guidance as it would be beyond the commissioning capacity of individual PCTs. There could be potential for funding support from University research departments and the Private sector.

Pathology

The Modernisation Agency site and the Department of Health site provide examples of innovation in Pathology services (www.modern.nhs.uk/pathology)

Although Pathology services have been reviewed regularly and there was a Draft Regional plan for the South West in 2001, there has been less visible progress in the organisation of services and in role redesign. Indeed the pressure for every hospital trust to have its own facilities has limited the wish to explore other solutions. The 2001 plan did point to a number of achievements including funding for the 'Avon HA Virtual Laboratory' which aimed to rationalise and unify pathology services across Avon and to link primary and secondary care.

Nationally, the development of extended roles is taking place, but the picture appears more fragmented. It may be worth exploring what lessons could be learnt from the Radiology Modernisation programme and there is interest in developing a National Framework for Service Improvement to mirror that in Radiology.

There has been work taking place to examine various organisational structures which could enhance the productivity of clinical laboratories. North Central London Strategic Health Authority has been working with local PCTs, Trusts and local patient representatives to examine the best organisational form for the future for Pathology services. Contacts with people across AGW expressed interest in exploring what the different options could be in order to work towards agreeing the organisational forms for the future. Reference is made in the section below to an article, which though based in North America, sets out the advantages of 4 different models:

- decentralisation
- centres of excellence (for routine essays)
- consolidation
- consolidated (with centres of excellence for esoteric testing).

Using the decentralised model as the baseline all the models showed increased productivity. Even within one Trust there are opportunities for improving capacity and meeting the increasing demands:

- integrating services
- centralising reception/pooling requests
- automatic analysis
- electronic recording of results.

An example of the achievements made through automating pre-analysis and analysis in biochemistry labs in Royal Free Hospital Trust in London is cited below. Further developments which the service is making are the centralisation of reception, but this relies on negotiating an exchange of location with another service. Progress is being made.

Example of use of new technologies: automated labs for biochemistry

Royal Free Hospital NHS Trust - Michael Thomas, Clinical Head of Service Pathology and Consultant Biochemist Michael.Thomas@royalfree.nhs.uk

Over the last 8 years the department has been developing and implementing an automated the analysis of blood samples and is seeking to achieve a central reception point within the Trust. 85% of the workload of the lab is generated within the Trust, but it should be possible to extend the service to local GPs. There has been a transfer of workload from haematology, releasing space there and consolidating the use of the analytical platform for assays. Results can be returned to haematology for further interpretation.

Posts were redeployed to do more interesting work (one post which had been hard to fill was rolled into the bid for hardware). Turnaround times for analysis and pre-analysis have reduced substantially and are now predictable. Automation means parallel assays can take place, again reducing waits for results. The department is one of the demonstration sites for Roche.

There are a number of different ways in which pathology services have sought to integrate and network. The example cited below illustrates a county wide networked service. In North West London pathology services have gone for a cluster approach whilst in Cumbria and Lancashire they have adopted a federated approach. Contact details are given in section 6 below.

Example of a networked service

North Lincolnshire and Goole Hospital – Pathlinks – Peter Wisher, General Manager Pathlinks pete_wisher@yahoo.com

The network offers a Lincolnshire wide service (for 5 District General Hospitals). There is a single IT system, and the network offers capacity to centralise expertise and develop specialisms. Samples can be sent to the most appropriate site within the network for testing

Endoscopy

The introduction of the Bowel Cancer screening programme from 2006 has focussed attention on Endoscopy services. The Modernisation website includes numerous examples of innovation and good practice (www.modern.nhs.uk/endoscopy) e.g.

Nurse led rectal bleed clinic – St Mark’s Hospital, North West London Hospitals NHS Trust.

Patients who were previously referred to consultants in the outpatients department are now transferred to the nurse led rectal bleed clinic for a flexible sigmoidoscopy. GPs are sent results of the procedure within 24 hours. The introduction of the clinic has freed up outpatient appointments, all patients needing further investigations ordered had these booked on the same day. 60% - 70% patients were seen only once. The maximum wait for non-urgent patients reduced to 10 weeks. All two week cancer referrals are seen within 14 days.

In-patient and emergency endoscopy – nurse list. Royal Liverpool and Broadgreen Hospital Trust.

Appointment of a gastrointestinal bleed nurse; inpatients triaged into endoscopy. Medical and nursing staff with limited or no gastroenterology experience were educated

and supported on patient care. The unit had already extended the working day over 4 nights per week releasing capacity for inpatients and emergencies. A telephone/fax hotline was set up in order for GPs to make direct referral to the gastroenterology directorate. The outcome included improved access, reduced patient stay in hospital, reduced wait for procedures, release of beds, pressure taken away from the endoscopy unit, improved communication.

Introduction of a Centralised Booking System – Gateshead Health NHS Trust

Waiting lists were reviewed and validated. A process mapping exercise was undertaken to incrementally move waiting lists from the control of individual medical secretaries to the endoscopy unit. This has meant that empty slots in endoscopy can be proactively filled, patient records need only be retrieved once, DNA rates have reduced from 20% to 3%. Improved process has freed up staff time in other areas including medical secretaries, health records and clinical coding.

Swindon and Marlborough NHS Trust are in the second wave of pilots. In addition, there is a regional training centre at Gloucester.

Developing Practitioners with a Special Interest: there are over 37 GPs with a special interest in Endoscopy across the country. For further information see the NatPact website (National Primary and Care Trust Development) www.natpact.nhs.uk - under the section on Practitioners with a Special Interest there is a database of all practitioners across the country.

One example was cited, with great interest, by several people as it involved the development and training of direct entry endoscopy technicians. The example is given below:

Example of Role redesign

Castle Hill Hospital – Hull and East Yorkshire NHS Hospital Trust

The redesign of roles in endoscopy at Castle Hill has led to reductions in waiting times for patients and has reduced the number of visits a patient had to make to the hospital from four to two. The Hospital has been a pilot in the Changing Workforce Programme (CWP): offering training to a nurse from the endoscopy unit, a physiology technician and a direct entrant who is training as an endoscopy technician. The nurse and clinical physiologist are now performing sigmoidoscopy in parallel clinics to the consultant, and the direct entrant is performing the procedures under direct supervision. The consultant's patient review clinic waiting times have reduced and there is increased capacity to do more colonoscopies. The CWP is funding the spread of the endoscopy direct entry programme and this will then inform the development of further training centres across England.

For further information about the pilot contact Jackie Younger, Lead Workforce Designer, CWP Jacqueline.younger@doh.gsi.gov.uk

Nine sites have now been identified for training endoscopy technicians – details available on the Endoscopy Modernisation site.

3. LABOUR MARKET TRENDS

Introduction

This overview identifies the long-term trends from local, national and international labour markets. While the perspective in some cases is up to ten years ahead, the action to address them needs to be taken very soon to counteract the powerful trends that are taking place.

It makes the case that it will be harder for all employers to recruit and retain staff, as the labour force will decline while the demand for labour will increase. The NHS therefore, has to improve its attractiveness to current and potential employees, merely to stand still.

General Employment Trends

International trends

- Most populations in developed countries are aging
- International competition for skilled labour will increase
 - America alone needs more than one million new and replacement nurses be needed by 2012¹.
 - More UK based nurses are leaving for the USA. In 2002-03, more than 2,200 verification checks on UK-based nurses were requested by American employers, up from just over 1,000 the previous yearⁱⁱ.
 - Nurses and other healthcare staff in the Philippines will be attracted to America, where they have historic links in preference to Britain.

England

Supply

- The UK population is ageing – so is the workforce.
 - Older workers may want to work fewer hours and value flexibility in employment
- The national labour market will shrink by 700,000 by 2010.
 - Competition for labour will increase, especially for those with skills that are valuable outside healthcare. Therefore, NHS wastage and vacancies could increase as a result.
- The number of school leavers will decline and yet a higher percentage will go on to university – the Government target is 50 per cent.

Demand

- The demand for labour will grow by an additional 2m jobs by 2010.
 - Competition for labour and NHS vacancies and wastage could increase further
 - The growing demand from service sector employers will increase the competition for women in employees, which will affect the NHS disproportionately, as it has a predominately female workforce.
- The public sector proportion of the UK workforce is declining.

Bristol, Avon and Wiltshire

Bristol

- There is plenty of competition for labour between employers in banking, insurance and finance and IT related employment. This is evidenced by a very rapid decline in unemployment and the large number of clerical vacancies.
- Unemployment affects young people from deprived areas who have performed poorly at school and who lack employment related skills.
- Bristol school leavers have poorer results than the national average.

Swindon

- Pay rates are high and average household income is above the national average.
- The low skill base of the population is a threat to the town's continued prosperity.
- Unemployment is concentrated amongst the over 45s whose former employers have recently shed staff.

Gloucester

- Unemployment rates are in line with national average, but are above those of the county.

Competition

- Expansion in demand for employment locally: the docks are likely to require male, skilled manual labour. However, the airport expansion will recruit a large number of women – i.e. serious competition with the NHS

NHS Employment trends

NHS in England

Past trends

- The NHS workforce is growing at a rate of 3.1% a year.
- Medical staff growth is 3% a year and Therapists growth is 4% a year.
- UK stands out among other western nations as the country that is most heavily reliant on recruiting nurses from the developing world, with nearly 10,000 people from developing nations registering to work as nurses in the UK between 2000/1 - 2002/3ⁱⁱⁱ.

Future Demand.

- Ageing population; by 2011 16.5% of the UK will be over 65.
- Increase in long-term conditions.
- Changing patterns of service delivery.
- Increased demand for staff.
- By 2010 the NHS will need to increase its workforce by 200,000 jobs
- Recruitment of 150,000 HCAs.

Supply

- Over 80% of existing professional and assistant staff need to be replaced by 2010.
- Number of nurses retiring will double between 2005 and 2015, with 27 per cent being aged over 50.
- Shortages of professional staff – 25,000 doctors by 2020.

- The feminisation of medicine (60 per cent of medical school intakes are female) will require more doctors to work a given number of hours, as women have shorter working lifetimes due to career breaks.

NHS in Avon, Gloucestershire and Wiltshire

Overview

- The AGW area has had far fewer recruitment problems for professional staff than the rest of the country. However, administrative and clerical staffing has been problematic, with the competition from the financial sector. This means that there has much less pressure to introduce new roles and to change skill mix.

Reference costs

- The historic overspends in Bristol suggest that reference costs are likely to be above average in many cases. This will produce major pressures to increase productivity through improved working processes. In addition, there are likely to be also be skill mix reviews to see whether other types of staff could undertake the work at lower cost.

Promoting NHS careers

- How can we sell careers not jobs? Starting pay is very poor in the NHS, yet little is made of the extensive training and opportunities for promotion.

Targeting graduates

- There are a large number of graduates who find it difficult to get jobs. Why not aggressively target sports scientists, biologists, psychologists?

Impact of IT

- More IT will reduce the demand for clinical records staff, but increase the demand for staff IT staff and information analysts. The data goldmine will enable the NHS to evaluate the impact of different drug regimes and care strategies much more effectively.

Demand and supply

- Plurality of providers – the greater use of the independent sector. This could drain more staff away from NHS and on the other hand, possibly encourage more efficient practices in the NHS.

Danger of pay spirals

- There is a danger that health and social care organisations faced with growing staff shortages will compete against each other very intensively, resulting in upward pay pressures, unless a coordinated approach is made to the problem by employers.

GPs

- There is a 11 per cent vacancy rate across AGW, with serious shortages in Swindon (18 per cent) and North Somerset (16 per cent).
- There will be a major problem trying to replace aging GPs as 26 per cent are aged 50 and above. This problem is particularly marked in North Somerset, where over a third are in that age group. This is on top of the very high current vacancy rate referred to in the previous paragraph.

Diagnostic radiographers

- They are in great demand and from an intake of 20, three obtained work within AGW and a further five obtained work in neighbouring Health Authorities. The destination of five was unknown. One interestingly joined Barclays Bank.

Staff groups related to Diagnostics – Vacancies 3 Months or More

	Significantly above ave.	Somewhat above average	Average	Somewhat below ave.	Significantly below ave.
Radiologists					✓
Pathologists					✓
Diagnostic radiographers					✓
Healthcare Scientists in Cyto/histopathologists	✓				
Cyto-screeners	✓				
Clinical Biochemists					✓
Healthcare Scientists in Haematology					✓
Healthcare Scientists in Microbiology					✓

AVON, GLOUCESTERSHIRE AND WILTSHIRE LABOUR MARKETS

Bristol

Main employers by sector

Key business sectors in the sub-region include aerospace and defence, printing and packaging, financial services, electronics and electrical engineering, and creative industries.

The aerospace industry in the South West directly employs over 40,000 people - and the Bristol area is at the heart of this. As well as the major names like Airbus and Rolls Royce, there are hundreds of smaller enterprises that have a vital role to play. This is reflected in much high index figures for knowledge based industries Bristol (120) and South West (124) compared with the UK (100).^{iv}

Banking, finance and insurance sector, employing 28 per cent of the Bristol workforce is very large compared with England as a whole.

The Printing, Packaging and Graphic Communications sector is the United Kingdom's sixth largest industry, with a turnover of £13 billion.

Over the past 20 years, it has been transformed from a traditional craft-based industry to a leader in ICT and digital technology.

Bristol Employment by Sector

Sector	Employees	%
Manufacturing Industries	23,900	9.8%
Utilities / Agriculture	1,200	0.5%
Construction	12,100	5%
Distribution / Hotels & Restaurants	49,400	20.3%
Transport & Communications	12,500	5.2%
Finance, Insurance and Business Services	68,800	28.2%
Public Administration, Education and Health	64,000	26.3%
Other Services	11,700	4.8%
Total	243,900	100.0%

Source: ONS Annual Business Inquiry 2002

Population and employment trends

The population of Bristol is projected to grow at a lesser rate (2.9 per cent) than England (3.8 per cent). However, the South West is likely to grow at a faster rate (5.8 per cent). Bristol has relatively more affluent blue collar workers and hard pressed families and single parent families receiving income support and high numbers of young children. Bristol has a higher rate of deprivation (29) than England (22)^v. A quarter of the Bristol population live in the most deprived 10% of wards in England.^{vi} This is where most of the young unemployed are concentrated who are thought to have low skill levels, as they seek unskilled jobs. They represent a larger problem for Bristol than unemployed people over 45. The South West in comparison has more affluent people in their 50s and senior citizens. This is reflected in a lower deprivation score (19) than England.

Employment in Bristol grew by 5 per cent 10,700 jobs between 1993 and 1998, particularly for the more skilled jobs and it is expected that this growth will continue in the short-term. In tandem with this, unemployment fell from 8.2 per cent to 3.4 per cent, which is lower than the UK average rate between 1996 and 2000. Unemployment in the South West is even lower 2.7 per cent.

Vacancies in Bristol were heavily concentrated in the distribution, hotels and restaurant sector and in banking, finance and insurance. The latter is reflected in difficult to recruit occupations, where clerical posts were the worst affected. ICT recruitment difficulties are also a growing problem. Bristol employers suffer to a greater extent from the recruitment difficulties than most others in the South West.

A survey of employers noted that a greater use was made of 'family friendly' policies in Bristol, which was attributed to the tight labour market^{vii}. The Bristol labour market is largely self-contained, with three quarters of employed residents working within the area.

Education

Secondary school performance in Bristol is below the national average. A higher percentage of school children are disadvantaged in that they have special educational needs and suffer from exclusion. Furthermore, more children are looked after. Nevertheless, a growing percentage progress to higher and further education with a diminishing number seeking jobs (16 per cent) in 1999^{viii}.

Skill Attainment Levels

<i>Bristol and Area - Age</i>	<i>Bristol</i>	<i>England</i>
with NVQ 4+	31.8%	23.5%
with NVQ 3+	15.8%	13.9%
with NVQ 2+	13.2%	14.9%
with NVQ 1+	16.1%	15.5%
with other qualifications	6.3%	9.1%
with no qualifications	11.8%	16%

Source: Nomis, ONS, Local Area Labour Force Survey 2001

Swindon

(Source www.swindon.gov.uk/business/economics.htm)

Economic overview

Despite a recent slowdown, the Swindon economy continues to be strong and competitive. The average earnings of local workers are high, and the average household income is well above the national level. Swindon is especially strong in the high and medium high tech sector, with twice as large a proportion of employees working in this sector as the UK as a whole. In Swindon, the overall new business activity is comparatively low and the number of companies de-registered has had a significant increase.

Service sector

In the past few years, the service sector has accounted for most of the employment growth in Swindon. Newly-available data, however, reveals that the productivity of the local service sector is falling below the national average. With the level of wages in Swindon comparatively high, the low productivity of the service sector is undermining its competitiveness. This needs to be addressed through raising the productivity of the existing service sector and attracting more high value added service industries into the town.

Qualifications of workforce

One of the biggest challenges for Swindon is to continually improve the qualifications of its workforce. As a major economic centre, Swindon is still far behind many of its competitors in the qualification attainment of its workforce. This needs to be urgently addressed by all education and training providers if Swindon is to stay a high-tech centre, improve its productivity, retain existing investment and attract high quality jobs into the town.

Local downward employment trends

The indicators have revealed that the general slowdown of the economy has begun to affect the workforce in Swindon. There has been a persistent monthly increase in long-term unemployment over the past year while nationally the level has come down. This indicates a skill mismatch problem in the local labour market, which will become increasingly an issue as the local industrial mix starts to change. Therefore support for redundant workers and an accurate assessment of future skill requirements for Swindon is essential.

There has also been a sharp increase in inactivity among the local workforce over the past year against the background of a series of local redundancies. This reflects an increase in under-employment among some groups of local people, especially the lower skilled workers and older people. The extent and the nature of the problem needs to be assessed so that effective policies can be put in place to support these people back to work so that they can continue to contribute to the local economy.

Gloucester

(Source: <http://www.gloucester.gov.uk/libraries/templates/page.asp?URN=71>)

The city's population is 109,888 and 7.5 per cent of the residents are from black and ethnic minority communities. The age structure of the population is similar to that of England and Wales with 32.08% of the population of Gloucester being under 25 and 14.96% being over 65. The population is expected to follow the national trends and for there to be an increase in elderly people and single person households in the future, increasing demand on housing and health services.

Good communications by road, river, canal and railways historically made the city attractive for manufacturing. Local employment is now mostly in health, education, public services, wholesale, distribution and manufacturing. Unemployment in Gloucester stands at 3.4%, which is high compared to the county average of 1.8% but is equal to unemployment in England and Wales overall.

USEFUL CONTACTS/REFERENCES

Radiology

www.modern.nhs.uk/radiology

On this site (under key documents and reports) you can find *Radiology: A National Framework for Service Improvement*

Carol Keirl, National Radiology Manager – London/South East (formerly at Taunton Hospital – with a wealth of local experience about the potential for developing extended roles, and the pitfalls to avoid) carol.keirl@npat.nhs.uk , 07747778287

Laura Nicholas, AGW Lead for Diagnostics (new in post)
laura.Nicholas@agwsha.nhs.uk Tel: 01249 858562

Tom Manning, ASW cancer network Tel: 0117900323

Report of the Accelerated Development Programme (December 2003)
<http://www.modern.nhs.uk/cwp/21132/21294/Radiography%20Report.pdf>
See also www.modern.nhs.uk/cwp database of role redesign
North Tees and Hartlepool NHS Trust has developed roles for all 4 tiers.

Peterborough and Stamford Hospitals foundation Trust – Dr Roger Moshy clinical lead for **ultrasound**.

Sonographers here perform 95% ultrasound scans. Team approach, flexible working.
Health Service Journal 14 October 2004 (www.hsj.co.uk)
There is also a sonographer led service in East Sussex Hospitals Trust

Manchester Royal Infirmary Nuclear Medicine Department - Robert Shields, Director of medical physics
Improving patient access to heart scanning. Flexible working hours, additional technical staff.
Health Service Journal 28 October 2004 (www.hsj.co.uk)

Princess Royal Hospital, Shrewsbury and Telford NHS Trust – **PACS**
See 2 August 2004 newsletter from National Programme for IT. (on the www.modern.nhs.uk/radiology site under Key Documents and Reports)

Pathology

www.modern.nhs.uk/pathology

North Central London SHA has been taking a sector wide approach to modernising Pathology services. The lead contact is Jennifer Benjamin, Hospital Service Development Manager Jennifer.Benjamin@nclha.nhs.uk

Jennifer Benjamin recommended a useful article with data on the impact on productivity of different organisational models in Pathology (in North America).
Brian Sheridan and Paul Mountain - Laboratory organisational forms that enhance productivity. RCPATH Bulletin 2003; 123:22-24.

Developing a partnership arrangement with a private company, TDL, to run automated biochemistry and haematology labs. Lorraine Norden – Director of Pathology, University College London Hospitals. Lorraine.norden@uclh.org

Organising pathology services in NW London in 3 clusters
Dennis Wright – Consultant Biochemist/Head of Department NW London Hospitals NHS Trust dennis.wright@nwlh.nhs.uk

Setting up a federated network for pathology where Trusts can work together on particular projects, but retain management and autonomy in Cumbria and Lancashire.
Leslie Martin – Lab Manager, Royal Preston Hospital Tel: 01772 522153

Endoscopy

www.modern.nhs.uk/endoscopy

Clinical lead for AGW: Stephen Hughes Stephen.Hughes@north-bristol.nhs.uk

National Clinical Lead: Roland Valori c/o teri.hopson@glos.nhs.uk

Calderdale and Huddersfield Hospital NHS Trust – example of analysing capacity and demand, flexing capacity and reducing backlog.

Document History

Role	Personnel
Sponsor	Maggie Boardman, Director of Workforce Modernisation
Client lead	Justin Riordan-Jones, Head of Workforce Information and Planning
Authors	George Blair and Karen Greenwood

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1	29 November 2004

ⁱ U.S. Bureau of Labor Statistics published in the February 2004 Monthly Labor Review,

ⁱⁱ RCN Report, quoted in Observer, 31 October 2004

ⁱⁱⁱ RCN warns of fragile future of the nursing profession, Press Release, 1 November 2004

^{iv} WESTEC Community Profile - Bristol

^v Department of the Environment, Transport and the Regions, Indices of Deprivation 2000, quoted in *ibid*

^{vi} *Ibid*, p.24

^{vii} *Ibid*, p.38

^{viii} *Ibid*, p.103