



North West London Cardiac Network

NORTH WEST LONDON CARDIAC NETWORK

CARDIAC WORKFORCE REPORT DECEMBER 2006

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SECTION 1

Introduction

This report is the first stage of work being undertaken by the NW London Cardiac Network (NWLCN) to scope existing and future cardiac workforce requirements for the next 5 to 10 year period in order to develop a sector wide workforce strategy.

This report's prime objective is to develop a detailed and accurate picture of the current Coronary Heart Disease (CHD) workforce in NW London, across all staff groups spanning both primary and acute care, to establish priorities and to make recommendations on future workforce requirements.

The report includes background information on national and local service developments in cardiology and key health policy drivers influencing service delivery. It also links with national and local workforce trends and requirements. It details and analyses the current cardiac workforce establishment across acute and primary care in NW London setting recommendations on future workforce needs. However, whilst providing a global view of the NW London cardiac workforce, significant variation exists at Trust level which will need to be addressed on an individual organisational basis.

This report does not include an analysis of education and training; this will be included in a forthcoming report.

Background

1.1 National

Cardiovascular disease accounts for a significant number of deaths. In 2003 it accounted for more than one in three (38%) deaths in England and Wales. Almost half of these were due to coronary heart disease, which continues to be the largest single cause of death in England and Wales. More than one in five men and one in six women die from coronary heart disease (National Service Framework Report, Long Term Conditions, 2005)¹.

Many improvements in the delivery of care to people with cardiac disease have been made in last 5 years but there is still much to be achieved. Since its publication, the NHS has made excellent progress in implementing the Coronary Heart Disease (CHD) National Service Framework (March 2000)². The Department of Health's *"Priorities and Planning Framework 2003-2006 Improvement, Expansion and reform: The Next Three Years"*³, confirmed CHD as a national priority and has set targets which the NHS must achieve by the end of 2006 including:

- Improve access to services across the patient pathway and increase patient choice by achieving the two week wait standard for Rapid Access Chest Pain Clinics; setting local targets to make progress towards the NSF goal of a 3 month maximum wait for angiography; and delivering maximum waits of 3 months for revascularisation by March 2005.
- Deliver a ten percentage point increase per year in the proportion of people suffering from a heart attack who receive thrombolysis within 60 minutes of calling for professional help.
- In primary care, update practice-based registers so that patients with CHD and diabetes continue to receive appropriate advice and treatment in line with NSF standards and by March 2006, ensure practice-based registers and systematic treatment regimes, including appropriate advice on diet, physical activity and

smoking, also cover the majority of patients at high risk of CHD, particularly those with hypertension, diabetes and a BMI greater than 30.

- Improve the management of patients with heart failure in line with the NICE Clinical Guideline released in 2003, and set local targets for the consequent reduction in patients admitted to hospital with a diagnosis of heart failure

Other health policy drivers include:

- **18 week patient pathway**⁴ requires that by December 2008 no-one waits more than 18 weeks from GP referral to hospital treatment. Patients can and will now expect faster access to services than ever before. Delivery of the 18 week pathway requires management of each patient's journey in a timely and efficient manner. Achieving this target is very ambitious and requires contributions from everyone working in the NHS. Successful delivery is largely dependent on having the correct numbers of appropriately skilled staff. Commissioners will need to consider this when commissioning activity.
- **National Service Framework, Chapter 8 on Arrhythmias and Sudden Cardiac Death**⁵ (February 2005) sets a blueprint for provision of services for people with arrhythmias by widening the scope of the NSF beyond just that of coronary disease. The Chapter defines certain "quality requirements" which describe the principles of care that clinicians and others will use to guide their practice. There are three quality requirements covering patient support, diagnosis and treatment, and sudden cardiac death. Implementation of these changes will have an impact on service delivery and cardiac workforce requirements.
- **A commissioning guide for services for young people and Grown Ups with Congenital Heart Disease (GUCH)**⁶ (DH, May 2006) sets out necessary steps in the provision of GUCH services. The aim is to create a more cohesive, high quality service where expertise is concentrated in a small number of specialist centers. This together with the aim to raise the awareness of congenital heart disease in primary

and secondary care will have an impact upon service delivery and workforce recruitment and training.

- **The NHS Improvement Plan** ⁷ published in June 2004 sets out the vision for the NHS and the key commitments that the NHS is expected to deliver by 2008. The focus is on the provision of more personalised care including more choice for patients, support in the community and an increasing emphasis on quality and safety. These changes in service delivery and a move to 24 hours a day/ 7 days a week service provision will have a major impact on working patterns for NHS staff.
- **The National Service Framework for Long-term Conditions** ¹ published in March 2005 sets out quality requirements and good practice for people with long term conditions including congenital heart disease and heart failure. This will affect planning and service developments in primary care.
- **European Working Time Directive (EWTD)** ⁸ lays down minimum requirements for employers in relation to working hours, rest periods and annual leave. The most significant aspect of this is the maximum 48-hour working week which is currently being phased in for trainee doctors in the UK and needs to be achieved by 2009, which will affect staffing levels and service delivery. This may mean that there is a need to develop new ways of working to adopt the EWTD in service delivery.
- **Increased emphasis on public health, self-management and provision of health closer to patients home, in “Choosing Health”** ⁹ **and “Our health, our care, our say: a new direction for community services”** ¹⁰ includes proposals to improve support for people with long term conditions giving them a stronger voice in improving services. It focuses on the development of more patient-centered pathways challenging traditional boundaries with a greater range of conditions being managed by primary care. Patients will expect more continuity and convenience of care and they will expect to be partners in the management of their condition, not just passive consumers. This suggests the need for a fundamental shift in the culture of organisations and the staff within them, together with change in the balance of

power between the patients and staff caring for them. It also highlights the need to implement new ways of working, breaking down the barriers across primary and secondary care.

All of the above together with the changing population needs are fundamental to the future success of health care services. This success depends on the ability of employers to have in place appropriate levels of skilled employees.

Workforce modernisation will continue to play a key role in future service delivery. Initiatives including agenda for change, the new GMS and consultant contracts, development of new roles spanning different professional groups, and 'Improving Working Lives' all provide a platform for workforce modernisation across the NHS. The Healthcare Workforce Portrait ¹¹ (Essex WDC, 2004) explores the causes and impact of the supply demand gap at a national level. It identifies the traditional professional workforce as being a major supply shortfall due to a variety of factors including:

- The workforce is on average ageing in line with the population. 13% of the NHS workforce is over 55.
- Fewer younger people are entering employment and will therefore result in the national labour pool shrinking by 700,000 by 2010.
- There will also be greater competition for labour and skills. By 2010 there will be an extra 2m jobs outside the NHS, offering more and wider choice to individuals.
- Increased investment into the NHS (and cardiac services) requires a significant growth in the workforce.

There is therefore a major mismatch between the growing demand for labour and the diminishing size of the UK workforce, which will profoundly affect labour intensive industries such as health and social care. Addressing all these issues will be particularly challenging in NW London as it is one of the most diverse regions of the country in terms of population

and healthcare needs. In short, high quality workforce planning and information has never been more vital in underpinning decisions to improve patient care.

Historically the importance of workforce planning has varied between Trusts. Therefore it is hoped that this report will provide a focus on the required investment and development of the cardiac workforce in NW London. Individual Trusts may find it difficult to tackle workforce issues in isolation. It is therefore, the intention of the Network to bring all Trusts together to work in partnership to develop programmes and solutions to meet current and future workforce challenges, which will be of benefit to all and which will ensure that NW London remains an attractive centre for retaining highly skilled and cutting edge roles.

1. 2 Local

The NW London Cardiac Network serves an ethnically and culturally diverse population of over 1.9 million, spanning 8 Primary Care Trusts and 8 Acute Hospital Trusts providing cardiac services across 11 hospital sites. Uniquely, specialist cardiac services are provided by 3 Trusts across 4 sites. The sector is characterised by areas of great affluence alongside significant deprivation. It has some of the most ethnically diverse wards in the country - around 35% of the local population belong to ethnic minority groups. Coronary Heart Disease (CHD) is the second largest cause of death in NW London.

Many improvements in the delivery of care to local people with cardiac disease have been made but there is still much to achieve. The expansion and development of cardiac services in primary and acute care has already impacted upon the NW London cardiac workforce. Further expansion including a greater emphasis on “out of hospital” care is expected. This will require more practitioners with specialist interests and increasing demand for heart failure services. However there will be other changes affecting acute care such as an increasing demand for Imaging services, an increasing demand for Grown up Congenital Heart Disease (GUCH) services with a move towards implementation of a GUCH ‘shared service’ model, and an increasing demand in the provision of services for Arrhythmias.

Therefore, the recruitment and retention of appropriately skilled staff is key to enabling ongoing service improvements and developments across the Network. Traditional roles across all professions are changing as the NHS focuses more fully on developing new services models which meet the needs and expectations of their local populations. As such, there is now a “need for the staff to be working smarter not harder” (NHS Plan 2000)¹².

The NW London SHA Annual Workforce Report 2004-2005¹³, whilst non cardiac specific, identifies global trends and future workforce forecasts in the NW London sector. If these forecasts are accurate shortages of key staff groups, in particular specialities are likely to be experienced. The report indicates that:

- Between 2002 and 2004 the Whole Time Equivalent (WTE) workforce has grown steadily and consistently in the majority of Trusts equating to a growth rate of 9.5%. Overall, the hospital based medical workforce grew by 12% and the consultant WTE by 18%, representing the largest proportion of growth.
- Non-Medical staff groups (other professionally qualified clinical staff) grew by 9% with the nursing group making up the bulk of this workforce. The qualified nursing workforce increased by 4%, whilst support nursing rose by nearly 11%.
- The average turnover rate across NW London has reduced by almost 3% over three years across the majority of organisations. This improved retention of staff may be a result of recent initiatives such as Improving Working Lives.
- Across NW London the spend on agencies has reduced.
- In NW London, across most of the staff groups the majority workforce is female the only group being predominately male is that of the Medical and Dental workforce. However in recent years the ratio of male to female doctors has fallen. With the exception of senior management, all other staff groups are female dominated with a ratio of approximately 3:1 and show little change over the last two years.

- The NW London workforce is ageing with a growing proportion of staff aged 51 or over. Similar trends have been reported in other sectors of London. The workforce tends to be younger in Inner London organisations compared to Outer London. This matches the national profile where inner city organisations tend to attract younger employees, but have a higher turnover.
- Overall on a sector basis, senior management tends to be comprised of more staff from white ethnic backgrounds than may be expected when compared to the local population, whereas administrative, clerical and nursing are generally staffed by more employees than might be expected from Black and Minority Ethnic (BME) groups. The reasons for this pattern may be due to overseas recruitment initiatives amongst some of the staff groups.
- There is an overall increase of 1% in the ratio of Medical Consultants to Qualified Nurses across acute Trusts in the sector. In 2002 there were 10.8 Qualified Nurse WTEs to every Consultant WTE. In 2004 this had reduced to 9.6 Qualified Nurse WTEs to every Consultant WTE. This appears to suggest an increase towards consultant-led care. It is unclear as to the reasons for its occurrence but it may be due to the impact of the EWTD and/or to the increasing sub-speciality occurring in acute care in line with changing case mix.

SECTION 2

2.1 Overview of North West London Cardiac Workforce

This section includes a detailed analysis of the current CHD workforce in NW London, across all staff groups spanning both primary and acute care, it highlights issues and future plans around the workforce identified during data collection. The data was collected by the NW London Cardiac Network Workforce and Education project manager during the period March - May 2006. This is an accurate reflection of information gathered at that time.

The data collection took place in two stages. In the initial stage, a Cardiac Workforce Questionnaire (Appendix A&B) was designed and disseminated to all cardiac General Managers and CHD leads in NW London for completion. The second stage of the data collection comprised face to face and telephone interviews with General Managers and relevant departmental/clinical leads. The data was collated and a detailed analysis of it is presented in the following section.

2.1 Data

There are 8 healthcare economies across the NW London Cardiac Network comprising of 8 Primary Care Trusts, 3 tertiary hospitals on 4 sites and 11 district general hospitals as detailed below. Historically, patient flows have generally been as follows:

- Harrow PCT; the majority of acute cardiology flows to Northwick Park Hospital (NPH), (part of NWL Hospitals NHS Trust).
- Hillingdon PCT; the majority of acute cardiology flows to Hillingdon Hospital NHS Trust (THH) and to a lesser extent Harefield Hospital (part of Royal Brompton and Harefield NHS Trust).

- Brent PCT; the majority of acute cardiology flows to Central Middlesex Hospital (CMH), (part of NWL Hospitals NHS Trust) and to a lesser extent St Mary's NHS Trust.
- Ealing PCT; the majority of acute cardiology flows to Ealing Hospital NHS Trust.
- Hounslow PCT; the majority of acute cardiology flows to West Middlesex University Hospital (WMUH).
- Hammersmith & Fulham PCT; the majority of acute cardiology flows to Hammersmith Hospitals NHS Trust (comprising Hammersmith and Charing Cross Hospitals (CXH)).
- Westminster PCT; the majority of acute cardiology flows to St. Mary's NHS Trust and to a lesser extent, Chelsea and Westminster Hospital NHS Trust (CheWest).
- Kensington & Chelsea PCT; the majority of acute cardiology flows to Chelsea and Westminster Hospital NHS Trust. Royal Brompton Hospital (part of RBH and Harefield NHS Trust), is located within Kensington and Chelsea. It provides tertiary level care only and therefore does not have a local catchment population, although it is the main provider of tertiary level services to Chelsea & Westminster Hospital.

2. 2 Summary of data

The British Cardiovascular Society (BCS) in their report "Cardiac Workforce Requirements in the UK" ¹⁴ have estimated the cardiac workforce requirement per million population (pmp) to support cardiac networks in estimating workforce and sub-specialties requirements. The BCS report has been used as a benchmark for the analysis of NW London's cardiac workforce needs. The population of NW London is 1.9 million however, there is a significant number of referrals flowing to tertiary centres from outside the sector and beyond which equates to an additional 2.2 million (Stocktake of Cardiac Care Report, March 2006) ¹⁵,

equating to a total population base of 4.1 million. It should also be noted that whilst St Mary's and Hammersmith Hospitals are tertiary centres they also provide secondary care services to their local populations. The above factors have been taken into account when analysing and benchmarking the NW London cardiac workforce data.

In relation to Cardiologists, the BCS report suggests each Consultant WTE post equates to 10 -12 PAs (Programmed Activity) per week of which 7.5 PAs are for direct clinical care and the remaining 2.5 - 4.5 PAs are dedicated to general activities.

Acute Care

Tables 1 and 2 illustrate the existing cardiac workforce establishment for all staff groups within the tertiary and district general hospitals (DGHs) across the NW London Cardiac Network.

Table 1a-d North West London Tertiary Care Hospitals

Table 1a

Cardiothoracic consultants (this includes all cardiothoracic surgeons, GUCH, paediatrics, transplantation), perfusionists and SPRs

	Total	RBH	Harefield	St. Mary's	Hamm
Cardiac and Thoracic Surgeons in NWL					
Number	28	11	9	4	4
WTE *	28*	11	9	4	4
Vacancies	1	0	0	1	0
Perfusionists					
Number	21	9	9	2	1**
WTE *	19	8.5	7.5	2	1
Vacancies	1	0	0	1	0
Surgical SPRs					
Number	30	12	8***	6	4
WTE	30	12	8	6	4
Vacancies	0	0	0	0	0

* 12 PAs assumed for consultants and surgeons WTE

** Hammersmith Hospital, in addition to 1 WTE employed by them, contracts the perfusionists department from an external contractor (6WTE)

*** 1 is Clinical Fellow

Table 1b

Consultant cardiologists and SPRs

	Total	RBH	Harefield	St. Mary's	Hamm
Consultant Cardiologists (Including visiting & academic)					
Number	57	17	15	13	12
WTE	42.38	16.7	11.3	8.42	5.96
Vacancies	0	0	0	0	0
SPRs (Including medical, research and staff grade)					
Number	60	29	11	14	6
WTE	60	29	11	14	6
Vacancies	0	0	0	0	0

Table 1c

Cardiac nurses

The following table details all cardiac nurses including: cardiology and surgical ward nurses, Cardiac Nurse Specialists, CCU/HDU nurses, Cardiac ITU nurses and Cardiac Theatre nurses. The nursing team from Harefield's transplantation unit have been excluded.

	Total	RBH	Harefield	St. Mary's	Hamm
		BAND 8c			
Number	1	1	0	0	0
WTE	1	1	0	0	0
Vacancies	0	0	0	0	0
		BAND 8b			
Number	3	0	3	0	0
WTE	3	0	3	0	0
Vacancies	0	0	0	0	0
		BAND 8a			
Number	6	2	0	1	3
WTE	6.1	2.1	0	1	3
Vacancies	0	0	0	0	0
		BAND 8			
Number	6	0	4	2	0
WTE	4.8	0	4	0.8	0
Vacancies	0	0	0	0	0
		BAND 7			
Number	57	29	12	8	8
WTE	47.73	20.9	11.53	7.5	7.8
Vacancies	31.4	1 + 23*	0.87	2	4.53
		BAND 6			
Number	240	88	70	60	22
WTE	232.69	85.8	64.49	60.8	21.6
Vacancies	24.9	3	10.1	11.8	0
		BAND 5			
Number	162	36	54	24	48
WTE	155.59	35.32	48.87	23.5	47.9
Vacancies	9.13	1.8	1.4	1.4	4.53
Surgical wards & Cardiac Theatre for RBH & Harefield provided separately below as information not available by band					
Number	**	**	**	***	***
WTE	247.06	107.34	139.72		
Vacancies	0	0	0		
GRAND TOTAL					
Number	475****				
WTE	697.97				
Vacancies	65.43				

* Total vacancies at ICU range AFC bands 5 - 7 equate to 23 WTE

** Data unavailable

*** Included above by bands split

**** Headcount from RBH & Harefield theatre & surgery not included

Table 1d

Cardiac physiologists

	Total	RBH	Harefield	St. Mary's	Hamm
Cardiac Physiologists					
BAND 8c					
Number	1	0	0	0	1
WTE	1	0	0	0	1
Vacancies	0	0	0	0	0
BAND 8B					
Number	3	0	1	0	2
WTE	3	0	1	0	2
Vacancies	0	0	0	0	0
BAND 8A					
Number	6	2	1	2	1
WTE	6	2	1	2	1
Vacancies	0	0	0	0	0
BAND 7					
Number	23	7	7	4	5
WTE	21.4	7	7	4	3.4
Vacancies	2	0	0	2	0
BAND 6					
Number	23	5	2	6	10
WTE	23	5	2	6	10
Vacancies	5	0	2	0	3
BAND 5					
Number	17	10	4	2	1
WTE	16	10	3	2	1
Vacancies	2	0	0	1	1
BAND 4					
Number	3	0	0	0	3
WTE	2.4	0	0	0	2.4
Vacancies	0	0	0	0	0
GRAND TOTAL					
Number	76				
WTE	72.8				
Vacancies	9				
Trainees					
% BAND 6					
Number	8	0	8	0	0
WTE	7.4	0	7.4	0	0
Vacancies	0	0	0	0	0
% BAND 5					
Number	10	7	0	3	0
WTE	10	7	0	3	0
Vacancies	0	0	0	0	0

AFC appeal process underway in one centre. All CPs ranging AFC bands 8a – 8c are awaiting AFC assimilation process outcome.

Table 1e

Cardiac Radiographers

	Total	RBH	Harefield	St Mary's	Hamm
		Cardiac Radiographers			
Number	22	**		15	6*
WTE	35.53		14.9	13.63	6
Vacancies	7		3	2	1

* Data available for cath lab only

** Data unavailable

The above tables illustrate current workforce establishment across Royal Brompton and Harefield NHS Trust, Hammersmith Hospitals NHS Trust and St. Mary's NHS Trust. The information includes the total number, the WTE and current vacancies across staff groups.

Table 2 a-d North West London District General Hospitals

Table 2a

Consultant cardiologists and SPRs

	Total	CXH	Ealing	NPH	WMUH	CMH	ChelWest	THH
		Consultant Cardiologists (Including visiting and academic)						
Number	22	2	4	4	4	3	3	2
WTE	15.41	2	2	3.52	2.64	1.45	1.8	2
Vacancies	0	0	0	0	0	0	0	0
		SPRs (Including medical, research and staff grade)						
Number	28	3	5	9	3	4	2	2
WTE	28	3	5	9	3	4	2	2
Vacancies	0	0	0	0	0	0	0	0

Table 2b

Cardiac nurses

	Total	CXH	Ealing	NPH	WMUH	CMH	ChelWest	THH
		Cardiac nurses including specialist nurses						
		BAND 8a						
Number	1	0	0	1	0	0	0	0
WTE	1	0	0	1	0	0	0	0
Vacancies	0	0	0	0	0	0	0	0
		BAND 8						
Number	1	0	0	0	0	0	0	1
WTE	1	0	0	0	0	0	0	1
Vacancies	0	0	0	0	0	0	0	0
		BAND 7						
Number	36	6	7	2	7	3	7	4
WTE	28.51	1	6	2	6.8	2.5	6.61	3.6
Vacancies	6	5	1	0	0	0	0	0
		BAND 6						
Number	55	2	16	7	5	7	4	14
WTE	52.57	2	16	7.3	5	7	4	11.27
Vacancies	4.86	0	3	1	0	0.85	0	0
		BAND 5						
Number	91	0	17	25	21	5	16	7
WTE	87.94	0	17	25	20.3	5	15.71	4.93
Vacancies	1	0	0	1	0	0	0	0
GRAND TOTAL								
Number	184							
WTE	171.02							
Vacancies	11.86							

Table 2c

Cardiac Physiologists

	Total	CXH	Ealing	NPH	WMUH	CMH	ChelWest	THH
Cardiac Physiologists								
BAND 8b								
Number	2	1	0	0	0	0	0	1
WTE	2	1	0	0	0	0	0	1
Vacancies	0	0	0	0	0	0	0	0
BAND 8a								
Number	2	0	1	0	0	0	1	0
WTE	2	0	1	0	0	0	1	0
Vacancies	0	0	0	0	0	0	0	0
BAND 7								
Number	12	3	1	2	1	2	1	2
WTE	9.77	2.2	1	2	1	1	1	1.57
Vacancies	2	0	0	0	1	0	1	0
BAND 6								
Number	12	1	1	7	2	0	0	1
WTE	10.47	1	1	5.9	2	0	0	0.57
Vacancies	2	0	0	0	1	0	1	0
BAND 5								
Number	9	2	2	0	1	1	2	1
WTE	8.84	2	1.84	0	1	1	2	1
Vacancies	2	0	0	0	1	0	0	1
BAND 4								
Number	5	1	1	2	1	0	0	0
WTE	4.5	1	1	1.5	1	0	0	0
Vacancies	2	1	0	0	1	0	0	0
ATO/B 3								
Number	8	1	2	1	1	1	1	1
WTE	7.67	1	1.68	1.49	1	0.5	1	1
Vacancies	0.6	0	0	0	0	0	0	0.6
GRAND TOTAL								
Number	50							
WTE	45.25							
Vacancies	8.6							
Trainees								
Number	8	0	1	3	2	1	1	0
WTE	8	0	1	3	2	1	1	0
Vacancies	0	0	0	0	0	0	0	0

All CPs at one DGH going through appeal process post AFC assimilation

Table 2d**Cardiac Radiographers**

	Total	CXH	Ealing	NPH	WMUH	CMH	ChelWest	THH
		Radiographers						
Number	3	0	1	1	0	0	0	0
WTE	3	0	1	1.5	0	0	0	0
Vacancies	0	0	0	0	0	0	0	0

The above tables illustrate current workforce establishment across all DGHs in NW London. The information includes the total number, the WTE and current vacancies across staff groups.

2.3 Current cardiac workforce establishment and future workforce requirements in NW London

This section includes detailed analysis on NW London cardiac workforce spanning staff groups and specialities. It also incorporates recommendations on staffing requirements benchmarked against the British Cardiovascular Society workforce report, together with future trends in cardiac service delivery and population needs.

Data Analysis

Cardiothoracic consultants, perfusionists and trainees

There are a total of 28 cardiothoracic surgeons equating to 28 WTE across all tertiary hospitals in NW London with 1 vacant post. Within the total number, 3 specialise in paediatric care, 3 specialise in Grown Up Congenital Heart Disease (GUCH), and 5 specialise in heart transplantation. In addition, there are a total number of 21 perfusionists equating to 19 WTE and a total number of 30 surgical trainees equating 30 WTE across four tertiary centres in NW London.

The BCS workforce report does not provide recommendations on the required numbers of cardiac/cardiothoracic surgeons. As such, there is no national benchmark against which to compare surgical numbers. Whilst, nationally there has been a decline in the number of

patients requiring cardiac surgery, those patients now presenting for surgery are significantly older, with more complex disease and multiple co-morbidities. Therefore, whilst at present, it may be reasonable to suggest that NW London has adequate numbers of cardiac/cardiothoracic surgeons to meet its population needs, this changing patient profile combined with the need to deliver the 18-week wait patient target, provide 24-hour consultant led care at a time when the number of surgical trainees is being severely reduced, may in fact mean that additional consultant surgeons will be required in the future.

Additionally there are a total of 21 perfusionists equating to 19 WTE with 1 vacancy for this staff group across all tertiary centres in the NW London sector. During the data collection, it has been highlighted that there is a lack of nationally funded training for perfusionists and at present they need to be trained in-house (2 years training) by surgical centres. There may therefore be a need to develop an accredited training course for this staff group.

Consultant cardiologists

There are a total of 57 consultant cardiologists equating to 42.38 WTE across all tertiary centres and a total of 49 equating to 35.84 WTE consultant cardiologists across all DGHs in NW London which takes account of the DGH role provided by St Mary's and Hammersmith Hospitals. Within the total number of consultant cardiologists, in both secondary and tertiary care, there are 12 specialising in heart failure, 50 interventional, 10 non-interventional, 10 Echo, 7 Electrophysiology, 5 GUCH, 1 Syncope and 1 consultant specialising in diagnostics and OPD (please note some roles have dual functions e.g. an interventional cardiologist who may also specialise in Echo).

Secondary care

The British Cardiovascular Society recommends a total of 22.1 - 36.3 WTE pmp consultant cardiologists for secondary care. Based on these estimates the required WTE of consultant cardiologists in secondary care in NW London should equal 41.99 – 68.97. The total number at present equates to 35.84 WTE which suggests that there is a shortage of 6.15 WTE of consultant cardiologists across secondary care.

Tertiary care

The British Cardiovascular Society recommends a total of 15.7 – 27.2 WTE pmp consultant cardiologists for tertiary care. Based on these estimates the required WTE of consultant cardiologists within tertiary care in NW London should equal to 64.37 – 111.52 against the present total of 42.38 WTE. This would suggest that there is a deficit of 21.99 WTE of consultant cardiologists across tertiary care in NW London. However, this assumes a global tertiary care catchment area of 4.1 million and does not take account of variation at sub-speciality level. On this basis, the apparent deficit in numbers may be overestimated and should be viewed in an individual organisational and sub-speciality context.

The BCS has put forward sub-specialty workforce requirements which were used as a benchmark for data analysis of cardiac subspecialties. Due to lack of WTE data for subspecialties across NW London, the total head count has been used for comparison in this report. Therefore sub-speciality data analysis reflects only approximate present and future workforce requirements across NW London and it should be viewed as a guide only.

Intervention

It is recommended that for all interventional procedures, approximately 17 WTE pmp consultant cardiologists are required. Across NW London there are a total of 50 consultants specialising in intervention. Considering the populations from NW London and out of sector, it appears that at present there are a sufficient number of consultant interventionists in NW London.

In order to provide a 24 hours a day/ 7 days a week interventional service, including primary PCI, services would need to be provided with rotas formed on a minimum of 6 interventionists (preferably 10) to ensure sufficient cover for leave and EWTD requirements. To ensure cost effectiveness, it is appropriate to consider concentration of 24/7 primary PCI activity in designated centres where rotas can be developed to the required level (this is the model currently in place across NW London).

Electrophysiology (EP)

The incidence and prevalence of arrhythmias, and the potential need for invasive investigations, device implants and ablation services is not well documented at this stage.

However, in addition to performing specialist intervention, it is recommended that consultant cardiac-electro physiologists should be available for advice and consultation in pacemaker and device outpatient follow-up clinics.

Based on the BCS recommendation of 3 consultant cardiac electro-physiologists per centre, each required to spend 2 PAs per week performing specialised diagnosis and treatment excluding devices (BCS recommends 6 WTE pmp for devices) there would be a need for 9.3 WTE of EP consultants pmp. In NW London across secondary and tertiary care there are 7 cardiac-electro physiologists (assumed to equate to 7 WTE) consultants specialising in EP. Based on BCS report's estimates, it appears that NW London has a significant deficit of this staff group.

Adult Congenital Heart Disease

Improvements in treatment has resulted in the numbers of people with Adult Congenital Heart Disease (ACHD) rising over recent years and this increase is expected to continue in the future. Currently, it is estimated that there are 1500 people with ACHD and it is estimated that by 2020 there will be several thousands in NW London. It is likely that by 2008, a minimum of 1 cardiologist with specialist training in ACHD will be needed pmp. With the rapid increase in adult services of childhood surgery, it is likely that at least 1 cardiologist with some expertise in GUCH will be required in every cardiac service across all DGH sites. Implementing the recommended GUCH shared service model, will require the need for every secondary care hospital to provide a basic level of local care for these patients. The demand for such consultants, (there are very few at present), could exceed 120 nationally over the next 10 years. It is suggested that at the moment there is a need of 0.6 – 0.8 WTE of GUCH consultants pmp. This is expected to increase to 1.3 – 1.5 WTE of consultants by 2007 and to 2.3 – 2.5 WTE by 2014. There are currently 5 (assumed to equate to 5 WTE) consultants specialising in GUCH in NW London caring for the local population and beyond, which at this stage seems sufficient compared with the BCS recommendations. However by 2014 this number will have to double if NW London is to meet the needs of its immediate population and out of sector flows. In addition, the growth in the GUCH population and the implementation of the EWTD suggests that the sector will need more training places for doctors and cardiologists with expertise in ACHD.

Heart failure

For non interventional procedures it is recommended that each acute hospital has consultant cardiologists with a special interest in heart failure, who spend 2PAs directly leading the management of patients with heart failure, including both diagnostics and monitoring. The recommended WTE for heart failure consultants is 5.9 WTE pmp. At present there are 12 (assumed to equate to 12 WTE) consultants specialising in heart failure across NW London. Based on these estimates against the NW London population, it appears that at present there are a sufficient number of heart failure consultants.

Echo

The recommended number of consultants specialising in echo equates to 11 – 15 WTE of direct clinical care pmp. There are currently 10 (assumed to equate to 10 WTE) echo consultants in NW London; this number is significantly below BCS recommendations. There is a need to consider alternative models for the provision of this service such as technician-led Echo which would free up Echo Consultants time to treat more complex cases.

General outpatient cardiology

It seems likely that the number of patients referred to cardiologists in the UK will increase in the future due to increasing age, co-morbidities and complexity of drug and device therapy. Since the publication of the NSF for CHD in March 2000, new-patient referrals from general practitioners to cardiologists increased by approximately 50%. It is estimated that by 2010 there will be a need for 22 – 72 WTE cardiologists. However, new roles would enable some of this service provision to be delivered by clinicians other than Cardiologists such as Practitioners with Specialist Interests PwSI. Individual organisations with need to plan carefully across their local health economies an appropriate balance between community and acute cardiology care in order to develop an appropriate workforce.

General inpatient cardiology

In general inpatient cardiology it is recommended that consultant cardiologists should lead the clinical management of all patients with suspected acute primary cardiac conditions and staffing levels should allow a 24 hours a day/ 7 days a week consultant-led cardiology service. The recommended number of cardiologists required for inpatients now is 49 – 53 WTE consultants pmp. For future inpatient cardiology care, on average, there will be a

similar WTE number of consultants required, and it is estimated that it will fall within forecasted range of 32 – 61 WTE of consultant pmp.

Medical Trainees

There are a total of 88 specialist registrars (SPRs), including medical, staff grade and research, equating to 88 WTE across NW London sector. There has recently been a change in the training provision for SPRs. It has been acknowledged that training in the past has primarily focused on interventional cardiology and neglected other sub-speciality areas. This has been recognised by the Royal College of Physicians and necessary changes in the training provision have already been made. The provision of current training follows 6 lines of sub-specialities including intervention, imaging, heart failure, pacemakers/devices, adult congenital heart disease and electrophysiology. Although the sector is likely to address future service demands through this change, there is a high probability that it will experience some intermediate difficulties across certain sub-speciality areas, particularly EP, imaging and GUCH. Therefore, there is a need to work in partnership with the Deanery to match the number of trainee posts with the future workforce requirements. The role of the Regional Advisor will be crucial in supporting this partnership. Some organisations have identified issues around compliance with the EWTD for this staff group. It will be important for centres to work in partnership to develop a unified approach to implementation of the EWTD.

In summary, the current cardiac workforce data collected, compared with that recommended by the BCS workforce requirements, suggests that NW London Cardiac Network has sufficient numbers of interventional and heart failure cardiologists but a deficit of echo and electro-physiology consultants. Whilst there is presently sufficient numbers of GUCH consultants, this level will need to double by 2014 to meet future demands.

However it needs to be remembered that although this report takes a global view of the cardiac workforce across the Network, there are some significant variations noted at a Trust level and it is recommended that individual Trust's benchmark their existing workforce against the BCS recommendations to ensure appropriate numbers are being planned.

Nurses

There are a total of 697.97 WTE cardiac nurses ranging between Agenda For Change (AFC) bands 3 – 8c working in tertiary care across cath labs, general cardiac wards, CCU, ITU, theatres and surgery wards including specialist cardiac nurses, with 65.43 WTE vacant posts.

There are a total of 171.02 WTE cardiac nurses ranging between AFC bands 5-8a working in secondary care across cath labs, general cardiac wards and CCU, including specialist cardiac nurses, with 11.86 WTE vacant posts.

There are a total of 66 specialist cardiac nurses ranging between AFC bands 6-8a equating to 55.98 WTE with 6.01 WTE vacant posts across all NW London acute trusts. Within the total number of specialist cardiac nurses there are 3 consultant nurses equating to 2.5 WTE, 13 arrhythmias and chest pain nurses equating to 12.4 WTE with 2 WTE vacant posts, and 27 rehab nurses equating to 19.8 WTE with 2 WTE vacant posts. There are 15 heart failure specialist cardiac nurses equating to 14 WTE with 2 WTE vacant posts, 2 pulmonary hypertension specialist nurses equating to 1.8 WTE, 1 family hypercholesterolemia cascade testing nurse equating to 1 WTE, and 3 clinical cardiology nurses equating to 2.9 WTE with 0.1 WTE vacant posts.

The British Cardiovascular Society recommends a total of 74.4 – 93.4 WTE pmp of specialist cardiac clinicians, mainly nurses. Based on these estimates and population size in NW London, it appears that there is a significant deficit of specialist cardiac nurses across the sector. It is recommended a total of 28 – 47 WTE pmp specialist chest pain nurses. The established number in NW London is significantly lower than recommended and equates to only 12.4 WTE of both arrhythmia and chest pain nurses, which indicates 88% under staffing within this group. Similarly, recommended WTE for heart failure nurses equates to 16.7 WTE pmp compared to 14 WTE in NW London, which suggests that the number of heart failure nurses needs to double. For cardiac rehab nurses, 21 WTE pmp is recommended against current provision in NW London of 19.8 WTE for this staff group.

The data and recommended BCS estimates pmp clearly indicates a severe lack of arrhythmia and chest pain specialist cardiac nurses (88%) across NW London and an

almost 50% deficit of heart failure and rehab nurses for needs of the local population. These issues need to be prioritised and addressed as soon as possible. There is no GUCH nurse specialist within NW London. The trends in cardiac service provision suggest that demand for training and development of nurses specialising in GUCH will increase in the future. Exploratory discussions have taken place with a view to develop competencies for GUCH nurse specialists as part of the “Skills for Health Programme” (DH, May 2006)¹⁶, and when finalised, it will enable discussion regarding potential demands for training and development. It will be important to support learning through placement experience and development of an agreed framework across NW London will be needed.

During the data collection, a number of issues were identified by Trusts in relation to nursing staff.

- Due to the current financial constraints, a number of organisations have identified significant problems with maintaining sufficient numbers of rehabilitation staff to provide a safe and effective service. In some Trusts, patients are not receiving the full range of services. Such shortages are also having a ‘knock-on’ effect to referral flows to other organisations.
- A lack of specialist training around areas such as heart failure, stable angina and arrhythmia has been highlighted. In addition, a number of central London Trust’s have identified issues with the numbers of inexperienced staff working in specialist cardiac areas and the need for competency based ‘on the job’ training to support development. Some Trusts have identified a freeze on recruitment to key ‘clinical educator roles’ and an inability to release staff to attend formal training.
- A number of Trusts raised concerns around vacancy freezes and the lack of maternity leave cover due to financial constraints.
- Theatre nurses have been identified by some Trusts as a staff group requiring particular attention. This staff group is characterised by an ageing workforce and has been an area where international recruitment has been focused. Trusts have indicated that training for this staff group is not flexible to meet the service and developmental needs of individuals and this is an area requiring further exploration.

The Network will continue to work with organisations to support them in addressing some of these issues across the sector. It will also endeavour to encourage Trusts to take a proactive approach to new ways of working and in particular to enhance and expand the role of cardiac nurses in order to improve services through maximising patient focused care and clinical effectiveness.

There is a proposal to pilot an Advanced Cardiac Nurse Practitioner role in order to support the EWTD initiative as a way of preparing for the inevitable reduction in junior doctors' working hours. In other parts of London the development of the Advanced Cardiac Nurse Practitioner has prepared the way for nurse-led thrombolysis and cardioversion services (SE London Cardiac Network). Therefore, the Network will seek to explore these initiatives and spread the learning from good practice to benefit the sector as a whole.

Cardiac Physiologists

There are a total of 126 cardiac physiologists (CPs) ranging from AFC bands 5 – 8c equating to 118.05 WTE across all tertiary and DGHs in NW London with 17.6 WTE vacant posts for this staff group. Of the total number, there are 48 cardiac physiologists specialising in echo and a total of 26 trainees, (mostly on AFC band 5-6) equating to 25.4 WTE. Trainees frequently fill the posts of fully qualified cardiac physiologists due to difficulty in recruitment and retention of qualified staff.

The BCS recommends 53 – 87 WTE pmp of cardiac physiologists, this suggest that recommended number of CPs for NW London should equate to 217.3 – 356.7 WTE, compared to 118.05 WTE at present for a total of 4.1 million NW London's catchment population. The data indicates a significant deficit of CPs in NW London sector although variation at Trust level needs to be considered. This shortage could significantly impact upon key targets including the 18-week wait patient pathway. In addition, having only 24.47 WTE CPs in training suggests a need for taking immediate actions towards increasing the number of trainees coming through the system.

Difficulties in recruiting cardiac physiologists have been identified both locally and nationally. There is a shortage of cardiac physiologists due to the increased number of cath labs in DGHs and low numbers of trainees coming through the system together with a

growing demand for cardiac diagnostic services and a lack of echo-cardiographers. The London Cardiac Networks led a pan-London approach to tackling this problem and submitted a business case for funding to improve the recruitment and retention of this staff group through the recruitment of supernumerary trainees and facilitators for the whole of London. A number of issues were identified by Trusts with regard to this staff group; those requiring particular attention are included below.

- A shortage of cardiac physiologists (CP) across all Trusts with some Trusts attempting to fill the gaps by filling the posts of qualified CPs with trainees and others focusing on international recruitment. However, the use of international recruitment will not be sustainable due to the planned changes to CP registration which are due to take effect from 2008.
- The introduction of Agenda for Change has caused staff re-banding to be inconsistent in Trusts across NW London. This has resulted in low morale among staff and in some cases retention difficulties.
- The staffing shortages are impacting upon the ability of permanent teams to supervise and support trainees. It is also impacting upon the ability to release permanent staff for training and development activities.
- Drivers including the implementation of Chapter 8 of the NSF and delivery of the 18 week patient pathway will place significant pressure and workload on this group.

The Network has also been supportive of new ways of working and supported Guy's and St Thomas' NHS Foundation Trust, Royal Brompton and Harefield NHS Trust and St Mary's NHS Trust in the ongoing development of the Generic Cardiac Catheter Laboratory Practitioner role in conjunction with London South Bank University. Following the successful pilot the Network submitted pan-London business case requesting financial support for the implementation of this across London, which awaits a final decision.

Further, following a national cardiac workforce conference in May 2006, the Heart Improvement Programme has taken the lead in tackling the cardiac physiology issue nationally. The Network workforce lead and cardiac physiology representative from NW London have been taking an active part in these discussions.

Cardiac Radiographers

There are a total of 38.53 WTE radiographers working within cardiology with 7 WTE vacant posts across NW London tertiary and DGHs. Out of the total, there are 28.37 WTE working within cath labs with 3 WTE vacant posts. In addition there are 4 WTE working in cardiac MRI and 4 WTE working in nuclear medicine with 2 WTE vacant posts. Development of Radiographers will contribute to the changing workforce roles in particular within the cardiac catheter laboratories.

Summary of cardiac workforce establishment across secondary and tertiary care in NW London sector

As highlighted above, this data provides a global view of the cardiac workforce and does not indicate in detail variation at a Trust level. It is recommended that individual Trust's benchmark their existing workforce against the BCS recommendations. The data collected, benchmarked against the BCS recommendations on current and future cardiac workforce requirements suggest that at present the Network is characterised by:

- A sufficient number of cardiac/cardiothoracic surgeons at the present time although this may need to grow in the future.
- A deficit of Echo and Electro-physiology consultants with sufficient number of interventional and heart failure.
- The need to grow GUCH consultants at double existing rates by 2014.
- A need for working in partnership with the Deanery to match the number of trainee posts with the future workforce requirements, particularly across specialities such EP, Echo and GUCH.
- A severe lack of arrhythmia and chest pain specialist nurses and deficit of heart failure and cardiac rehab nurses.

- A severe lack of cardiac physiologists, despite recent efforts to address this on a pan-London basis.
- A shortage of cardiac radiographers.

2. 4 Future workforce plans

This section includes future workforce plans identified during data collection and face to face interviews with general managers and clinical teams working across acute Trusts in NW London.

Future workforce plans

Surgeons

- In December Royal Brompton Hospital (RBH) is planning to appoint 2 additional Consultant Cardiac/Transplant Surgeons. There will also be an appointment of 1 paediatric/ GUCH surgeon in the future.

Consultant Cardiologists

- St. Mary's, Northwick Park, West Middlesex and Royal Brompton Hospitals are all planning to extend their services and recruit electro-physiologists. In the case of RBH this is due to a planned service development and at Northwick Park to meet the new NSF chapter on arrhythmias.

Nurses

- St. Mary's cardiac surgical wards are currently well established following successful international recruitment. The cardiothoracic nurses rotate between the Fast Track Unit and the general cardiac surgical ward which has proved positive from a recruitment point of view and in terms of learning new skills. A similar approach to other cardiac areas is being considered by the management team.

- Northwick Park Hospital has plans to appoint 1 band 7 nurse to manage the cath lab.
- Across Harefield, RBH and Chelsea & Westminster Hospitals an increase in the nursing establishment is not being considered at present.
- Charing Cross Hospital is in the process of profiling the vacant Cardiac Rehabilitation and Heart Failure Nursing posts.

Cardiac Physiologists

- Northwick Park, Ealing and Chelsea & Westminster Hospitals are seeking authorisation to recruit echo technicians to meet the 18 week target.
- RBH are considering developing a 2 year training programme for cardiac physiologists who are already qualified to enable them to staff EP labs in the future. Other Trusts are investigating similar approaches.

Radiographers

- At St. Mary's Hospital work has been undertaken on shared competencies for radiographers.

PRIMARY CARE

2.5 Data

North West London Cardiac Network comprises 8 Primary Care Trusts (PCT) listed below:

- Harrow PCT
- Hillingdon PCT
- Brent PCT
- Ealing PCT
- Hounslow PCT
- Hammersmith & Fulham PCT
- Kensington & Chelsea PCT
- Westminster PCT

2.6 Summary of data

Tables 1 and 2 illustrate the existing cardiac workforce establishment in primary care spanning cardiac nurses, general practitioners (GPwSI) and practitioner (PwSI) with special interest in cardiology across the NW London Cardiac Network.

Table 1 Specialist cardiac nurses across NW London Cardiac Network

PCT										Total
		Harrow	Hounsl	Hilling	Ealing	Westmin	Brent	K & Ch	Hamm & Fulha	
Specialisation	Nurse Consultant									
Number		1	0	0	0	0	1	0	0	2
WTE		1	0	0	0	0	1	0	0	2
Vacancy		0	0	0	0	0	0	0	0	0
Specialisation	Arrhythmia Nurses									
Number		0	0	0	0	0	0	0	0	0
WTE		0	0	0	0	0	0	0	0	0
Vacancy		0	0	0	0	0	0	0	0	0
Specialisation	Chest Pain Nurses									
Number		0	0	0	0	0	0	0	0	0
WTE		0	0	0	0	0	0	0	0	0
Vacancy		0	0	0	0	0	0	0	0	0
Specialisation	Heart Failure Nurses									
Number		2**	0	1	0	0***	2**	1**	0	6
WTE		2	0	1	0	0	1	1	0	5
Vacancy		0	0	2	0	0	0	2	0	4
Specialisation	Rehab Nurses									
Number		0*	0	2**	0	2	6	0	0	10
WTE		0	0	2	0	1.4	4	0	0	7.4
Vacancy		0	0	0	0	0	2.5	0	0	2.5

* 2 Rehab nurses are on maternity leave and there is a freeze on staff recruitment

** BHF funded posts

*** Joint post with K&Ch PCT

The above tables illustrate current specialist cardiac nurses establishment across all PCTs in NW London. The information includes the total number of head count, WTE and vacancies.

Table 2 PwSI in cardiology across NW London Cardiac Network

PCTs	Harr	Houn	Hillin	Ealing	Westm	Brent	K & Ch	Hamm & Fulh	Total
Diagnosics and Clinical Assessment									
Number	4****	1	0	0	2	0	0	0	7
Clinics/ community p/w	2	**	0	0	4	0	0	0	6
Clinics/ hospital	3*	**	0	0	0	0	0	0	3
Services Heart failure									
Number	0	0	1	0	0	2	0	0	3
Clinics/ community p/w	0	0	3	0	0	2	0	0	5
Clinics/ hospital	0	0	3	0	0	0	0	0	3
Services Hypertension and shortness of breath									
Number	0	0	1	0	0	1***	0	0	2
Clinics/ community p/w	0	0	0	0	0	3	0	0	3
Clinics/ hospital	0	0	1	0	0	0	0	0	1
Services General Cardiology and RACPC									
Number	4 in training	0	1 in training	1	0	0	0	0	6
Clinics/ community p/w	**	0	**	0	0	0	0	0	**
Clinics/ hospital p/w	0	0	0	1	0	0	0	0	1

* Number of clinics per month

** Data unavailable

*** Community Consultant Cardiologist

**** 1 is PwSI

The above tables illustrate current PwSI establishment across all PCTs in NW London. The information includes the total number, speciality area and location from where the services are provided.

2.7 Data Analysis

This section includes detailed analysis of specialist cardiac nurse staffing and PwSI establishment in NW London together with an analysis of cardiac service provision in the community. It also incorporates the BCS predictions indicating the potential impact of changes in cardiac care upon the required workforce skill mix and needs.

Specialist cardiac nurses

In summary, the data collected indicates 2 WTE consultant nurses, one of which is also working as a PwSI, with 0 vacancies for this staff group. There are no arrhythmia/chest pain nurses employed by NW London PCTs. There are 6 heart failure nurses equating to 5 WTE with 4 vacant posts for this staff group. There are 10 cardiac rehab nurses equating to 7.4 WTE with 2.5 WTE vacant posts for this staff group.

PwSI in cardiology (mostly GPs)

In summary, the data collected indicates a total of 11 GPwSI, 1 PwSI and 5 GPs training to specialise as GPwSI, providing diagnostics, clinical assessment, heart failure, and hypertension, shortness of breath, general cardiology and rapid access chest pain clinics(RACPC) in the community. Uniquely, there is 1 community consultant cardiologist employed by Brent PCT who provides hypertension, shortness of breath and general cardiology service in the community.

Cardiac service provision by PCT

Harrow PCT employs 1 nurse consultant who is also qualified as a PwSI. There are 2 BHF funded heart failure nurses working full time. There are no arrhythmia or chest pain nurses funded by the PCT. At present rehab posts in the community are vacant due to maternity leave (1.5WTE) and cover has been attempted to be provided by other nurse specialists but this has impacted upon the ability to provide a full rehabilitation service. Additionally, there

are 3 GPwSI, running 2 clinics per week in the community and 3 clinics per month at the hospital, providing diagnostics and clinical assessment service for the local population. The PCT is also in the process of training 4 additional GPwSI to support further community development. There are plans to start a 'one-stop' shortness of breath clinic in January 2007 supported by BNP and Echocardiography with input from the GPwSI's, heart failure nurses and possibly 1 outreach Consultant Cardiologist session. Spirometry will also be available within the community.

Hounslow PCT there are no specialist cardiac nurses currently employed in the community. One GPwSI supports the hospital-based Echo service.

Hillingdon PCT employs 1 heart failure nurse working full time and there are 2 vacancies, funded via the BHF, for this staff group. There are no arrhythmia or chest pain nurses employed. There are 2 BHF funded rehab nurses work across Hillingdon PCT. Additionally, there are 3 GPwSI, 1 still in training providing heart failure, hypertension, general cardiology and RACPCs.

Ealing PCT does not employ specialist cardiac nurses. However, there is a prevention programme in place across the PCT, co-ordinated by Ealing Hospital with hospital nurses going into the community to see patients within individual GP surgeries for lifestyle screening and counselling. The chest pain service at the Hospital is supported by one GPwSI.

Westminster PCT employs 2 rehab nurses working 1.4 WTE - it is suggested that one could be developed as a nurse consultant in the future. There are no arrhythmia or chest pain nurses. Additionally there is 1 WTE BHF funded heart failure nurse, post joint with Kensington and Chelsea PCT, providing heart failure services across both PCTs. There are 2 GPwSI running 4 clinics per week in the community providing hypertension, shortness of breath, general cardiology and RACP clinics.

Brent PCT benefits from 1 nurse consultant, working across Brent who is employed by NWL Hospitals Trust. There are 2 heart failure nurses working part time each, 6 rehab nurses equating to 4 WTE and 2.5 WTE vacant posts for this staff group. Additionally, there

are 2 GPwSI providing heart failure, shortness of breath, hypertension and general cardiology services in the community. Uniquely, Brent also employs the community consultant cardiologist; this is joint appointment by Brent PCT and NWL NHS Trust, who runs 3 hypertension and general cardiology clinics in the community.

Kensington & Chelsea (K&C) PCT employs 1 WTE BHF funded heart failure nurses jointly with Westminster PCT and there are 2 vacant posts for this staff group. There are no arrhythmia, chest pain or rehab nurses in the community. Similarly no GPwSI are employed.

Hammersmith & Fulham PCT there are no cardiac nurses or GPwSI employed by the PCT.

2.8 Current primary care cardiac workforce establishment and future workforce requirements across NW London

A recently increased emphasis on community services driven by the white paper “Our health, our care, our say: a new direction for community services”¹⁰ guidance on introduction of a General Practitioner and Practitioner with special interests roles (The NHS Plan, 2000)¹² will lead to the provision of more specialised services in the community, enabling more patients to be managed near to their homes and freeing up services in secondary care. This suggests that the future cardiac workforce in the community will need to increase, for which Trusts should be planning and training now.

The BCS report does not provide recommendations for primary care workforce requirements, however it suggests that whilst many advances in cardiac care can be predicted to some extent, their impact on the required workforce skill mix are more difficult to accurately foresee, although it can be predicted that cardiac clinical work will be undertaken differently from the past. It is assumed that non-consultant cardiologists or GPwSI could see most of the patients attending RACPCs, routine follow-up clinics after patient’s event and/or intervention, and heart failure clinics. Patients will frequently be seen by non-medical staff such as cardiac specialist nurses, there is expectation of more “one-stop” clinics, for example people with heart murmurs attending clinics in Echo laboratories.

There will be a need for extra staff, extra training and/or current roles being re-designed, to provide new ways of working across acute and primary care, such as:

- PwSI in cardiology
- Nurse led RACPCs/chest pain nurses
- Nurse led risk factor & prevention clinics (primary and secondary prevention)
- Nurse/echocardiographer running heart failure diagnostics clinics
- Nurse led heart failure clinics
- Nurse Practitioner role

It is expected that new ways of working will result in improvement in the consistency and quality of care that patients receive. The new ways of working may reduce the demands on cardiologists, although non-medical staff will not be competent in all of the current duties of medical staff. Furthermore, new ways of working will not diminish the estimated requirements for cardiologists undertaking the assessment and clinical care of patients due to increasing disease prevalence. If these changes in medical working practice are to be successfully delivered, which is a concern within the cardiological community with regard to availability of additional nurses and other non-medical professional staff required, actions will need to be taken by all Trusts across NW London to enable cardiac care provision sufficient for the population needs.

Summary of cardiac workforce establishment across primary care in NW London sector

The data and BCS prediction on the forthcoming changes in the cardiac service delivery suggest that at present NW London sector is characterised by:

- No arrhythmia nurses in primary care
- 5 WTE of heart failure nurses
- 7.4 WTE of rehabilitation nurses
- 11 GPwSI, 1 PwSI, 5 GPs in training and community consultant cardiologist providing diagnostics, clinical assessment, heart failure, hypertension, shortness of breath, general cardiology and rapid access chest pain clinics in the community

The above data suggests that the number of staff providing cardiac services in the community is small in comparison with the population needs and anticipated future cardiac workforce drivers.

2.9 Future workforce plans and current issues

This section includes future workforce plans and current issues identified during data collection and face to face interviews with CHD leads and cardiology staff working across primary care.

Future workforce plans

3 out of the 8 PCTs have identified their workforce plans for 2006/07 to date and overall they include service expansion in the community, such as:

- Increasing the number of clinics run by the GPwSI
- Increasing nurse consultant service in primary care by increasing number of clinics run by nurses
- Recruiting additional heart failure and rehab nurses

The remaining 5 PCTs had not included cardiac in their workforce planning, therefore the Network will seek to address this in the future by providing tailored support and guidance, where necessary, on local workforce planning and development.

Current Workforce Issues

4 out of the 8 PCTs provided information on existing workforce issues including:

- Total freeze on staff recruitment due to current financial difficulties
- Lack of funding to cover training, maternity leave, sick leave etc.
- Insufficient numbers of staff effectively

- Resistance to change to new models of care delivery by both some community and acute Trust teams

Other staff investment

- Brent and Hillingdon PCTs have invested resources in implementing a Long Term Conditions care model to identify all patients with long term conditions within their communities and to offer them tailored support.
- It was also explored how the development of new roles, such as Community Matrons could support the existing workforce in the provision of cardiac services in the community. Although only in existence for 2 years, the role has proven to be invaluable in providing support to both staff and patients in ensuring that the patient's experience is improved. The role can
- Whilst the Community Matron role is not cardiac specific, such roles/teams have and will in the future support elements of cardiac care in the community including heart failure.

SECTION 3

Recommendations

Based on the information derived from the data analysis and the BCS recommendations on current and future cardiac workforce requirements, this section includes the summary of gaps identified in cardiac workforce specialities across NW London and it recommends a way forward across the Network to start to address some of these challenges.

3.1 Summary of gaps identified across cardiac workforce specialities in primary and secondary care in NW London.

- A deficit of 31.13 WTE consultant cardiac electro-physiologists and 35.1 WTE of Echo consultants.
- A requirement to double the number of GUCH consultants by 2014.
- A significant deficit of cardiac physiologists.
- 88% under-staffing of arrhythmia and chest pain nurses in acute/primary care.
- Almost 50% under-staffing of heart failure and cardiac rehab nurses in acute/primary care.
- 12 PwSI in cardiology working in primary care, mainly GPs, which seems a large number in comparison to the number of PwSI in other London's sectors. However, this is an area that will need to continue to substantially grow in order to meet "Our health, our care, our say: a new direction for community services"¹⁰ requirements.

In order to address these gaps a Workforce Planning Group, spanning PCTs and Hospital Trusts, needs to be established adopting a proactive approach to future workforce planning, including the elements of:

- **Workforce modernisation;** including developments around skill mix and skill escalation, role and service redesign, introduction of new, extended or enhanced roles, development of career pathways, development of competency-based skills (including Skills for Health), to enable organisations to progress in a direction that

meets workforce, service and individual needs. New ways of working continue to emerge from acute and community care and good practice examples of these from around the country which will be shared later in the report.

- **Retention measures;** including development and promotion of rotational programmes (both within Trusts and across organisations), secondment opportunities, increase in flexible working practices to maintain workforce capacity, flexible retirement schemes, roll-out of Improving Working Lives, etc.
- **Recruitment measures;** including development of recruitment and marketing campaigns across the Network and succession planning to attract new entrants, supported by flexible and modern working opportunities to ensure bringing more staff into the sector.
- **Education and lifelong learning;** including development of flexible carer pathways, improved staff access to NHS training schemes, pre-registration training and skills development to ensure that NHS remains an attractive employer. Development of local NW London training programmes to support specialist areas of cardiac care.
- **Implementation of a holistic whole system approach** to care delivery by developing roles which straddle acute and community care ensuring a seamless service to care delivery.

3.2 Examples of good practice and potential solutions to addressing gaps in cardiac workforce skills and specialities in NW London

Deficit of EP, Echo and GUCH Consultants

- A recommended way forward is ensuring ongoing dialogue and partnership working with the Deanery to match the number of trainee posts with the future workforce requirements, particularly across the above specialities. Initial discussions between the Network and the Specialist Training Committee Chairman have identified opportunity of joint working between the two organisations.

Deficit of Cardiac Physiologists

- London SHA and Trusts recommence expansion of cardiac physiology workforce via trainee recruitment and review historic funding model of training provision for this

staff group, to ensure long term workforce planning (with current training model there are no benefits before 2008). Long term workforce planning can be achieved by developing a realistic funding model between Trusts and the London SHA (the funding for 4 years 1 supernumerary post equates to almost £150K). The seriousness of the present situation needs to be recognised and immediate steps need to be taken otherwise there is a very real possibility that the 18 week wait target will not be met in NW London due to shortage of this key staff group.

- Considering development of a Network-wide training co-ordinator's role in order to centrally co-ordinate all CPs training, placements and support with clinical supervision across the sector. This approach has proved to be successful across other Networks including Essex and the Trent Cardiac Networks.
- Looking at Accelerated Training Programmes to address shortfalls and skills requirements. The British Heart Foundation have funded a 2 year project for an accelerated Echo training programme for science graduates to enable development of echo cardiographers across primary and acute care. Trusts across other Cardiac Networks provide in-house training in Echo to other health professionals, mostly nurses, to enhance their roles in order to reduce diagnostic waiting lists and improve utilisation of fully qualified cardiac physiologists.
- Maximising use of existing qualified staff by development of Assistant Practitioner roles at AFC band 4, which has been successfully implemented across the Essex Cardiac Network and South Manchester University Hospital NHS Trust among others. The role demonstrated benefits in cath and Echo labs and Pacemaker/ICD clinic including more efficient use of Cardiac Physiologist time and improved throughput through reduction in delays in-between patients (More information about the role, benefits and training details is available on request).
- Continuing the promotion of Accredited Cardiac Catheter Laboratory Practitioner Programme and facilitating new entrants to the system in order to grow the number of Generic Cath Lab Practitioners to maximise existing qualified staff resource and to

reduce delays and cancellations in the cath labs. (More information about the programme and benefits of the role can be obtained on request, the programme evaluation is due to be finalised in the near future).

- Looking at development of the Network-wide marketing strategy to promote the profession to school leavers to ensure new entrants to the system, this strategy proved to be successful across the Essex and Yorkshire Cardiac Networks.
- Performing capacity and demand exercises across all cardiac physiology departments to optimise use of skills and equipment and to eliminate constraints in a system.

Deficit of arrhythmia, chest pain, heart failure, cardiac rehab and GUCH nurses in the future

- Ensuring that the CHD nursing workforce continues to grow, skills' training is available, nurses are freed from their duties to attend the training and financial grants are secured in order to develop workforce capacity in the above areas.
- Looking at development of Network wide arrhythmia, chest pain, heart failure and rehab competencies and competency-based training to enhance and extend roles of generic and specialist cardiac nurses to enable nurse-led cardiac service provision in the future, particularly in primary care. Development of cardiac competences proved to be successful across the Essex and South East London Cardiac Networks in enhancing roles, development of carer pathways and development of competency-based training for nursing staff.
- Maximising existing qualified nursing staff resource by development of Assistant Nurse Practitioner role at AFC band 4. Evaluation of such roles has indicated positive impacts for patients including decreased length of stay, improved continuity of care and high patient satisfaction. For the individual evaluation has indicated rewarding clinical career providing opportunities to progress professionally and

personally. Overall, nursing and medical staff perceived working environments and team effectiveness to have improved.¹⁷

- Implementation of a holistic whole system approach to care delivery by developing roles which straddle acute and community care ensuring a seamless service to care delivery.

Cardiac Radiographers

- Developing the Generic Cath Lab Practitioner role further may support improving issues related to training, best utilisation of specialist skills, holiday/sickness/early closure of some cath labs due to lack of cardiac radiographers.

GPwSI and PwSI in cardiology

- Continuing the promotion and provision of the Certificate in Cardiovascular Medicine course for local GPs and specialist nurses to raise the level of care in the community and supporting attainment towards the Diploma practitioner course.
- Encouraging local GPs and specialist nurses to undertake an accredited 1 year PGDip in Cardiology offered by some universities, in order to grow the number of GPwSIs and PwSIs across the Network. This will require securing PCT funding for course places and back-fill of time, together with the mentorship from hospital teams,

3.3 Summary of next steps

To enable and support joint working between all PCTs and Hospital Trusts across NW London in addressing the network wide workforce challenges this paper proposes:

Development of a Cardiac Workforce Planning Group (CWPG)

- CWPG will provide a briefing to the Network Board and London SHA on issues related to cardiac care, in particular to the current and future supply of human resources for cardiac services.

- CWPG will make recommendations to the Network Board regarding future human resource management in cardiac care to lay the foundation for more formal cardiac human resource planning across NW London Network.
- CWPG will identify and prioritise the likely impact of new initiatives on acute and primary care services to enable proactive management of workforce changes.
- The workforce planning will take into account the sector's ability to recruit and retain the staff needed to deliver cardiac services and the availability of these professionals on the labour market to develop realistic and achievable workforce plans.
- CWPG will address education and training issues and link them with workforce planning.
- CWPG will investigate role re-design, competencies and new ways of working following successful implementation of new roles such as Pre-operative Specialist Practitioner, Specialist Surgical Practitioner and Generic Cath Lab practitioner across some of NW London Hospital Trusts.

Development of Cardiac Workforce Strategy

- CWPG in partnership with all key stakeholders will develop a network wide workforce strategy, based on recommendations included in this paper, to meet current and future workforce challenges.

Cardiac Workforce Strategy Implementation

- CWPG will support the development of working sub-groups representing cardiac workforce sub-specialities, particularly those where there is a deficit and/or lack of human resources needed if NW London is to provide cardiac services adequate to its population needs in the future.
- CWPG will take responsibility for the NW London Cardiac Network's strategy implementation.

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APPENDICES

Appendix A

PCT Workforce Questionnaire

Survey of NWL Cardiac Workforce 2006

NWL Cardiac Network is performing a scoping exercise to understand the current cardiac workforce, recruitment and retention. Once this is completed, it will be followed by a workforce strategy development, to ensure that NWL has the required staff, with required training and numbers to deliver local and national targets.

We are interested in a headcount and WTE of staff in post within your organisations, for the staff groups listed below. Please complete the data as of 31st January 2006.

1. Nurses

		Grade/Band	Number	WTE	vacancies
1.	Please specify the total number of community based specialist cardiac nurses you employ (Please include consultant nurses).				
2.	Of the above how many are (Please specify)				
	• Arrhythmia Nurses				
	• Rehab nurses				
	• Heart failure				
	• Other/Nurse consultant				

2. GPs with Special Interests in Cardiology

		Number	WTE	Number of sessions per week. Please specify where i.e. GP or hospital
1.	How many GPwSI in cardiology are employed by organisation?			
2.	What services do they provide? Please specify.			

	•			
	•			

9. Practitioners with Special Interests in Cardiology

		Number	WTE	Number of sessions per week. Please specify where i.e. GP or hospital
1.	How many PwSI in cardiology are employed by your organisation? Nurse consultant			
2.	What services do they provide? Please specify			
3.	How many vacancies for PwSI are there in your organisation?			

	Have you got future plans regarding cardiac workforce? Please specify.

	What are the issues around workforce in your organisation? Please specify ease specify.

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Thank you for completing the questionnaire.

Name.....

Contact details.....

Organisation

Appendix B

NHS Hospital Trusts Workforce Questionnaire

Survey of NWL Cardiac Workforce 2006

NWL Cardiac Network is performing a scoping exercise to understand the current cardiac workforce establishment, recruitment and retention. Once this is completed, it will be followed by a workforce strategy development, to ensure that NWL has the required staff, with required training and numbers to deliver local and national targets.

We are interested in a headcount and WTE of staff in post within your organisations, for the staff groups listed below. Please complete the data as of 31st January 2006.

1. Cardiac Surgeons

		Number	WTE/12PA	Vacancies
1.	Please specify total number of cardiac surgeons employed by your organisation (Please include visiting and academic appointments).			
2.	Of the above how many are visiting consultants?			
3.	Of the above how many are academic consultants?			
4.	Of the total number how many are:			
	• Paediatric			
	• GUCH			
	• Transplantation			
	• Perfusionists			
	• Pacing			

1a Cardio-thoracic Surgeons

		Number	WTE(12PA)	Vacancies
1.	Please specify total number of cardiothoracic surgeons employed by your organisation			
2.	Of the above how many are visiting consultants?			
3.	Of the above how many are academic consultants?			

2. Consultant Cardiologist

		Number	WTE	Vacancies
1.	Please specify the total number of cardiologists employed by your organisation (Please include university and academic appointments)			
2.	Of the above how many are visiting consultants			
3.	Of the above how many are academic consultants			
4.	Of the total number how many are:			
	• Heart Failure			
	• Interventional			
	• Non-Interventional			
	• EP			
	• Echo			
	• GUCH			
	• Other			

3. SPRs

		Number	WTE	Vacancies
1.	Please specify the total number of SPRs employed by your organisation.			
	How many of the above are:			
	• Medical			
	• Staff Grade			
	• Research			
2.	Please specify what services they provide: Medical: Research:			

4. Nursing (including specialist nurses)

		Grade/Band	Number	WTE	Vacancies
1.	Please specify total number of nurses employed in the cardiac unit.	B8c B8b			

		B8a B7			
2.	Please specify the total number of specialist cardiac nurses you employ.				
3.	Of the above how many are (Please specify):				
	• Nurse consultant				
	• CCU				
	• Cath lab				
	• Theatre				
	• ICU				
	• General Cardiac Ward				
	• Cardiac Surgery Ward				
	• Arrhythmia Nurses & Chest Pain				
	• Rehab nurses				
	• Heart failure				
	• Other:				

5. Cardiac Physiologists

		Grade/ Band	Number	WTE	Vacancies
1.	Please specify total number of cardiac physiologists employed by your organisation.	B8c B8b B8a B7 B6 B5			
3	How many of the above are echo technicians?				
4.	How many trainees are employed by your organisation?				

6. Radiographers

		Grade	Number (if applicable)	%WTE	Vacancies
1.	Please specify % of the WTE of radiographers working within cardiology (Please include annual leave and sickness cover)				

2.	Of the above how many people or % of WTE of work is done in:				
	• Cardiac Cath labs				
	• Cardiac MRI				
	• Nuclear medicine				
	• Cardiac CT				

	Have you got future plans regarding cardiac workforce? Please specify.

	What are the issues around workforce in your organisation? Please specify.

Name:.....
 Organisation:.....
 Contact details:

Please return the completed questionnaire to Joanna.Pisko@nhs.net