Coleg Nyrsio Brenhinol Cymru
Royal College of Nursing Wales

Inquiry into Workforce Planning in Health and Social Care
National Assembly for Wales
Health, Wellbeing & Local Government Committee
November 2007

Contents

Executive Summary – 12 Key Policy Actions

1. The RCN believes that the increase in overall nursing numbers is to be welcomed. However, this figure must be set against the decline in specialist community nursing numbers and the far lower rate of increase in the number of whole-time-equivalent registered nurses. The goal of the Welsh Assembly Government should be to build a sustainable nursing workforce.

2. The RCN believes that investment is needed to increase the numbers of and update the skills of the community nursing workforce.

3. The RCN believes that the Welsh Assembly Government should publish an annual Workforce Plan for the NHS. A transparent and inclusive Workforce Planning Framework, which has the capacity to generate this annual Plan, also needs to be established.

4. The RCN believes that a statutory responsibility should be laid upon NHS health organisations in Wales who directly provide patients services to establish a staffing system that provides the right number of registered nurses to ensure appropriate staffing levels for patient care.

5. The RCN believes that the workforce planning process should take account of the estimated ideal workforce need. This can be assessed both through local information from health organisations and information from national strategic policy.

6. The RCN believes that workforce planning capacity needs to be expanded both at the Welsh Assembly Government level and in NHS organisations across Wales.

7. The RCN believes that every newly qualified nurse should be guaranteed an offer of employment from NHS Wales and that an offer of support and mentorship similar to that offered by the Scottish Flying Start scheme should be considered.

8. The RCN believes that the Welsh Assembly Government, in conjunction with higher education institutions, should begin succession planning for the nurse educator workforce.

9. The RCN believes that the number of excess hours nurses are working should be monitored and targets should be established to reduce these. The working of unpaid and unrecognised excess hours should be stopped immediately.

10. The RCN believes that an annual analysis of the nursing workforce should be published by the Welsh Assembly Government showing nursing retention rates, turnover, retirement, agency and bank use and transfers (including cross border transfers) to other NHS and non-NHS employment.

11. The RCN believes that there should be a national strategy for the development of nursing and other healthcare provision in the Welsh language.

12. The RCN believes it essential to gather data about the nursing workforce in the independent sector. Accurate information on the number of healthcare support workers employed across the health and social care spectrum in Wales should also be available.

Section 1 - Introduction

1 The Royal College of Nursing is the world's largest professional union of nurses, representing over 390,000 nurses, midwives, specialist community public health nurses, health care support workers and nursing students, including over 22,600 members in Wales. The majority of RCN members work in the NHS, with around a quarter working in the independent sector.

2 The RCN works locally, nationally and internationally to promote standards of care and the interests of patients and nurses, and of nursing as a profession. The RCN is a UK-wide organisation, with its own National Boards for Wales, Scotland and Northern Ireland. The RCN is a major contributor to nursing practice, standards of care, and public policy as it affects health and nursing. The RCN represents nurses and nursing, promotes excellence in practice and shapes health policies.

3 RCN Wales is delighted to contribute to this timely and important review of workforce planning in health and social care. The 2006 education commissioning round was a significantly flawed process with a specific detrimental impact on the nursing profession (described in more detail later). 2007/8 is an interim year for workforce planning in health with a hopefully improved process beginning in 2008. However it is the belief of the Royal College of Nursing that further significant improvements in the areas of planning and the availability of meaningful data are required. In order for this achievement, adequate preparation must be made now.

4 The Royal College of Nursing has always endeavoured to constructively contribute to the development of national policy. To this end, an independent report on nurse workforce planning across the UK was commissioned by the RCN from Professor Buchan of Queen Margaret University, Edinburgh. This paper has been included as Section 7 of this paper and we would specifically commend the attention of the Committee to this Section.

5 References to other documents are provided as appropriate throughout this submission. However we would like to particularly mention Holding On: Nurses' Employment and Morale in 2007 J Ball and G Pike, Employment Research Ltd (RCN Wales & Employment Research Ltd July 2007) which provides a great deal of available data on the UK nursing workforce and has been drawn on extensively in this submission. A top-up sample from Welsh members also means that country specific analysis has been possible.

Section Two – Principles of Effective Workforce Planning

Principles for effective workforce planning
1. The main functions/stakeholders (e.g. finance, service planners, education providers, public/private sector employers) are committed to and involved in the planning process, with clear lines of responsibility and accountability being defined.
2. Build from a structured information base on current staffing, staff budgets and relevant activity whether planning for a ward, organisation, region or country.
3. Assess workforce dynamics and "flows" between sectors and organisations within the system being planned for – assessing sources of supply and turnover.
4. Develop an overview analysis to identify need for, and scope for, change.
5. Develop and agree a set of planning parameters linking workforce and activity data.
6. Use "what if" analysis to model different scenarios of demand for services, and related staffing profile.
7. Develop an agreed workforce national plan which aggregates local/ regional plans.
8. Establish a framework to monitor staffing changes in comparison to the plan – develop a cycle of review and update.

From Buchan, Nurse Workforce Planning in the UK

6 The Royal College of Nursing believes that far greater transparency is needed in the workforce planning process. In 2006 despite membership of the NHS Partnership Forum and indeed a seat on the Workforce Development Commissioning Board, RCN Wales, alongside other trade unions, encountered great difficulty in acquiring key recommendations and proposal papers in a timely fashion and ultimately was obliged to rely on a Freedom of Information Request to obtain a full account of the process[1].

7 There was also specific difficulty in separating out and separately attributing the advice of the various stakeholders within the service such as education organisations, NHS Trusts and LHB's, professional nursing advice from the office of the Chief Nursing Officer and financial advice.

8 The RCN believes that transparency should be a fundamental principle of the new process. Furthermore all stakeholder contributions should be clearly identified. There needs to be a clear space for both professional and trade union recommendations to be made and for the involvement of the NHS Partnership Forum.

9 It is also crucial that the final decisions are clearly owned by the Welsh Assembly Government with effective scrutiny being provided by the National Assembly for Wales

10 The RCN believes that the Welsh Assembly Government should publish an annual Workforce Plan for the NHS. A transparent and inclusive Workforce Planning Framework which has the capacity to generate this annual Plan also needs to be established.

11 The RCN believes that a statutory responsibility should be laid on NHS health organisations in Wales who directly provide patients services to

[1] FOI Request of Welsh Assembly Government reference 1937

establish a staffing system that provides the right number of registered nurses to ensure appropriate staffing levels for patient care.

12 The purpose of this statutory mechanism would be to galvanise local organisations into effective workforce planning, to increase their capacity to do so and ultimately to ensure that local workforce planning ceases to be merely a reflection of historic patterns and financial resourcing and instead is a reflection of nursing and health need.

13 Rather than establishing a specific numeric ratio, the legislation would require the establishment of a system that ensures the number of qualified nurses on each shift and in each unit provides appropriate staffing levels for patient care.

14 At a local level, staffing levels would not only take into account the number of patients, but also look at other important staffing considerations, such as the experience level of nurses on the unit, the skill-mix of staff, the severity of patients' conditions, the availability of support services and resources as well as local geography. In the longer term, local agreements would be flexible enough to take account of changing treatments and technologies. Staff would also be involved in determining the staffing levels set for their working environment to ensure that their professional judgement is central to the decision making process.

15 In Scotland in 2004, the RCN successfully campaigned for an amendment to the NHS Reform Act which laid a requirement for workforce planning on Health Boards[2].

16 Legislation has also been introduced in Victoria, Australia and California, USA. Victoria implemented mandatory ratios in 2001 for all public sector facilities. California passed legislation in 1999 and this was implemented in January 2004.

17 Similar legislation has been promoted by the American Nurses Associations, the New Zealand Nursing Organisation and the Irish Nurses Organisation.

[2] please see www.rcn.org.uk/scotland for more information

Section 4 – Shaping Effective Workforce Planning Policy

[18] The most important influence on the workforce planning process of the health service should be the health need of the people.

[19] Unfortunately there has been no substantive effort to achieve this at either a national or local level. National Service Frameworks or other strategic documents published by the Welsh Assembly Government consistently fail to assess either ideal or real levels of workforce provision. The information from NHS Trusts and Local Health Boards provided to the Workforce Development Unit at NLIAH is a reflection of historic employment patterns and financial resourcing/affordability.

[20] An investigation should be made into the long-term possibility of using the electronic patient record to assess current service demand and model future demand. The work currently being undertaken in Gwent by the Informing Healthcare project will be essential in this investigation.

[21] However, a new insistence from the Welsh Assembly Government for health organisations to make an assessment of the likely health need of their future population and feed this into the workforce process would be helpful. This should be alongside a new requirement for national health and health service polices to take account of workforce requirements. Setting a goal for service provision is of course not the same thing as making a commitment to provide for that goal. However the very act of determining the national goal will ensure that the Government can make informed decisions on priorities and also realistic target-setting.

[22] Following on from this point is that there must be a mechanism to allow national policy to feed into workforce planning. While currently short-term factors (such as the need for therapy radiographers to utilise the new linear accelerators[3]) are feeding into this process it is clear that high level strategy is not. The most blatant example of this is the failure of the 2006 education commissioning round to take account of the need for community nursing. This example is discussed further in section 5.1.

[23] Integration with financial and service planning at both the local and national level is vital. This leads on to the equally important consideration of the timescale of workforce planning. Where as it is thankfully becoming commonplace for the NHS to plan on a 3 to 5 year basis both financially and in service provision, NHS workforce planning is an annual process. This makes very little sense indeed given that it takes 3 years for a nurse to graduate and register. This short-term approach causes sharp fluctuations[4] in the numbers of graduate nurses looking for employment which may have an unexpected and undesirable impact on local service provision.

[3] referenced in evidence to the Committee from NLIAH 17th October 2007
[4] see figure 2 of Nurse Workforce Planning in the UK (Section 7 of this submission)

[24] The short-term annual approach to education commissioning is also problematic. The central funding is allocated extremely late in the annual budget process. Mr Griffiths, the joint interim Director of the Workforce Development Unit commented on this point to the Committee:

> I did not include in our submission a number of key messages that I want to give you today. That is one of them. The commissioning is currently done on an annual basis... That causes massive problems for higher education institutions when we are contracting on an annual basis, because the HEIs cannot turn their education provision on and off quickly. If we wanted to increase rapidly the number in a certain staff group, they would have to have the tutors, staff, and infrastructure in place to support and deliver that. If we are telling them in March that we want a massive increase for September, it is too late for them to recruit sufficient students to placements… One of the key messages that I would like to convey today is that we need to consider how we can put in place a three to five-year cycle for workforce planning commissioning from a financial point of view.[5]

[25] The late timing of this workforce planning cycle does cause difficulties for the education providers. There is some anecdotal evidence to suggest that the late confirmation of places may be causing Welsh applicants to seek a place in England. However this in turn may be causing a late movement of English students into Welsh places. We do know that there is still high demand for places with 6 applicants for each place. The Wales Audit Office report of 2001[6] identified good practice in Wales particularly with the low student attrition rate of 3.1% per year.

[26] Sharp fluctuations in the number of commissioned education places also affect nursing lecturer posts in universities. The nurse educator stands between the fields of higher education and clinical practice and it takes between 10 and 12 years of practice to take up such a post. In the next 5/10 years 50% of nurse educators are due to retire.

[27] The question of graduate employment must also be considered. However this has been brought sharply to the attention of democratic policy makers in the last year with UK difficulties for junior medical doctors in finding placements and the apparent 'excess' number of Welsh physiotherapists (despite the clear patient need for these professionals).

[28] The last few years have also seen some difficulty particularly in North Wales for nursing graduates in finding jobs. The RCN believes that it is important that publicly funded nursing students are offered a post in the NHS in Wales. One of the most important factors in educating nursing students is that 50% of the course takes places in clinical placements. Finding and supporting these clinical placements across Wales can be difficult and can lead to an understandable desire on the part of the student to take up a position in the hospital they were trained in.

[5] transcript of 17th October 2007

[6] Educating and Training the Future Health Professional Workforce for Wales (Wales Audit Office: March 2001)

[29] In England a 'Talent Pool' scheme gives preferential treatment to graduates who have trained in a particular locality being employed there. However there are some difficulties with this approach, graduates may wish to return to their 'home town' and graduates originally from Wales who have qualified elsewhere in the UK may also wish to return. It is also limited in its influence to a local area.

[30] In Scotland an initiative to guarantee nursing graduates NHS employment is running with the support of the RCN, RCM and Unison. Unemployed graduates register centrally and are sent information on nationally available vacancies. Moreover newly employed nursing graduates with the help of the Flying Start initiative are offered support and mentorship. The RCN would recommend that this scheme is examined for applicability and a similar initiative and guarantee is offered in Wales.

[31] Finally, it is necessary to consider what capacity there is in Wales for workforce planning. In evidence to the Committee,[7] Mr Griffiths, the joint interim Director of the Workforce Development Unit stated, in response to a question from the Chair, that of the 9 staff employed by the workforce development unit only 1 had a background in workforce planning. It is highly unlikely that large or indeed adequate numbers of workforce planners are employed at the NHS Trust or Local Health Board level. A national approach to training and recruiting this skill set is clearly needed and should be addressed by the National Agency for Leadership and Innovation in Healthcare within which the workforce development unit is based.

[7] transcript of the 17th October 2007

Section 5 – Measuring the Nursing Need

Since 1999 numbers of NHS nurses have risen by 39.8%
Since 1999 number of registered NHS nurses have risen by 40.0%
Since 1999 numbers of wte NHS nurses have risen by 16.0%
Since 1999 numbers of wte registered NHS nurses have risen by 19.8%

Since 2003 numbers of NHS nurses have risen by 15.7%
Since 2003 number of registered NHS nurses have risen by 17.9%
Since 2003 numbers of wte NHS nurses have risen by 4.51%
Since 2003 numbers of wte registered NHS nurses have risen by 7.29%

[32] There has been welcome growth in nurse staffing levels over recent years in Wales. The whole-time equivalent figure for registered nurses employed by the NHS in 2006 is 21,042 which represents an increase of 19.8%[8] since 1999.

[33] It should be pointed out that the Welsh Assembly Government (and many other holders of official statistics) often does not distinguish clearly between registered nurses and nursing students or healthcare support workers (who are indeed part of the nursing family). The term "nurse" is in fact protected by law and refers to a professional registered with the National Midwifery Council. The impact of this distinction can be noted in the table below:

Table 1: NHS Nursing Numbers [9]

	1999	2000	2001	2002	2003	2004	2005	2006
No.	32804	35169	35521	37378	39633	41675	43215	45844
r/q	22818	24221	24577	25958	27108	28668	29527	31952
Wte.	24054	24314	24751	25506	26697	27407	28152	27901
r/q	17560	17756	18190	18876	19612	20272	20802	21042

[34] This growth in staffing levels can however serve to obscure the real situation. Section 5 of this submission attempts in the absence of a readily available formula to simply asses across Wales ***What is the nursing need?***

[35] There has been no national attempt to calculate this nursing need[10] and it is important to appreciate that the reported vacancy rate of nurses in the NHS in Wales is NOT a measurement of the number of nurses needed to fulfil the current workload. There has not yet been a national workload measurement evaluation of the skill mix of qualified nurse to patient dependency.

[8] Statistical Release 67/2007 Statistics Wales
[9] Statistical Release 67/2007 Statistics Wales
[10] This is further discussed in Section 4 para.s 18-21 of this document

5.1 Community Nursing

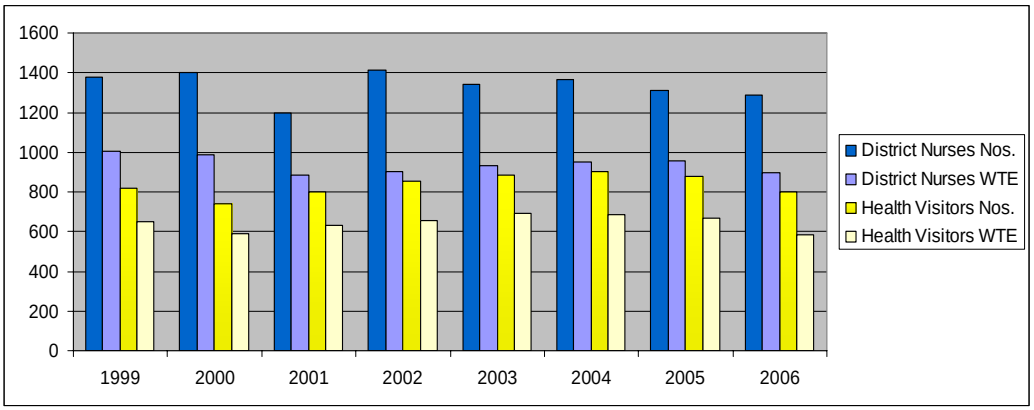
[36] Designed for Life outlined the 'world class' health and social care services that Wales should enjoy by 2015. Considerable change is envisaged to ensure that services will be provided to people within their own homes or as close to their own homes as possible.[11] This vision of health care in the community was and still is supported by the Royal College of Nursing. However it is not possible to achieve this without substantial investment in the nursing workforce in community and primary care. [12]

[37] This shift of focus from the acute hospital to the community requires a corresponding focus on the staff that will provide this care. It is important to stress that a nurse cannot simply be moved from an acute hospital setting to the community without preparation. The levels and scope of practice are entirely different.

[38] Since 1999 there has been a decline in the number of district nurses and specialist community public health nurses (known as health visitors) by 5.14% and a decline of whole-time equivalent numbers by 10.5%. The number of whole-time equivalent district and specialist public health community nurses in Wales in 2006 was 1,479 which compares to the 1,652 available in 1999[13].

[39] District and community nursing staff are under pressure across Wales with current services being very limited and lacking in the infrastructure to support service delivery. Securing sufficient district and community nurse training places should be a priority.

Table 2: Numbers of District Nurses and Health Visitors



[40] Yet despite this, in April 2007 the last Welsh Assembly Government cut the numbers of commissioned community nursing training places by 17%.

[11] Designed for Life (2005) Welsh Assembly Government
[12] For more information please see RCN Wales Brief Primary Care July 2007 and RCN Wales Brief Community Care October 2007
[13] Statistical Release 67/2007 Statistics Wales

41 It should be stressed that although health visitors and district nurses are community nurses many other nursing disciplines form part of this community. Practice nurses and nurse practitioners are good examples of this. A 'practice nurse' is a nurse employed in primary care usually by a GP and based in the surgery. A nurse practitioner is an advanced primary care specialist and independent prescriber. It is patently ridiculous that the Welsh Assembly Government does not hold accurate and contemporary data on these nursing numbers considering the sheer scope of primary care services delivered by these groups.[14]

42 Occupational health nurses and learning disability nurses are two further examples of the community nursing workforce. Community Psychiatric nursing is a specific area in which we know shortages exist (particularly in child and adolescent community mental health nursing).

43 School health nursing has the potential to contribute enormously to community health and figures for this group will have to rise very sharply indeed if the Welsh Assembly Government is to meet its own target of one such nurse per secondary school.

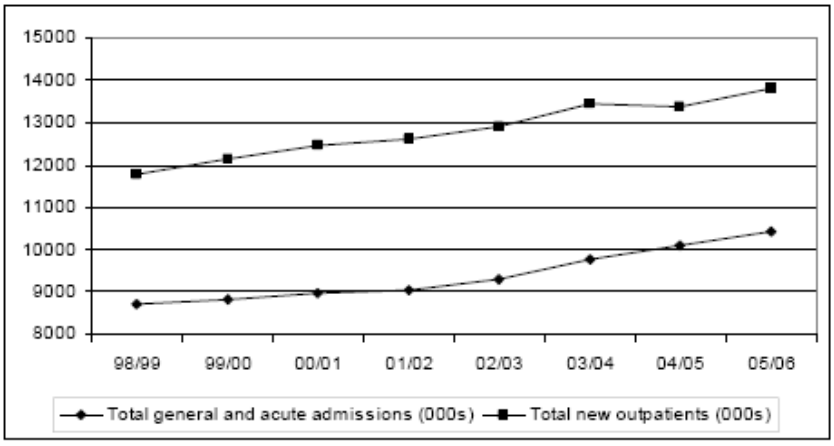
44 There has been recent discussion within the Welsh Assembly Government and the nursing profession in Wales of whether the time is right for changes to community nursing. The term 'family nurse' (of which a model was introduced in Scotland) has been used. The current Scottish initiative for generalist community nurses has also been discussed alongside discussion of modernisation of the community nursing curriculum. A comprehensive review of community nursing has been promised by the Welsh Assembly Government by December 2007.

45 The Royal College of Nursing is by no means averse to these discussions. Nursing as a profession must continuously develop and strive to deliver more effective patient care. However it must be understood that patient need will not disappear whilst these important deliberations are undertaken. There are severe service gaps and pressures facing the community nursing service today. If patients are to receive safe and effective care in the community then community nursing numbers must rise, and consideration be given to the many ways in which education and training can be delivered to modern professionals within their working life.

[14] The absence of this data is also commented on by the workforce development unit in their evidence to the Committee on the 17th October 2007

5.2 Workload & Appropriate Staffing

Table 3: Hospital activity trends 1998/9 – 2005/6



Source: Employment Research/RCN 2007

46 While staffing growth targets have been the focus of policy attention the objective of increasing the number of NHS nurses is to improve the provision of care to patients. The relationship between high nursing numbers and good patient care appears at one level to be self evident but examining this relationship and providing evidence has been an important goal for the nursing profession.

47 There is a growing evidence base on the links between low staffing levels in nursing and a range of negative care outcomes. These include: increased mortality rates; adverse events after surgery; increased incidence of violence against staff; increased accident rates and patient injuries; increased cross-infection rates; and higher rates of pneumonia, upper gastrointestinal bleeding, shock/cardiac arrest, and urinary tract infections.[15]

48 In October 2006 Professor Anne Rafferty published a major new study in patient-nursing ratios[16]. The independent study – the first of its kind in the UK – mirrored the findings of US research by establishing a direct link

[15] Hartz A, Krakauer H, Kuhn E et al (1989) Hospital Characteristics and mortality rates, New England Journal of Medicine, 321,1720-1725.
Kovner C, Gergen J (1998) Nurse staffing levels and adverse events following surgery in US hospitals, Image: Journal of Nursing Scholarship, 30, 315-321.
Australian Resource Centre for Hospital Innovations (2003)
Safe staffing and patient safety literature review, Waratah, Australia: ARCHI.
Fridkin S, Pear S, Williamson T et al (1996) The role of understaffing in central venous catheter associated bloodstream infections, Control and Hospital Epidemiology, 17 (3) 150-158.
Stanton M (2004) Hospital nurse staffing and quality of care, Research into Action, issue14, Agency for Health Research and Quality, USA.

[16] Outcomes of variation in hospital nurse staffing English hospitals: Cross-sectional analysis of survey data and discharge records on Monday. International Journal of Health Care Management, October 2006.

between the number of nurses working on wards and patients' chances of recovery and survival.

49 For her research, Professor Anne Marie Rafferty surveyed nearly four thousand nurses and looked at 118,752 patient episodes of care in 30 hospital trusts in England. She found that wards with lower nurse to patient ratios had a 26% higher patient mortality rate. Conversely, hospitals where the number of nurses per patient is greater experience significantly lower surgical mortality rates. Professor Rafferty concluded that had there been more nurses on the wards, 246 lives could have been saved.

50 Prof Rafferty's other major finding was that nurses in the hospitals with the heaviest workloads are between 71% and 92% more likely to experience burn out. They are also more likely to report low or deteriorating quality of care on their wards and hospitals.

51 Prof Rafferty's research endorsed an independent review by the London School of Hygiene and Tropical Medicine of the impact of registered nurses on patient outcomes. The review, commissioned by the RCN in 2004, concluded higher numbers of registered nurses and a higher proportion of registered nurses in the nursing workforce help reduce patient mortality, infection rates, patient falls, the incidence of pressure sores and mistakes administering medication.

52 In September 2006 the RCN published a guidance document[17] on the principles that should underpin appropriate nurse staffing levels and the components of nurse staffing reviews in acute wards. Given that skill mix ratios within the staffing establishment for general NHS wards have remained at an average of between 62% to 68% registered nurses and 38% to 32% health care assistants over the last 5 years, whilst patient acuity and bed occupancy have all increased, the document calls for a benchmark ward staffing establishment skill mix ratio of 65% registered nurses: 35% health care assistants - unless or until a thorough review of ward staffing levels has been undertaken in accordance with our principles.

[17] Setting Appropriate Ward Nurse Staffing Levels in NHS Acute Trusts RCN: September 2006

Table 4 - Average staffing and patient data (UK) – NHS wards 2007

	NHS wards 2007	
	Day	Night
Number of beds	22.5	22.7
Total number of patients	22	22
Occupancy	96%	100%
Number of registered nurses	3.6	2.8
Number of HCAs/auxiliaries	1.9	1.2
Total staff on duty (RNs + HCAs)	5.6	4.0
RNs as % of all nursing staff	66%	70%
Patients per registered nurses (mean across all RNs)	6.9	9.1
Patients per member of nursing staff (mean across total staff)	4.2	5.7
Number of cases	*805*	*380*

Source: Employment Research/RCN 2007

[53] The average ratio of patients to nursing staff in Wales is 6.3. The area with poorest staffing is older people's nursing where the average number of patients per RN is 10.1 (as opposed to 7.6 across all specialities), and registered nurses make up just 51% of the nursing workforce.

[54] Mental health has a similarly dilute skill mix, with RNs accounting for 53% of the staff on duty.

[55] At the opposite end of the spectrum, in general paediatric wards RNs make up 85% of the nursing staff on duty, and typically have a ratio of 4.4 patients per registered nurse.

Table 5 - Average staffing and patient data (UK) – NHS wards by specialty (all shifts)

	Older People	Mental health	Adult general	Paediatric general	All specialties
Number of beds	24	17	25	18	23
Total number of patients	23	16	25	16	22
Occupancy	97%	92%	105%	87%	97%
Number of registered nurses	2.6	2.4	3.5	3.9	3.4
Number of HCAs/auxiliaries	2.6	2.1	1.8	0.7	1.7
Total staff on duty (RNs + HCAs)	5.2	4.5	5.3	4.6	5.1
RNs as % of all nursing staff	51%	53%	67%	85%	67%
Patients per registered nurses (mean across all RNs)	10.1	9.1	8.2	4.4	7.6
Patients per member of nursing staff (mean across total staff)	4.8	4.2	5.3	3.7	4.7
Number of cases	*92*	*95*	*531*	*127*	*1179*

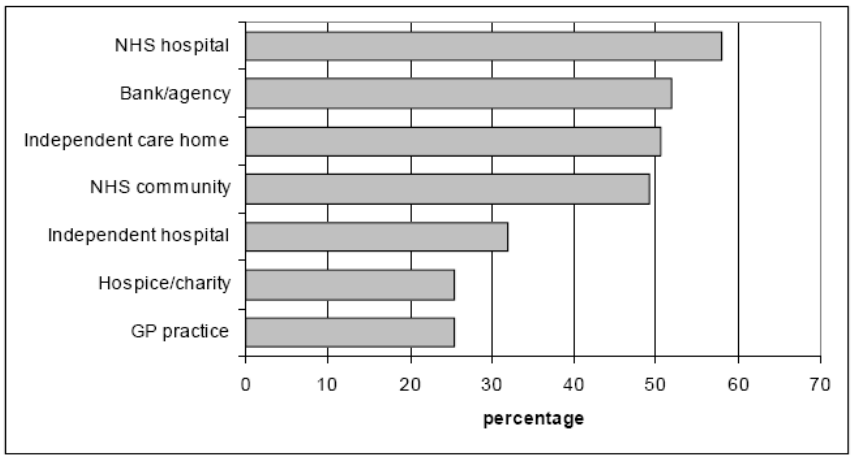
Source: Employment Research/RCN 2007

[56] 47% of nurses surveyed by the RCN in Wales say that there is not sufficient staff to provide a good standard of care and 26% of nurses in Wales say care is compromised on most shifts. 56% of all nurses say they feel under too much pressure at work and 59% say their workload is too heavy.

[57] In community settings, 59% of health visitors and 49% of district nurses say they cannot provide the level of care they would like.

[58] Comparing results by specialty in the NHS shows areas of the NHS where responses to this statement are more negative such as older people's nursing (63%) and mental health (60%) – both areas that have the highest numbers of patients per RN.

Table 6 - I am too busy to provide the level of care I would like (percentage agree - UK)



Source: Employment Research/RCN 2007

[59] A link exists between the patient to RN ratio and views of workload. Looking at nurses working in NHS hospital wards specifically, an average of 7.3 patients per RN exists on wards where nurses agree that the quality of care provided is good, compared with 8.3 patients per RN on wards where nurses feel that the quality of care provided is not good.

[60] Similarly, among NHS hospital nurses, respondents who say they are too busy to provide the level of care they would like have an average of 6.9 patients per nurse whilst the group who say they are NOT too busy to provide the level of care they would like have just 5.2 patients per nurse on average.

5.3 Working Hours

61 The proportion of respondents to the annual employment survey of the RCN indicating that they worked more than their contracted hours in their last full working week is 58%. Four in ten of all respondents (44%) say that they work in excess of their contracted hours several times per week (34%) or every shift (10%).

62 39% of nurses in Wales worked more than their contracted hours several times a week and 18% reported working excess hours at least once a week.

63 6% of nurses in Wales are paid for their excess hours at a lower rate of pay than their normal wage (compared to a UK average of 1%) and a further 6% receive neither pay nor time off in lieu (compared with a UK average of 2%).

64 Across all full time respondents the average total number of hours worked in the previous week is approximately 44, while for part-time respondents it is 29 hours.

65 Research in the USA has found that the risks of nursing staff making errors was significantly increased when shifts were longer than 12 hours, when nurses worked overtime, and when nurses worked more than 40 hours per week.[18] This is a significant health and safety issue for patients.

66 Respondents were asked to indicate whether or not their employer monitors the total number of hours they work (including bank/overtime); 61% said yes their employer does monitor their total hours,19% thought they did not and 21% said they did not know.

[18] Rodgers A, Hwang W, Scott L, Aiken L, Dinges, D (2004) The working hours of hospital staff nurses and patient safety, Health Affairs, 23 (4) 202-212.

5.4 Bank and Agency Nursing

67 In January 2007, all NHS Trusts in Wales were required to use the All Wales Temporary Agency Nurse Staffing Contract. This development, alongside an increase in nursing posts, has sharply reduced spending on agency nursing in Wales as can be seen from the figures below.

Table 7: NHS Wales Expenditure on Agency Nursing[19]

Financial Year	Expenditure in £,000000
2003/2004	21.4
2004/2005	23.7
2005/2006	19.8
2007/2008	12.1

68 Of particular concern to the Royal College of Nursing is that much of this agency spend appears to be on continuing care which reemphasises the chronic pressure on community nursing described in Section 5.1

69 Expenditure or even usage figures on bank nursing across Wales (that is temporary nursing supplied by the NHS rather than a private company) are not monitored by the Welsh Assembly Government, although some work is currently being undertaken to standardise definitions across Wales. Figures from the Healthcare Financial Management Association Wales Report 2005 show expenditure on bank nursing at £30m per annum in 2004/2005.

70 The significance of this data lies beyond ensuring good financial management, as important as that is. Currently no work is undertaken by the Welsh Assembly Government to estimate the need for nursing numbers based on health need or indeed actual workload activity. In the absence of these measures expenditure and usage rates for Bank and Agency Nursing represent a proxy measure of nursing need in addition to the posts and hours filled by directly employed nurses.

[19] Source: Welsh Assembly Government

5.5 Nursing & the Welsh Language

[71] The Royal College of Nursing believes that it is important to ensure that people in Wales can receive NHS care through the medium of the Welsh language. The study Welsh in the Health Service clearly identified how the inability of the service and professionals to communicate in Welsh adversely affected patient care. The study concluded: *"Very few health care institutions have effective systems to identify and record patients language choice and to pass that information on. Even fewer actually take steps to act on the basis of any such information after obtaining it."* We agree with the recommendation of this study that *"In order to avoid the present skills wastage, bilingualism and the ability to speak Welsh must be acknowledged as valuable professional skills in the field of health care."* [20]

[72] The Welsh Board's Review of the Welsh Language on the NHS Trusts 2006 recommended*: "All Trusts should adopt a Linguistic Skills Strategy in order to plan their workforce for the provision of Welsh language services."*[21]

[73] The excellent work of the NHS Wales Welsh Language Unit must be safeguarded and developed. The Welsh Language in Healthcare Awards promotes and celebrates the achievements of healthcare staff in this area. The Unit (in conjunction with others such as University of Wales, Bangor) has helped to develop technological lexicons, promoted awards for an increase in Welsh language use and provided invaluable research in understanding how different professions such as nurses, managers and doctors all have different attitudes to the use of Welsh in the NHS.

[74] Another important area of development is in the pre-registration training nursing. The Report of a Study of Welsh Language Awareness in Healthcare Provision in Wales recommended that: *"Higher education institutions be encouraged to enhance Welsh language awareness amongst healthcare students"* and that *"Higher education institutions to consider developing their provision of Welsh language awareness programmes within all pre-qualifying healthcare professional courses."* It also went on to recommend that: *"Healthcare organisations be encouraged to consider their future needs for appropriately qualified healthcare professionals with the required levels of Welsh language proficiency."*[22]

[75] All patients should be able to receive care through the medium of the Welsh language if they so choose. Currently the most vulnerable patients (such as young children, the elderly or mentally ill) are sometimes faced with great difficulties because of the inability of NHS Wales to respond to their needs.

[20] Welsh in the Health Service (2000) A. Misell: Welsh Consumer Council p.75/76
[21] Review of the Welsh Language in the NHS Trusts 2006 Welsh Language Board
[22] Report of a Study of Welsh Language Awareness in Healthcare Provision in Wales (2004) G. Roberts et al: University of Wales Bangor p.52/53

Section 6 – Workforce Data

Table 8 - Critical Data gaps in UK Nurse workforce planning[23]

Critical data gaps	*Current situation/ recent developments*
1) We do not have accurate UK wide attrition rates during pre-reg nursing and midwifery education.	*No improvement and increasing evidence of data problems. A definition had been agreed in England for common measurement but DH England now reporting they will not use this HESA data in future; there is currently no complete and comparable data across the UK.*
2) We do not know with any accuracy how many newly qualified nurses and midwives take up employment in the NHS or elsewhere.	*No improvement: has been made more problematic because of changes in student indexing. Has been identified in recent DH England report as a priority problem.*
3) We have little published evidence of the actual retirement behaviour of nurses; a vital issue given that so many are in the 50+ age group.	*Little improvement – some one off surveys: and the issue is now even more significant because of ageing workforce and proposed changes in NHS retirement scheme for future entrants.*
4) We have no accurate knowledge of how many of the growing number of overseas registrants are actually working in the UK, or where they are based.	*No significant improvement. NHS in England does not record how many international nurses it employs. Scotland has recently initiated monitoring of international recruitment activity. No accurate information on outflow of nurses from the UK.*
5) We have only scant information on the "cross border" flows of nurses between the four UK countries. This is likely to become a growing issue with devolved government and diverging health policies in the four countries.	*No improvement in published information.*
6) We have no recent detailed information on the actual number of "re-entrants" who stay working in the NHS after refresher training, where they are working, and the hours they work.	*Worsened. Return to practice data no longer collated at national level in England.*
7) We do not have consistent or complete information on vacancy rates across the four countries to assess the impact of shortages.	*No improvement; and more questions being asked about relevance of "point in time" 3 month vacancy rate.*
8) We do not have complete data on flows of "joiners and leavers" in the NHS to assess with any accuracy the current sources of recruits and destinations of nurses leaving the NHS.	*Major source is OME sample survey, with worsening response rates. NHS Information Centre is currently examining potential of using ESR.*
9) We have only scant information about the dimensions of the growing non-NHS nursing labour market and the "flows" of nurses between the NHS and other nursing employment.	*Worsened. Data no longer collated nationally in England – where it is now considered to be a major and growing issue.*
10) We do not have UK wide information about the ethnic composition of the UK nursing population or workforce, to enable any assessment for potential to recruit, or to monitor equal opportunities in employment.	*Attempts at improvement, but changes in definitions, and large "unknown" response rate limit utility of data. NMC does not record ethnicity.*

[23] please see Section 7 of this submission for more detail

[76] In September 2006 the RCN published The UK Nursing Labour Market Review 2005/6. The Review commented:

> "It is also evident that there remain weaknesses in the available data which can undermine effective nursing workforce policy and planning. Many of these weaknesses are well known but have not, as yet, been effectively addressed. In the labour market review published last year, we set out our analysis of the main information gaps that were undermining a complete policy analysis of the dynamics of the UK nursing labour market, and were impairing effective workforce planning. All these weaknesses remain compounded by the current financial difficulties in parts of the NHS, and the uncertainties created by organisational change.[24]

[77] In 2006, the Scottish Executive produced its first National Workforce Plan for NHS Scotland a document which emerged from the previous year's National Workforce Planning Framework. The then Minister for Health and Community Care commented in the Foreword:

> The challenges cannot be underestimated. But we can be proud of the progress that has been made in the first year of the new annual workforce planning cycle. We do not yet have all the answers, but issues have been identified and methodologies developed to ensure ongoing progress and improvement.[25]

[78] The production of a similar annual strategy in Wales could also galvanise improvement in the identification and collation of important statistical data.

[79] In this section we discuss the specific area of workforce data that are lacking in Wales, such as the ageing profile of nursing and retention rates, and are required in order to secure safe and effective patient care. A recurring theme however, is the lack of and need for more data. Surprisingly little is known about the single largest professional group employed in the public sector – the nursing workforce.

[24] Buchan, J. and Seccombe, J. The UK Nursing Labour Market Review 2005/6 (RCN: September 2006)

[25] National Workforce Plan for NHS Scotland (Scottish Executive: December 2006) and the National Workforce Planning Framework (Scottish Executive: 2005)

6.1 Retention

80 There is no accurate or easily available estimate of the overall retention rate of NHS nurses at UK or national level. The only source with any trend information is the annual survey conducted by the Nursing and Other Health Professions' Review Body through the Office of Manpower Economics (OME). This survey examines the number of nurse joiners and leavers.

Table 9: Summary of the main results of the 2006 Workforce Survey for nursing staff, midwives and health visitors for NHS Trusts

	England	Wales
joining rate	11.8%	8%
leaving rate	10.8	6.8
wastage rate	8.6	6.5

81 However this survey also found that Trusts were unable to state where around 44 per cent of joiners had come from. Similar problems of incomplete response are found in the recording of reasons for leaving Trusts in England and Wales: Unknown destination was recorded for 41 per cent of leavers.

An RCN survey found that among NHS leavers the two most important reasons for leaving the NHS were to gain a change in working hours and because of stress/workload (each mentioned by 35% of cases).

82 The age profile of the nursing workforce has grown steadily older over the last 20 years, since these surveys started. In 1987 the average age was 33. The average age in 2007 is 42 (both in Wales and in the UK). Recent years have shown a slight slow down in the rate of age increase, due in part to the increase in the number of internationally recruited nurses, who tend to be younger than the average UK trained nurse. But this effect may reduce in the future if international recruitment continues to decline.

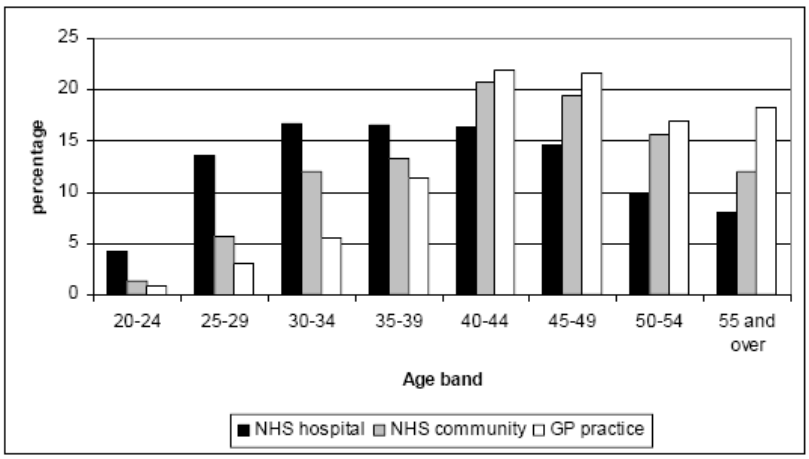
83 There is also considerable variation in the age profile of the nursing workforce with younger nurses in Wales employed predominantly in NHS hospitals, where just 19% are aged over 50. This is in contrast to NHS community settings in Wales, where 29% are aged over 50. The 2007 RCN Employment survey comments:

> "Given that expansion in community care will be required to meet the shift towards local provision planned in *Our health, our care, our say*, significant recruitment to these sectors will be needed, not only to meet increased service demand but also to meet increasing retirement rates."[26]

The same is equally true, of course, of Designed for Life[27].

[26] Holding On: Nurses' Employment and Morale in 2007 RCN 2007
[27] Designed for Life Welsh Assembly Government May 2005

Table 10: Age profiles NHS hospital, community and GP practice nurses: 2007



Source: Employment Research/RCN 2007

[84] Another important area where information is lacking is cross-border flows between Wales and England (and other UK countries). As policy and employment practice increasingly diverges, workforce planning can no longer be undertaken in isolation[28]. It may be that other UK countries will begin to recruit from Wales.

[85] The Committee has also specifically requested information on the experience of BME nurses in healthcare. From the RCN Annual Employment survey of 2007, respondents from BME backgrounds across the UK account for 14% which is up from just 6% in 2002. In Wales only 8% are from BME backgrounds but this figure is up from 5% in 2005.

[86] RCN surveys over the last 5 years indicated that, in comparison to UK qualified white members, UK qualified BME members were more likely to:

- Work fulltime and be the main breadwinners
- Work in the independent sector
- Work longer hours
- Feel their grade is inappropriate to their role and responsibility
- Have been bullied or harassed

[87] The RCN believes that these results need to be comprehensively addressed by local NHS employers and the independent sector as part of an active equal opportunities strategy and more data is required on patterns of BME employment within Wales

[28] this issue was also raised by the workforce development unit in their evidence to the Committee of 17th October 2007

6.2 International Recruitment and Migration

88 There is currently no organised effort to recruit international nurses to the NHS in Wales. However the Royal College of Nursing is concerned that no central data is available from the NHS or the independent sector on either individual international appointments or appointments of those qualified overseas. It is important both for workforce planning and the sustainability of our international policy that relevant data is identified, collated and analysed by the Welsh Assembly Government.

89 Data on migrant workers from the EU is also required. There is anecdotal evidence that increasing numbers of nurses from eastern EU countries are taking employment within the UK in the independent sector as healthcare support workers. If this is corroborated by investigation it represents a potential source of UK nursing labour but it also represents a threat to the healthcare within the source country.

90 The Electronic Staff Record should eventually be able to provide this information.

91 The UK is a major player in international nursing labour market. We compete with other developed countries such as the USA, Australia, Ireland and Canada, which are also facing demographic-related nursing shortages. The limited international data that is available suggests that the overall trend in international flows of nurses is increasing.

Table 11: % of non-UK initial admissions to the NMC register and initial 2007 admissions by country/area

1995/1996	14%
1996/1997	21%
1997/1998	26%
1998/1999	28%
1999/2000	35%
2000/2001	39%
2001/2002	53%
2002/2003	43%
2003/2005	38%
2005/2006	33%

Source: NMC

Country/area	Initial entrants
England	16,848
Scotland	2,434
Wales	962
Northern Ireland	696
European Economic Area	1,753
Overseas	8,709
Total	**31,402**

92 NMC statistics highlight the reliance on India, the Philippines and Australia for overseas admission to the register. India alone accounted for 11% of all initial NMC entrants in 2007.

93 Seven in ten (69%) of IRNs work 12 hour shifts, compared to 59% of UK qualified BME respondents and 43% of all white respondents.

94 IRNs are much less likely to be offered time off in lieu (10% to 28%) and more likely to be offered higher (19% to 14%) or normal (39% to 29%) rate pay. This difference is in addition to pay band differences.

97% of IRN respondents work fulltime
80% of UK qualified BME respondents work fulltime
59% of UK qualified white respondents work fulltime

21% IRNs respondents report being most likely to work permanent nights
12% of UK qualified BMEs respondents report being most likely to work permanent nights
10% of UK qualified white respondents report being most likely to work permanent nights

Source: RCN

95 It is noticeable, that corroborating the 2005 RCN findings; IRNs work longer hours than all other groups of nurses. Even when we adjust for the mode of work, by only looking at those working fulltime (most IRNs work fulltime) the total average hours worked by IRNs is 47.7 hours, while for UK qualified BME nurses it is 46.6 hours and for UK trained white nurses it is 42.9.

96 The RCN has focused particularly on encouraging good practice in recruitment and retention in the UK and ensuring that international nurses are aware of their rights[29]. The NMC has also worked to warn potential recruits about dubious practices of some recruitment agencies, which charge inflated prices and provide misleading information. Such practices occur disproportionately in the independent sector. We believe that statutory guidance should ensure that poor employers should not be able to continue to obtain work permits to employ international nurses.

97 Using international recruitment as a means of meeting NHS nurse staffing targets has not been without controversy. Many commentators have raised the issue of the detrimental impact of the international recruitment of nurses on the developing healthcare systems of some countries.

98 To combat some of these criticisms, the UK Department of Health introduced a code for international recruitment in 2001 (on this issue the DoH acts as the lead for the Welsh Assembly Government). This code requires NHS employers not to recruit actively from a list of developing countries published in 2003, unless there is a country-to-country agreement such as with the Philippines, India and Indonesia. Also, they must use recruitment agencies from a preferred provider list. The code emphasises that international recruitment is "a sound and legitimate contribution to the development of the NHS workforce".

[29] RCN 2005 Working Well initiative: Internationally recruited nurses. Good practice guidance for healthcare workers and employers RCN London
RCN 2005 Working Well initiative: success with internationally recruited nurses. Good practice guidance for employers in recruiting and retaining RCN London
We Need Respect – Experiences of Internationally Recruited Nurses in the UK RCN
Here to Stay – International Nurses in the UK RCN

99 The RCN would like to see a strengthening of the UK Code to provide a framework which addresses the whole journey of a migrant health professional, underpinned by ethical principles, and covering all those involved in recruiting and employing health professionals. This would include better information to prospective migrants in source countries and enforcement of employment rights. It also needs to be part of a wider strategy for workforce planning in this country and international policies to tackle health worker shortages.

100 The major limitation of the code is that it does not cover the independent sector, which continues to recruit from countries on the proscribed list. The RCN has lobbied for the principles to cover all recruiters to protect vulnerable health professionals and ensure that inappropriate international recruitment did not just shift from the public to the private sector.

101 The RCN continues to support the principle in the Code that employers should not engage in mass recruitment from countries and regions where there are shortages. However the use of banned countries lists now needs to be reconsidered in terms of who is consulted when compiling the list, any unintended consequences (e.g. lack of incentive to improve working conditions for health workers in source countries), lack of flexibility (given in-country maldistribution of health professionals), and what is likely to happen within the UK and wider labour markets over the next five to ten years.

102 Migrant workers cannot and should not be excluded from any safeguards on employment rights that are reflected in UK legislation.

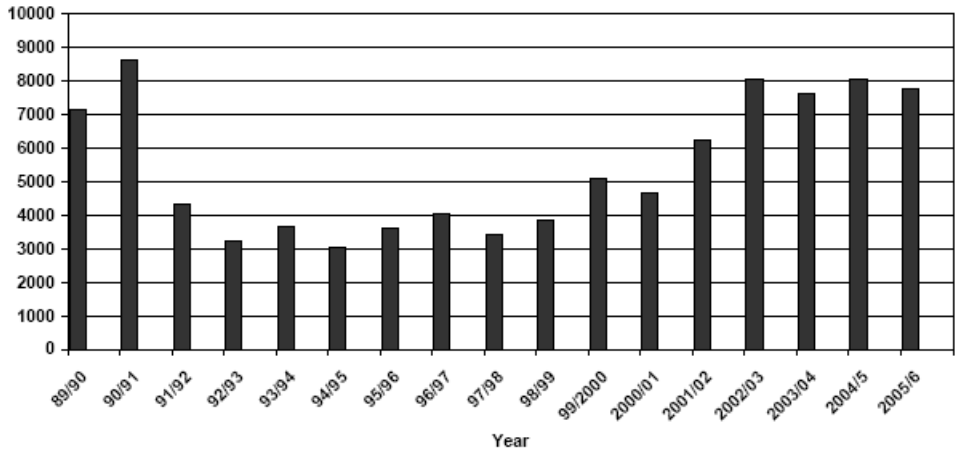
103 It should be noted that 16% of new overseas registrants to the NMC in 2005/2006 came from Sub-Saharan Africa.

104 Finally, neither Wales nor the UK can ignore that they are part of a broader international labour market for nurses. English speaking nurses have a range of career opportunities in OECD countries in North America and Australasia.

105 The USA has quantified its nursing recruitment need as being in excess of 1 million registered nurses between now and 2012, including 623,000 to fill newly created jobs. The Canadian situation has been quantified as a shortfall of around 78,000 nurses by 2011. Australia projects a shortage of 40,000 nurses by 2010. Most countries are now looking for policy solutions to address these shortage problems.

106 The UK has exploited its market advantage in recruiting English speaking nurses from Africa and Asia, but it will be the target for increased recruitment activity from OECD countries attempting to solve their own nursing shortages. There are already signs that recruitment of nurses from the UK to the USA is becoming more significant.

Table 12: Number of NMC verifications issued to destination countries 1980/90 – 2005/06



Source: NMC/UKCC

6.3 Health Care Support Workers

107 It is important to recognise that Health Care Support Workers are an increasingly significant part of the healthcare workforce and a vital part of the nursing family. Healthcare Support Workers need to receive ongoing training and opportunities to gain vocational qualifications. Despite their growing numbers and value to the workforce, it is difficult to assess completely and accurately the size of this group. In 2005 Wales reported around 4000 healthcare support workers within the NHS.

108 There appears to be a clear policy drive from NLIAH to recruit more HCSW's or assistant practitioners who are not regulated or registered[30]. What is not clear is why this is so or the evidence base for such an approach. As the numbers of registered nurses increase in the community they will indeed require a support team. However, attempting to compensate for a lack of registered nurses in the community by increasing the numbers of HCSW's is an unsubstantiated and potentially unsafe approach and will undoubtedly put patients at risk.

109 Healthcare Support Workers are not currently a regulated profession. The RCN believes that HCSWs should be regulated in the interests of public protection and that regulation of level 4 assistant practitioners in nursing by the NMC is a first pragmatic step in this direction.

[30] See The Development of a strategic approach to creating a more flexible and sustainable workforce for NHS Wales (NLIAH: October 2007)

6.4 The Independent Sector

110 There is even less known about the numbers of nurses employed outside the NHS in sectors such as nursing and residential homes, independent hospitals and clinics, independent hospices, respite and voluntary agencies, nursing agencies, and public sector services (prison service, defence medical service, higher education, police service, local authorities).

111 A detailed and accurate identification of how many nurses are employed in these sectors is not currently possible. The information that is available is incomplete and is contained in disparate sources, uses a variety of definitions and is prone to double counting. This information is important as little is known about the movement of nurses away from the NHS and even less is known about the potential for nurses to return to NHS employment. Several countries, including the United States and Canada, have commissioned extensive surveys of this sector using their equivalent of the Nursing & Midwifery Council's Register in order to inform their workforce planning processes.

112 This information is clearly crucial to an understanding of the requirements of providing integrated health and social care.

113 More information on the impact that this lack of information has on NHS workforce planning and suggestions for how to proceed can be found in Section 7 which surveys nursing workforce planning across the UK.

SECTION 7

NURSE WORKFORCE PLANNING IN THE UK

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1. Introduction

This report has been prepared for the Royal College of Nursing. Its main objective is to provide a commentary on the current status of nursing workforce planning systems and data in the NHS. It also identifies current limitations and critical gaps in nurse workforce data availability in the NHS. Comparisons are also made with non UK sources and approaches where these serve to illustrate possible options to improve current UK systems and data gathering approaches.

The report is written for a policy/ general mainstream audience (i.e. it reports on technical data issues but is not written primarily for a technical audience). It focuses primarily on identifying key UK policy/planning limitations and critical gaps in current data availability which constrain or prevent effective planning and policy analysis.

The remainder of the report is in five further sections:

Section 2. What is Workforce Planning?, *sets out the key aspects and principles of workforce planning*

Section 3. The UK Context, discusses the context in which nurse workforce planning is conducted in the UK

Section 4. Nurse Workforce Planning in the Four UK countries describes recent developments in the approach to workforce planning, and identified limitations

Section 5. Nurse Workforce Planning in the UK: Gaps and Risks identifies critical current information gaps

Section 6. Improving the Workforce Planning Information Base sets out proposals to improve the information base and support more effective planning.

2. What is Workforce Planning?

Textbooks and reports tell us that the role of workforce planning is to effect the balance of demand for staff with its supply – to ensure that sufficient (but not over-sufficient) numbers of appropriate qualified personnel are available, in the right place and at the right time to match the demand for their services (see e.g. Hall and Mejia, 1998; O'Brien Pallas et al 2001, AHWAC 2004) It can also encompass local level day to day decision making on allocation of staff (see e.g. Hurst 1993); this report does not cover this latter aspect- it focuses on national/regional planning systems.

The same text books argue that, on the demand side, the function of workforce planning is to assist in determining the appropriate number and mix of nursing staff and other employees, for a given catchment's population, number of hospital beds or planned number of cases. On the supply side, the function of workforce planning is defined as assisting in determining future requirements in the supply of nursing staff, assessing the comparative magnitude of various 'flows' of staff into and out of the service (*from* training, *to* career breaks etc) and working with policy and management in developing appropriate personnel policies to keep these flows in the required balance, therefore best meeting the demand side requirements for staff.

The workforce planning function is therefore usually summarised as having three main elements:

1 Assessing how many, and what type, of staff are required (demand side)
2 Identifying how these staff will be supplied (supply side)
3 Determining how a balance between demand and supply can be achieved.

It is important to note that the process of workforce planning itself is not the critical issue in determining its impact on policy and service delivery. What is important is the extent to which the planning process connects with, and influences decisions on funding allocation for staffing levels and mix (see e.g. Buchan et al 1998; O'Brien Pallas et al, 2006). Workforce planning can be:

-**integrated** with finance and service delivery (e.g. it is an integral part of the overall planning of services and can have a major influence on funding allocation, service configuration and staffing decisions),

OR

-**aligned** to finance and service delivery (e.g. workforce planning is primarily a stand alone exercise conducted with stakeholder input- it may have a influence on service configuration and staffing decisions, but this will be dependent on stakeholders taking note and acting on the planning outcomes, OR

-**independent** of finance and service delivery (e.g. it is a third party monitoring exercise conducted in the expectation that results may be used to influence stakeholder decisions in staffing, service delivery and funding allocation; it may be technically proficient but there is no direct linkage to service planning).

The conventional wisdom is that the role of workforce planning can only be properly realised if it follows the first model- if it is integrated with the broader objectives of service planning. In practice this linkage is often weak, can be fractured and, even if robust, is sometimes ignored by stakeholders, policy makers and politicians.

Many health systems have aspired to integrated workforce planning, but few in practice have even been able to even align fully the planning for the different health professions, yet alone fully integrate these processes. Furthermore, there is very little published research on the actual delivery and effectiveness of nurse workforce planning, and on the extent to which systems, even if technically efficient, cannot deliver if the organisational and political context is not supportive (but see e.g. Buchan, Seccombe and Smith, 1998; Scott-Findlay et al, 2002; Buchan, 2004)

Demand Side

The question ‘how many nursing staff do we need’ has no single ‘right’ answer – the answer will vary, depending on the methodology or methodologies adopted to determine need, demand and met demand (not necessarily the same thing) funding made available, and available supply. The question may have at least three dimensions:

-do we want to know how many nurses are required to serve the population at current service levels?

-do we want to know how many nurses are required to meet the expected needs of the population (including any needs not currently met)

-if we are re-organising services, do we want to know how many nurses will be required for a re-configured service?

(see e.g. Birch et al, 1994; O'Brien Pallas et al, 2001; AHWAC, 2004 for more discussion)-

This lack of specificity and varying definitions of "demand" can lead to criticisms that workforce planning does not "work", or is not worth the effort – that it is an inexact science producing inexact or "wrong" results. The reality is that workforce planning should not be expected to produce precise forecasts and results. Its function is to assist the organisation, or system, to make better use of its internal labour market and to map its position of the organisation in the wider labour market and enable it to react flexibly to changes in that external labour market.

The demand side element in planning can encompass a whole range of issues. At the simplest level, the 'need' for healthcare provision can be based on an assessment of the catchment's population to be served by the organisation (be it a single hospital or a national health service). AHWAC, 2004 categorised five main types of demand estimation (see also e.g. Birch et al, 1994):

- **needs based**- population health estimates are used to assess future health requirements (this will vary depending on demographic indicators and on definition of "need")
- **utilisation based**- use of health services is used as a measure of staffing required (this assumes that current health services are adequate)
- **effective demand**- fiscal/ financial constraints are explicitly built into needs based assessment
- **effective infrastructure**- where environment and technology place a constraint on workforce size and skills
- **models of care**- an model of care delivery that will deliver good outcomes is identified, including workforce mix; this multidisciplinary approach requires integrated workforce planning to determine supply to meet this demand estimate

Assessing future demand for nursing staff will always be an inexact science, because it is not possible to identify or measure accurately the impact of all the variable factors which will impinge on future staffing requirements (not least the future availability of funding), because there are different methods of defining and assessing demand which will produce different results, and because the time lag between demand estimate and service delivery may be years. The longer the timescale of assessment, the greater will be the scope for a growing margin of error

Supply Side

The future supply of newly educated nurses can be measured with some degree of accuracy, because the time lag between entering nurse education and qualification enables a three year

plus look forward projection to be made. The current magnitude of other inflows (nurses returning from career breaks, from other forms of employment, and from other countries) and outflows (retirement, career breaks and 'wastage' to other forms of employment) can also be estimated, using available data sets. Current limitations in these data sets will be identified and discussed later in the report.

The near monopsony position of the NHS, as a purchaser of the services of nurses, is reinforced by its monopoly role as the only provider of basic level pre-registration education of nursing staff and the major provider of clinical placements and post basic training. It therefore acts as the arbiter of the magnitude of the 'flow' of new nurses, by determining the number of pre-registration places provided at diploma and degree level.

Matching Demand and Supply

Workforce planning is at best an inexact science, and the match of supply and demand will never be precise, because the context in which the planning process is conducted is ever changing, with some changes being more predictable than others.
What the planning process does achieve is to highlight areas of specific concern in the short term, which will require immediate remedial action, and areas of potential concern in the longer term, which may be avoided, accommodated or addressed by adopting new HR policies.

About 670,000 nurses and midwives are registered with the Nurses and Midwives Council in the UK. More than 400,000 of them are employed in the NHS in the UK, and more than 100,000 are working in other sectors or other jobs; the remainder are not in practice or are abroad. The central contribution of nurses to delivering health care, and the size of the nursing workforce, with its recurring paybill costs and initial training and education costs mean that nursing is a major focus of planning, in a highly labour-intensive organisation.

As such, planning to ensure effective use and deployment of nursing staff has a financial, as well as operational, imperative. Given the public sector, politicised nature of the NHS there is also a political dimension. The tension between different measures of demand – 'how many nursing staff do we need?' and 'how many nursing staff can we afford?' - is ever present, and it is one role of workforce planning to assist in determining the second measure and so (in theory at least), influence the level of funding available, and decisions on affordability and resource allocation. Many of the "failures" of workforce planning have not arisen because of

shortcomings in the planning process itself, but because the signals that emerge from workforce planning are ignored in decision making on resource allocation; this is compounded by a lack of clear lines of responsibility for planning, and for accountability in terms of the implementation of the results of planning. This highlights the central importance of ensuring that he lines of accountability in the planning process are clear, and that workforce planning is technically proficient, and strategically linked- not just an isolated technical exercise.

Principles for Effective Workforce Planning

Given the variation in objectives, approaches and outcome of different types of nurse workforce planning there is no single "best" model. What can be developed is a series of principles that should underpin any approach, and which will make it more likely that the approach will be effective and sustainable (see e.g. Birch 1994, AHWAC 2004, O/Brien Pallas 2006, Welsh Assembly Government 2007 for examples). Various reports have suggested different lists of principles to follow; a synthesis of 8 key points is summarised below:

Principles for Effective Workforce Planning

1. The main functions/stakeholders (e.g. finance, service planners, education providers, public/private sector employers) are committed to and involved in the planning process, with clear lines of responsibility and accountability being defined

2. Build from a structured information base on current staffing, staff budgets and relevant activity whether planning for a ward, organisation, region or country.

3. Assess workforce dynamics and "flows" between sectors and organisations within the system being planned for – assessing sources of supply and turnover

4. Develop an overview analysis to identify need for, and scope for, change

5. Develop and agree a set of planning parameters linking workforce and activity data

6. Use "what if" analysis to model different scenarios of demand for services, and related staffing profile

7. Develop an agreed workforce national plan which aggregates local/ regional plans

8. Establish a framework to monitor staffing changes in comparison to the plan- develop a cycle of review and update

If a workforce planning system does not "tick" the eight boxes above it is much less likely that it will be effective and sustainable, particularly in a multi stakeholder, mixed sector system such as the NHS dominated health service in the UK.

3. The UK Context

The Planning Horizon

Workforce planning in the NHS is more complex than in private sector organisations or other "big" organisation such as the armed forces. Although often regarded as a single entity, the NHS actually comprises hundreds of organisations functioning in different labour markets, and with varying organisational priorities. Individual employers (NHS trusts, foundation trusts, Health Boards etc) will conduct some degree of local workforce planning, but there is also a need to aggregate up to regional/national level for planning purposes. There are tensions between local led and national led, between "bottom up" approaches and "top down".

Workforce "planning" in the NHS is actually often about determining how many "new" nurses should be educated. One of the critical challenges for NHS workforce planning is determining how to "plan" the supply of new staff to these organisations- and to the non NHS employers operating in the health sector, who will also have staffing needs, and the social care sector which will also have an overlapping recruitment pool.

The NHS workforce is comprised of discrete occupational groups with different planning "lead in" times (up to twenty years for an experienced specialist doctor). In the UK it takes approximately four years between the decision being made to fund a place for a student nurse and that nurse being eligible to register and practice. This is the minimum planning horizon when policy makers have to make decisions about how many nurses are needed, what the "demand" for nurses might be and how many student nurse places to fund. These latter three issues are not the same; one of the problems with assessment of the "effectiveness" of workforce planning in nursing is that commentators assume they are one and the same. There can also be a conflict between 3-4 year plus workforce planning and financial and service planning, which in the NHS often operates to a shorter timescale.

The planning process in the NHS also is affected by a range of broader political, regulatory and professional policy decisions. The list below is not exhaustive, but gives some sense of the different pressures which will act on NHS workforce planning as it looks to its horizon:

- demographic change- a growing, ageing population
- changes in NHS funding and budgets
- changes in service plans and reconfiguration
- changes in policy e.g. shifts in locus of care delivery from hospital to community; from NHS to non NHS

- changes in regulatory and legislative framework e.g. impact on medical and nurse staffing of the EU Working Time Directive; introduction of nurse prescribing legislation
- changes in professional education e.g. impact of "Project 2000" – phasing out of enrolled nurses;
- introduction of new roles e.g. Assistant practitioners; Health Care Assistants

Some of these impacts have a lead in time and a degree of predictability and can (or should) be accommodated within the planning process; others can emerge from nowhere and require a revision of planning scenarios or even a replacement of the current planning system. The NHS, particularly in England, has been characterised by successive re-organisations in the last two decades which would have sorely tested even the most robust and flexible of systems. In reality some of these policy led changes in the NHS have either undermined the workforce planning process (e.g. the impact of NHS funding deficits in 2005/6) or have been imposed on the planning process rather than derived from it (e.g. the NHS plan staffing growth targets of 2000).

Whilst many nurses will be located within regional labour markets delineated by their travel-to-work parameters, there is, for planning purposes, also a UK wide market for nurses. There is a single over-arching regulation framework maintained by the Nursing and Midwifery Council (NMC) and a single NHS wide pay/career structure, Agenda for Change. Nursing qualifications are standard and are recognised throughout the UK If he/she is geographically mobile, a nurse can move and work anywhere in the UK.

On the "supply" side, the UK is also unusual in the level of control that government has on numbers of student nurses, through funding allocation decisions. Other countries provide funds to underwrite all or part of the costs of training places, but in most there is not the same degree of scope for manipulating policy levers as exists in the UK.

However the UK is not a single political entity. Political devolution since 1997/8 has sharpened the focus of policy determination at country level (i.e. England, Northern Ireland, Scotland and Wales) and has stimulated policy divergence, but did not in itself create the four policy domains for nurse workforce planning in the UK. There has never been UK wide nurse workforce planning or monitoring; before political devolution the four UK countries, through the regional arms of the UK government (Scottish Office; Welsh Office etc) were already exercising independence in their approach to deciding how much funding should be made available for pre-registration nurse education, and how many new nurses should be educated.

One organisation which has a UK wide remit is "Skills for Health", the Sector Skills Council (SSC) for the UK health sector. Its purpose is to "help the whole sector develop solutions that deliver a skilled and flexible UK workforce in order to improve health and healthcare" (Skills for Health, 2007). Its stated strategic aims are:

1. "Engage with health sector employers to ensure we can be the authoritative sector voice on skills and workforce development for the whole sector".
2. Inform the development and application of workforce policy through research and the provision of robust labour market intelligence.
3. Implement solutions which deliver a skilled, flexible and modernised workforce capable of improving productivity, performance and reducing health inequalities.
4. Champion an approach to workforce planning and development that is based on the common currency of national workforce competences.

Skills for Health is a relatively new stakeholder in the UK health sector workforce planning process. It produced a "health sector workforce market assessment" in 2003, has commissioned research on labour market indicators in the health sector and more recently has provided some labour market analysis and competence frameworks. The Health Committee (2007) noted that its role was not yet fully formed or well understood. It recommended that "The role of Skills for Health in the workforce planning system and the health service itself be clarified as there is little evidence that this organisation has yet made an impact on workforce planning beyond the production of competence frameworks" (p 110).

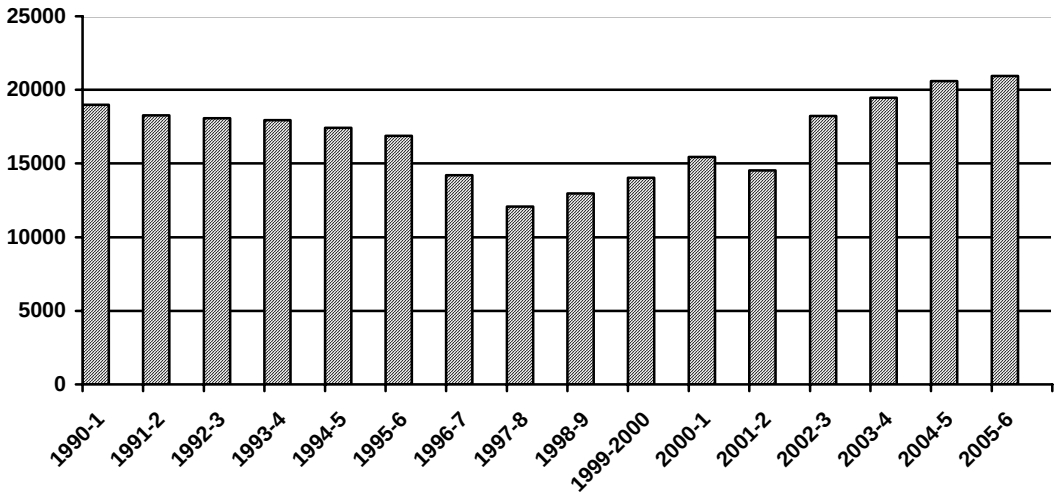
The key characteristics of the UK is therefore in having a single regulatory structure and pay system (for nurses in the NHS), public funded and public sector based nurse education and a four country devolved model of planning for health services. This is somewhat different from most other countries- for example; Australia, Canada and the United States all have multiple regulatory systems based on States or Provinces (although Australia is planning a move towards national regulation) and have multiple locally determined pay/career structures for nurses.

Recent Trends

Figure 1 shows the trend in the number of "new" nurses coming onto the UK register from each of the four UK countries This gives some indication of the overall contribution that UK based planning and funding allocation has made to adding to the pool of potential nurses in the four countries. It represents the result of planning decisions made three or more years

earlier, combined with the impact of attrition during pre-registration nurse education, and levels of "take up" on successful completion of courses. The marked drop in the mid 1990's, followed by the catching up exercise in the early years of this decade (fuelled by increased funding) is evident.

Figure 1: Number of new entrants to the UK nursing register from UK sources, 1990/1 to 2005/6

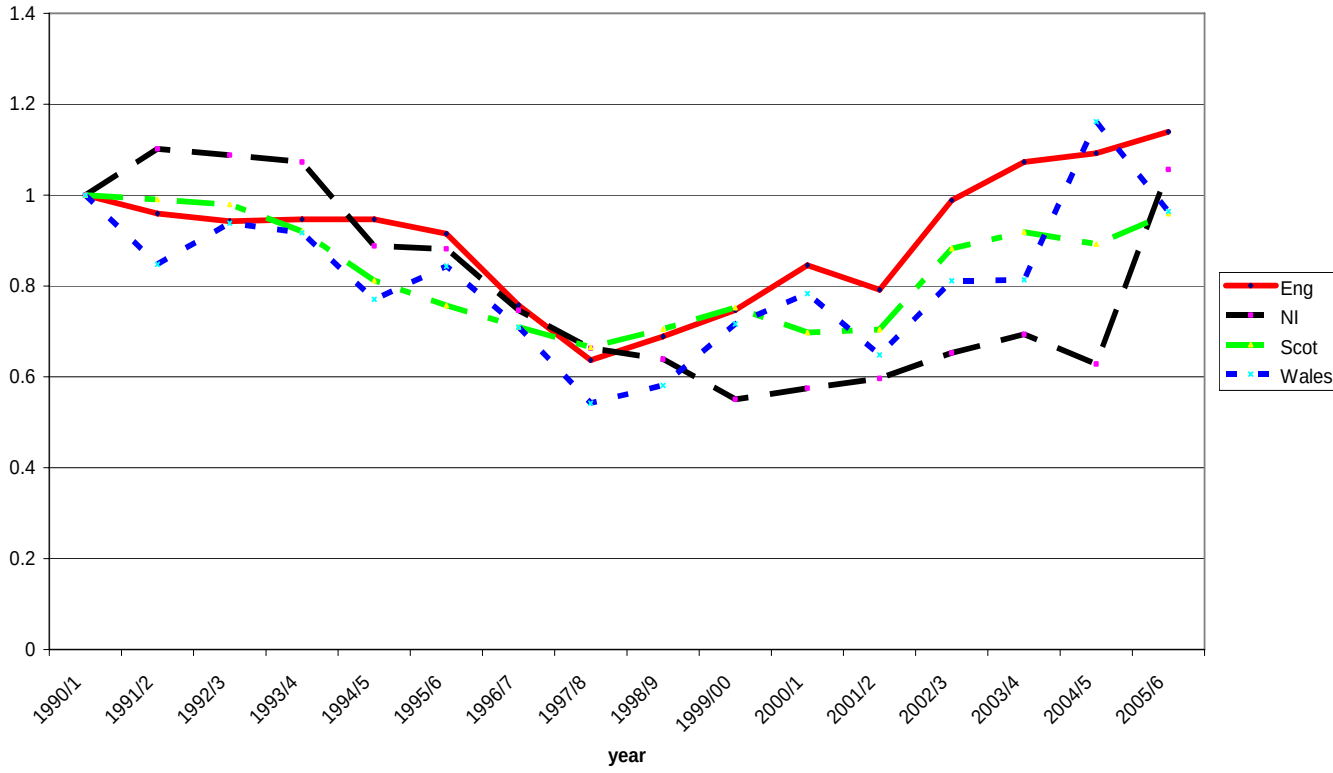


Year on year differences in data collection and timing of registration means that only longer term trends in this NMC data should be examined, rather than differences between any two consecutive years (and the possible effect of data collection difficulties reported by the NMC in 2001/2 and in 2004/5 should be noted). However it is clear that over the period between 1990/91 and 1997/8 there was a drop of about 37% in the annual number of new UK registrants, followed by an increase of about 42% between 1997/8 and 2005/6. The recorded annual level of new UK registrants in 2005/6 is not dissimilar to the level in 1990/91, but in the intervening years there has been a marked decline, followed by a marked increase.

Figure 2 below shows the annual change in the number of new UK registrants from each of the four UK countries, with 1990/01 as starting point. All four UK countries exhibited a drop in new registrants in the period up to the mid 1990's, and then show an increase in new registrants, but there appear to have been some variations between the countries across the period. Of the four UK countries, Scotland has shown the least fluctuation between minimum

and maximum across the period, while Northern Ireland and Wales have exhibited the greatest fluctuation. England reports rapid growth in the early part of this decade, and now contributes a higher % of new UK registrants than was the case in 1990/91.

Fig 2: New Entrants to UK Register from each UK country, 1990/91- 2005/6; 1990/91=1



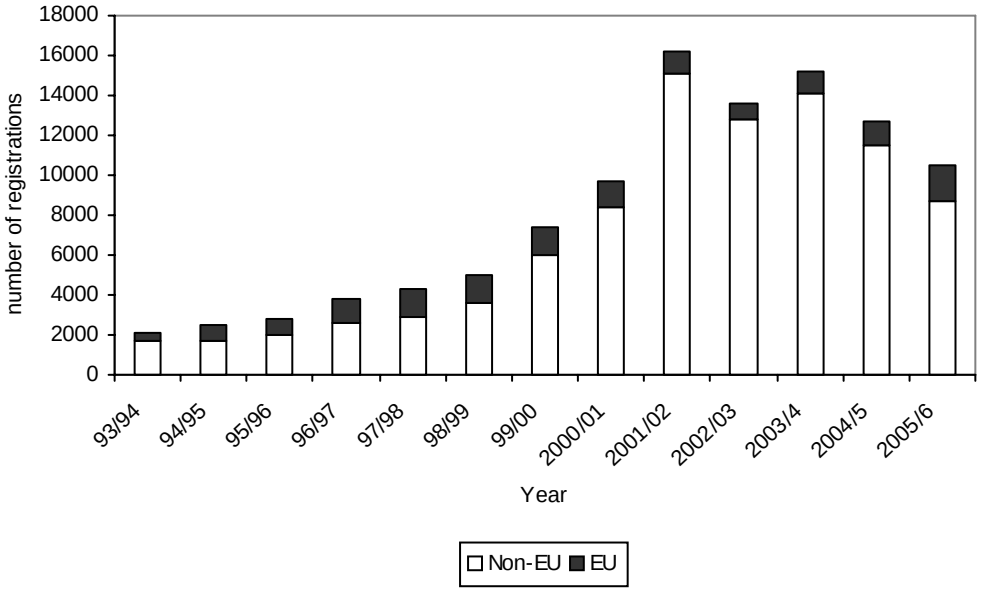
Source: NMC

The other source of "new" nurse recruits to the UK has been active recruitment from other countries. International recruitment is attractive to policy makers because it enables rapid recruitment without the expense and lead in time that commissioning more home based training places requires. In the period between the late 1990's and middle of this decade, the UK, particularly England, was actively recruiting nurses from a range of countries. The level of UK reliance on international nurses can be assessed with data from the Nursing and Midwifery Council (NMC)[31]. Because the NHS in England did not centrally record how many international nurses it recruited, accurate information is not available on how many of

[31] There are limitations in using NMC data to monitor the inflow of nurses to the UK, because it registers intent to work in the UK, rather than the actuality of working. Overseas nurses may be registered, but not move to the UK, or they may move to the UK but not take up employment in nursing.

these nurses were recruited to, or were working in the NHS. However one key indicator on overall numbers coming to the UK is the level of initial admissions to the NMC Register of nurses and midwives originally trained and registered outside the UK (Figure 3).

Figure 3 : Admissions to the UK nursing register from EU countries and other (non EU) countries 1993/94 - 2005/6



Source: NMC/UKCC

Rapid growth in the annual numbers of entrants to the UK register from overseas in the late 1990's and earlier years of this decade is highlighted in Figure 3. In the peak year of 2001/2, international registrants represented more than half of all new registrants on the UK register. However, there has been a marked reduction in overseas registrants in recent years, due to growth in home based nurses entering the labour market, more stringent registration requirements being initiated by the NMC, and because band 5 and 6 nursing posts (the main entry clinical grades in the NHS) were removed from the Home Office "shortage occupation" list, meaning that UK employers cannot recruit these types of nurses unless they have actively tried first to recruit within the UK or elsewhere in the European Union.

As noted earlier, one of the reasons that active international recruitment has been so attractive to policy makers in the UK is that it offers a "quick fix"- the nurses have been trained elsewhere, at someone else's expense, and can be recruited and working in the UK within a few months- not the four years it would take to commission and train a UK educated nurse.

Equally, if and when funded demand for nurses in the UK falters or reduces, the numbers of international recruits can also be reduced, virtually overnight. This is now happening in the UK. In addition, international nurses already working in the UK may find that their work permits are not renewed and they will have to leave the country to find work.

Increases in the numbers of UK educated nurses, and international recruitment have contributed to significant growth in NHS nurse staffing across recent years. Table 1 below summarises % growth in each of the four UK countries since 1997.

Table 1: Whole time equivalent and per cent change in the NHS Qualified Nursing and Midwifery Workforce, 1997 to 2006, four UK Countries (September).

	1997	**2006**	**%Change 1997 - 2006**
England	246,011	307,447	**25%**
Scotland	35,245	40,942	**16 %**
Wales	17,228	20,980	**22%**
N. Ireland	11,508	13,595	**18%**

Sources: England: non medical staff census, The Information Centre, NHS. Northern Ireland – DHSSPSNI; 2006 data is for June; Scotland data - ISD Workforce Statistics; Wales –SDR 67/07; Note: per cent Figures are rounded.
NOTE: Data for England includes bank nurses; data for other three countries does not.

Nurse staffing growth has been most pronounced in the NHS in England, with a 25% increase over the period 1997-2006 (staffing numbers actually decreased slightly between 2005 and 2006), whilst Scotland has reported the lowest overall growth, at 16%.

Examining headline data changes in number of registrants and numbers of NHS staff gives some indication of the "output" from workforce planning in the four UK countries, in terms of the level of funding that has been allocated to pre-registration nurse education. It also serves to highlight the critical contribution made by the inflow of international nurses to the UK register over the period from 1999 to 2005. What it does not illuminate is how planning has been conducted, or what have been any identified planning limitations or failures. This will be examined in the next section of the report.

4. Nurse Workforce Planning in the Four UK countries

How is nurse workforce planning conducted in the four UK countries? This section reports on recent developments in the countries, identifies current limitations and discusses current data difficulties.

The first point to note is that one factor which must be taken account of if workforce planning is to be effective is the size and scope of the planning process in terms of staff numbers, geography and service configuration. England alone accounts for about 80% of the annual number of new UK educated registrants and about the same proportion of the total number of registrants and nurses working in the NHS. One size does not fit all in workforce planning. England is much bigger and has a greater need to look at intermediary levels between national level and local operational level.

In the other three UK countries it is feasible to get all the necessary national level stakeholders in one room and link direct to operational level in terms of assessment of future requirements. This "single table" planning could not be undertaken with any success in England.

England

In England, the reforms and re-organisations of the NHS have made their mark on NHS workforce planning. In recent times it could be argued that no one system has been given sufficient time to bed down before the system it has to plan for is re-organised, and organisational structures are changed.

In the 1970's and 1980's much of the responsibility for nurse workforce planning was delegated by the Department of Health to Regional Health Authorities, with central control on overall numbers being exercised through limiting overall expenditure. The absence of effective nurse workforce planning was noted by the Briggs Committee in 1972, and by the 1979 Royal Commission on the NHS (Buchan, Seccombe and Smith 1998). The National Audit Office identified "limited" and "inconsistent" nurse workforce planning in the NHS in the mid 1980's and highlighted that future demand was based on financial projections rather than on likely service developments (NAO, 1985).

In 1989 the Department of Health published "Working Paper 10" which set out a new approach to workforce planning (Department of Health 1989). It vested most of the

responsibility for planning the numbers of new staff to be trained with the 14 Regional Health Authorities in England, who aggregated up local employer demand, using a standard template to determine regional requirements. The regional assessments were in turn to be monitored at a national level, to identify any likely collective over or under-training. In 1991 this approach was adapted to use a "national balance sheet" which used a set of indicators ("traffic lights") to give warning of under-training ("red") or oversupply ("green") of different categories of staff.

In the mid 1990's the Department of Health commissioned workforce modelling to assess longer term demand for nurses, but this work was not published (Buchan, Seccombe, Smith, 1998). Further changes occurred to the planning system in the late 1990's. The Regional Health Authorities were abolished, with planning responsibility moving to new NHS Executive regional offices, leading, in 1996 to the creation of a new framework for education commissioning via Education and Training Consortia, involving local employers and education providers in commissioning pre-registration places by collating local workforce plans. More than 40 such consortia were established in England. They only had a few years of existence.

Further change occurred as a result of the White paper on NHS staffing- "A Workforce of all the Talents" published by the Department of Health in 2000 in response to the Health Select Committee's Inquiry on Future NHS Staffing. As a result, a National Workforce Development Board was set up, and 27 local Workforce Development Confederations (WDC) were established to bring together local NHS and non-NHS employers to plan and develop the whole healthcare workforce. The WDC only had an existence of a few years, being merged into Strategic Health Authorities which themselves were reorganised and drastically reduced in number in 2006.

In the space of eighteen years, between 1989 and 2007, no single system for NHS workforce planning in England survived for more than a few years before being replaced as a result of broader re-organisation or specific redesign.

At the time of writing, the focal points for NHS workforce planning for England are now the 10 Strategic Health Authorities, which have lead responsibility to support the assessment of workforce requirements within their geographic areas, in association with NHS employers at trust level. As noted above, until 2006 there were almost three times as many smaller SHAs; these were merged into the 10 larger units in July 2006. Contracts for specified numbers of pre-registration places for medical, nurse and other health profession education are agreed

with local education providers (universities etc) on the basis of funding allocated by the Department of Health.

A national overview of the likely requirements of numbers in different medical specialities and in other health professions is determined by the national Workforce Review Team (WRT). The WRT produces risk assessment based annual recommendations on planning for all the main clinical groups, based on assessments of future recruitment levels, changes in skill mix etc (Workforce Review Team, 2007).

As noted above the process of workforce planning in the NHS in England has gone through several significant changes in recent years, and the recent UK Parliament Health Committee report on NHS Workforce Planning was critical of the lack of stability and capacity in workforce planning (House of Commons Health Committee, 2007). The Committee characterised the government's handling of workforce planning in the NHS in England as a 'disastrous failure' and pointed to a lack of strategic planning by the Department of Health as a factor in trusts recruiting "far more staff than they could afford to pay". They also argue that there is insufficient workforce planning capacity within the NHS, and were critical of the impact of restructuring on workforce planning and policy making: "The situation has been exacerbated by constant re-organisation including the establishment and abolition of Workforce Development Confederations within 3 years". Poor integration and coordination between workforce and financial planning was also cited, as were issues of "short termism", particularly in 2005/6 when some SHAs raided their education and training budgets because of broader financial difficulties.

Specific recommendations about workforce planning made in the Health Committee report were:

- Make workforce planning a priority for the health service with greater emphasis given to long term and strategic planning.
- End the constant reorganisation of workforce planning (such as the establishment and then abolition of Workforce Development Confederations within three years); instead, ensure that the organisations responsible for planning do their jobs properly.
- Improve the integration of workforce, financial and service planning. More integrated planning will mean increased involvement for education providers and the independent sector.
- Make sure that the 10 new SHAs improve their understanding of workforce demands and take collective responsibility for improving planning at the national level.

- Ensure that as commissioners, PCTs help SHAs to analyse future workforce demand and ensure that service planning and workforce planning become integrated and complementary processes.

- Ensure that planning decisions cover the whole workforce rather than looking at each staff group separately.

- Recruit workforce planners of the highest calibre and ensure that they are supported by staff with appropriate skills.

- Stop the Department of Health's micromanagement of the planning system encouraging an oversight capacity to ensure SHAs are giving workforce planning the priority its importance requires.

The Health Committee report was published in March 2007. More recently the Workforce Review Team (WRT) has put its annual risk assessment for the NHS in England out for consultation (Workforce Review Team 2007).

The workforce risk assessment is produced for SHAs, DH and trusts by the WRT, drawing together the WRT's national forecasting and SHA plans. The risk assessment focuses on 2008/09 but looks towards the medium to long term, identifying key workforce developments, issues and priorities, together with associated risks to service provision and patient care, in order to:

- set SHAs' and employers planning and decision making into the context of medium term workforce trends;
- demonstrate the outcome of SHAs' aggregate decisions, and how they impact on workforce supply and geographical differences;
- highlight areas of the workforce that require particular measures.

The WRT report emphasises that the development of nursing and midwifery roles is key to the delivery of a "modernized" healthcare workforce, with consideration for advanced practice and new and enhanced roles. They also note that support roles to nurses and midwives are an important part of the skill mix of nursing and midwifery teams, with roles, particularly at band 4 (NHS careers framework), of assistant practitioner and maternity support worker. "Consideration needs to be given to the ongoing support and development of these roles".

In terms of workforce planning capacity in the NHS, the WRT note that "Significant organisational change, particularly at SHA and PCT level, has led to the loss of experienced workforce planners and information analysts. The number of staff involved in planning the workforce has fallen, many staff are relatively new in post and some posts remain vacant……

The robustness of local data, particularly longer term demand indicators, on which trusts' and subsequently SHA workforce plans are based is variable". (WRT, 2007)

The WRT is also currently developing demand side modelling. This is at the pilot stage, initially modelling demand for mental health services. The objective is to develop a tool "which will allow multiple demand drivers to be drawn together in a quantified analysis to generate a calculated demand forecast". This forecast is likely to be a range rather than an explicit number. This approach will create a standard mechanism to compare the demand requirements of different areas of healthcare e.g. mental health and orthopaedics, to allow a common currency of comparison. The WRT report that if the process is found to be helpful and transferable it will be extended to other service areas.

The WRT report is the only systematic, national, annual data based analysis of nursing workforce supply/demand issues to be published by the NHS in England. The Department of Health does undertake and commission modelling and projection analysis but this is not usually placed in the public domain. A "leaked" DH report in January 2007 (Money, 2007) based on its own staffing projections suggested that there would be a shortfall of 14,000 nurses by 2011 unless action was taken by SHAs to restore the recent reductions in training commissions. The WRT key assessment for nursing and midwifery in England is that supply forecasts suggest a levelling out of nursing numbers followed by a projected decrease, largely in adult/general nursing. Higher retirement rates are anticipated in both nursing and midwifery, where approximately 20% are currently aged 50 or over (WRT 2007)

Northern Ireland

The Department of Health, Social Services on Public Safety (DHSSPS) "recognises the importance of workforce planning in identifying appropriate staffing levels and structures" (DHSSPS, 2005). Local staffing arrangements are the responsibility of individual NHS employers, taking into account factors such as service needs and available resources. A Workforce Planning Unit located within the Department conducts periodic workforce planning reviews carried out at regional level across the main professions.

The main aims of these reviews are to establish information on the supply/demand dynamics relevant to the workforce group in order to inform the Department's decision making on the number of training places to be commissioned and to develop understanding of the issues impacting on recruitment and retention and career progression of those employed. The

workforce planning cycle comprises a major review of each group every three years, supported by annual update reviews. The stated purpose of the annual update reviews is to maintain current workforce information and identify any new issues impacting on the workforce group thereby enabling any necessary action to be taken at an early stage.

The last major review of nursing was published in 2005 (DHSPSS 2005), the objective being to "inform the Department's planning for these professions to facilitate service provision over the next 5-10 years".

The review investigated current and future supply and demand factors that would impact on the delivery and development of nursing, midwifery and health visiting services, and included a review of policy and contextual documents; a review of the current supply and demand picture and projections of the future supply and demand picture.

The key findings were that "a more developed approach to workforce planning involving improvements in data collection and analysis is desired by all stakeholders"; that "when contrasted with the previous workforce planning review", the supply situation had now "clearly improved" (DHSPSS 2005). There was also reportedly broad agreement that more work is needed to be done to cascade the improvements that have been made at the strategic level, by focusing attention at workforce planning at the operational or trust level.

Scotland

In Scotland, the approach to nurse workforce planning has been based on the Student Nurse Intake Planning (SNIP) project which has been in operation since 1996. Its primary focus is to determine how many pre-registration nursing and midwifery places should be contracted in Scotland. The SNIP process has been subject to review and modification but retains the central elements of involving key nursing and midwifery stakeholders in its assumptions, modelling and recommendations to the Minister of Health in Scotland on student nurse intake numbers. The SNIP process models information and data collected on supply trends as well as on future demand projections. The process uses computer based spreadsheet/template approach, with each local NHS Board completing a standard template as the basis of the "bottom up" data gathering aspect of the process.

Information contained within NHS Board workforce plans (i.e. local plans) is aggregated and provides a picture of future demand. There is an iterative process of verification of these data between the centre and local employers. Running in parallel to the NHS data gathering

exercise, there is data collection across a range of non-NHS employers. There is also interpretation and analysis of centrally held data if no local/regional data is available.

From projections received across the NHS and non-NHS employers, a baseline year (in terms of number of posts) and five year projections for nurses and midwives are conducted. This is based on the anticipated number of staff required to fill vacancies and meet projected need, so it includes an assessment both of replacement and expansion demand.

Until 2006 the SNIP exercise had been largely "stand alone". In 2006 it was more closely linked to broader based annual planning cycle which leads to the publication of an annual NHS workforce plan for Scotland.

Wales

In Wales, the Welsh Assembly Government (WAG) recently published "Designed to Work" a workforce strategy to support the delivery of "Designed for Life" a 10 year health strategy. A new Workforce Development and Contracting Unit at the national level will act as the focal point of a new planning and contracting system, underpinned by a series of principles:

- Workforce planning needs to be fully integrated with service and financial planning so that workforce plans can reflect the major changes in service delivery that are planned and anticipated for the future.

- If workforce planning and service planning are to be fully integrated there needs to be a clear methodology for relating planned service activity and workforce demand.

- Workforce planning needs to address future workforce capability in terms of skills, roles and ways of working in teams rather than simply numbers in individual professional groups.

- Long term workforce development decisions should be made using a methodology that is appropriate to strategic planning.

- The level of expertise and resource devoted to workforce planning needs to be increased, particularly in relation to strategic planning.

- Workforce information systems need to be improved to better support workforce planning.

The new system is intended to become fully operational in 2008, and is based on three levels: : National Strategic Workforce Planning, Local Strategic Workforce Planning and Employer Operational Workforce Development Plans.

At a national level, the national strategic planning will have four main functions:

- Informing recommendations to the national WAG on education commissioning;
- Showing the impact of national strategies on future workforce needs;
- Informing national strategic service planning of workforce issues that could have an impact on service delivery and
- Providing a strategic framework and analysis for local workforce planning.

The Health Committee of the Welsh Assembly Government has recently announced it will be conducting an inquiry on NHS workforce planning.

Overview

The above sections have set out some of the key characteristics of current systems in the four UK countries (see summary below).

England	N. Ireland	Scotland	Wales
"New" SHAs (regional) will lead process; WRT plays role nationally in assessing risks	Central unit; three yearly detailed comprehensive review of nursing workforce; supported by annual assessment	Central unit; SNIP approach on an annual basis links local and national plans;	New annual approach will be based on national unit linked to local planning process

One of the continuing problems of nurse workforce planning in the NHS across all four countries is that it is primarily used for determining student intake numbers where a precise number is required, and that there is only limited use of 'what if' scenario modelling and even less publication of the results of such modelling (SNIP being a notable exception). The other major common weaknesses are that despite lip service to "integration", workforce planning is still often done in isolation for different professions and nurse workforce planning (unlike medical) tends to focus only at the pre-registration level.

Other constraints on achieving effective nurse workforce planning in all four countries are the short term nature of commissioning which makes it difficult for providers to project workforce requirements with any reliability; service planning horizons are short term; there is an absence of robust trend data which means that that projections, even where they are conducted, are overly influenced by the most recent 'trend'; some non-NHS employers have never been willing (or perhaps welcomed) to take part; and variable training routes and lengths of training are not accounted for in all the planning processes.

When comparing the current workforce planning systems in the four UK countries with the principles set out in section 2 of the report (repeated below) it can be argued that some progress has been made in improving workforce planning structures, but that the constraints

noted above continue to undermine effectiveness, as does the tendency for NHS restructuring to impact on workforce planning.

Principles for Effective Workforce Planning

1. The main functions/stakeholders (e.g. finance, service planners, education providers, public/private sector employers) are committed to and involved in the planning process, with clear lines of responsibility and accountability being defined

2. Build from a structured information base on current staffing, staff budgets and relevant activity whether planning for a ward, organisation, region or country.

3. Assess workforce dynamics and "flows" between sectors and organisations within the system being planned for – assessing sources of supply and turnover

4. Develop an overview analysis to identify need for, and scope for, change

5. Develop and agree a set of planning parameters linking workforce and activity data

6. Use "what if" analysis to model different scenarios of demand for services, and related staffing profile

7. Develop an agreed workforce national plan which aggregates local/ regional plans

8. Establish a framework to monitor staffing changes in comparison to the plan- develop a cycle of review and update

For example the new approach described, but not yet operational, in Wales ticks most of the boxes, and the system that has been working since the early 1990's in Scotland also meets most of the criteria, particularly that it is now more closely aligned with the overall workforce planning process. England has fallen short in terms of transparency, stakeholder involvement in the planning process in recent years, in a lack of clarity about lines of accountability, and in the absence of a publication of a national "plan". It is beginning to develop some demand modelling, but in the past, its work on workforce scenarios and projections have largely been conducted in-house, and have been rarely published and most recently have been the subject of high profile leaks.

Projection and risk assessment work conducted by the Workforce Review Team (WRT) in England is being developed as a helpful planning support tool, but has not always been utilised fully by SHAs. Its most recent risk assessment WRT highlights problems and threats to patient care and services created in 2005/6 by some SHAs "raiding" pre-registration education budgets and reducing funding for Continuous Professional Development because of NHS financial deficits. It also projected a likely decline in nursing numbers in the NHS because of the ageing of the workforce (WRT 2007; Parish 2007)

Meeting all criteria set out above would be a good indicator that a workforce planning system was technically efficient. The bigger challenge for nurse workforce planning systems in the four UK countries is to ensure that they are fully engaged with the broader system wide decision making on the shape of future services and the allocation of current funding. The most notable failure in UK nurse workforce planning in recent years has been the high profile problems of "boom and bust" in England. This was less to do with technical inadequacies in the planning system (although there is significant room for improvement) than it was to do with poorly defined lines of accountability within the system, and a rapid pace of organisational change, which led to de-linkage of workforce planning from service planning and funding and subsequent funding claw back.

A technically efficient workforce planning system is a pre-requisite for effective nurse workforce planning but does not in itself guarantee effectiveness in a politicised NHS. This requires both a commitment to a systematic planning process, and a commitment to act on the results of that planning process. It is securing the latter that is the bigger challenge.

5. Nurse Workforce Planning in the UK: Gaps and Risks

The previous section has highlighted that there is room for technical improvement in the nurse workforce planning process in the UK. There are a range of challenges which face those responsible for nurse workforce planning across the four countries:-

- further impact of compliance with European Working Time Directive
- impact of technological changes
- impact of full implementation of Agenda for Change, which may stimulate changes in staff mix
- changes in education "pipeline" e.g. move to all graduate entry for nurse education
- ageing of sections and occupations in the health workforce (and related issues of retirement patterns)
- re-configuration of NHS services, particularly the shift of staff to community/primary care
- (primarily England) impact of "mixed economy" of provider organisations (NHS, NHS funded, non NHS) on workforce planning
- pressure to increase productivity of health services through new ways of working, new working patterns, new skill mix
- related to above, introduction or expanded use of "new" roles – assistant practitioner, healthcare assistant, physician assistant, nurse practitioner.
- (In England and Wales, explicit) Limited current workforce planning capacity

The question remains how the workforce planning arrangements evolving in the four UK countries can accommodate these factors and how the related information gaps that currently exist can be filled. Since 2001, the RCN published annual review of the UK nursing labour market has identified critical data gaps and identified what if anything has been done to fill them (see Table 2 on next page).

The Workforce Review Team (WRT) note "particular areas of concern" in relation to workforce data in the NHS in England, including incomplete data across NHS trusts e.g. foundation trusts, and a lack of access to data for the independent, voluntary and social care sectors.

Table 2 below summarises the current situation

Table 2: Critical Data gaps in UK Nurse workforce planning

Critical data gaps	***Current situation/ recent developments***
1) We do not have accurate UK wide attrition rates during pre-reg nursing and midwifery education.	***No improvement and increasing evidence of data problems. A definition had been agreed in England for common measurement but DH England now reporting they will not use this HESA data in future; there is currently no complete and comparable data across the UK.***
2) We do not know with any accuracy how many newly qualified nurses and midwives take up employment in the NHS or elsewhere.	***No improvement: has been made more problematic because of changes in student indexing. Has been identified in recent DH England report as a priority problem.***
3) We have little published evidence of the actual retirement behaviour of nurses; a vital issue given that so many are in the 50+ age group.	***Little improvement- some one off surveys: and the issue is now even more significant because of ageing workforce and proposed changes in NHS retirement scheme for future entrants.***
4) We have no accurate knowledge of how many of the growing number of overseas registrants are actually working in the UK, or where they are based.	***No significant improvement. NHS in England does not record how many international nurses it employs. Scotland has recently initiated monitoring of international recruitment activity. No accurate information on outflow of nurses from the UK.***
5) We have only scant information on the "cross border" flows of nurses between the four UK countries. This is likely to become a growing issue with devolved government and diverging health policies in the four countries.	***No improvement in published information***
6) We have no recent detailed information on the actual number of "re-entrants" who stay working in the NHS after refresher training, where they are working, and the hours they work	***Worsened. Return to practice data no longer collated at national level in England.***
7) We do not have consistent or complete information on vacancy rates across the four countries to assess the impact of shortages	***No improvement; and more questions being asked about relevance of "point in time" 3 month vacancy rate.***
8) We do not have complete data on flows of "joiners and leavers" in the NHS to assess with any accuracy the current sources of recruits and destinations of nurses leaving the NHS.	***Major source is OME sample survey, with worsening response rates. NHS Information Centre is currently examining potential of using ESR***
9) We have only scant information about the dimensions of the growing non-NHS nursing labour market and the "flows" of nurses between the NHS and other nursing employment.	***Worsened. Data no longer collated nationally in England- where it is now considered to be a major and growing issue.***
10) We do not have UK wide information about the ethnic composition of the UK nursing population or workforce, to enable any assessment for potential to recruit, or to monitor equal opportunities in	***Attempts at improvement, but changes in definitions, and large "unknown" response rate limit utility of data. NMC does not record ethnicity***

employment.	

Source: based on Buchan and Seccombe, 2001; reviewed and updated 2005, 2006, 2007

One constraint in filling these data gaps is the absence of agreed and complete information sources; another is transparency in the planning process. This is particularly the case in England, where with the exception of the annual publications from the WRT there has been a lack of consistency in making public the results of workforce assessments, modelling and scenario planning, highlighted most recently in the 2007 "leaking" of supply/demand projections.

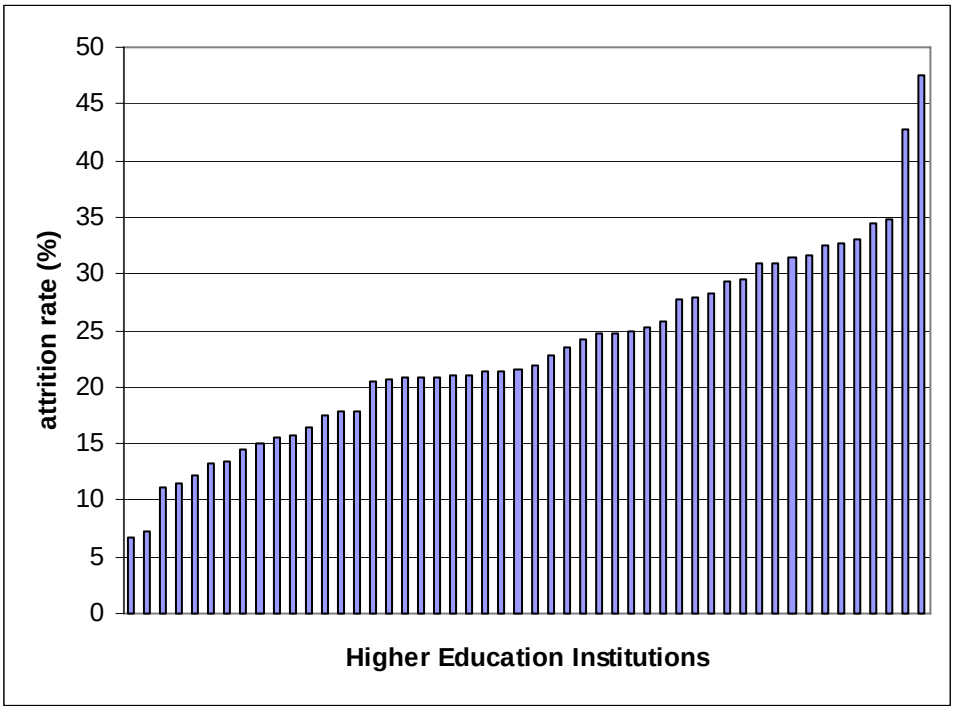
Attrition

Accurate information on the number and percentage of students who fail to complete their course is an important component in overall planning; and is also a factor in determining the level of funding to the universities that are providing the courses. An additional important indicator for planning purposes is to know the number and percentage of students who successfully complete their course but subsequently choose not to take up registration or employment as nurses in the UK. Comparisons on attrition rates between the four UK countries are also often made for benchmarking purposes. For example, the report of the Budget Review Group in Scotland reported that "trainee attrition rates are currently 28%....in Scotland and 17% for nursing trainees in Wales." (Budget Review Group, Scottish Executive, 2006). For all these reasons it is imperative that attrition data is accurate, complete and up to date. Currently it meets none of these requirements.

In the 2006 RCN labour market review it was noted that "robust up-to date figures remain elusive and there has been continued disagreement about the actual levels of attrition" (Buchan and Seccombe 2006). The review quoted data released to the *Nursing Standard* under the Freedom of Information Act which cast doubt on the accuracy of official figures on attrition rates. The figures reveal that out of 16,919 nursing students, who began diplomas expecting to finish in 2004, a total of 4,091 did not complete their courses.[32] This gave an overall attrition rate of 24.2 per cent, with a wide range, from 7% to 47.5%, between institutions.

[32] Nursing Standard, 15 February 2006

Figure 3: Attrition rates from the 2004 diploma courses qualifying cohort



Source: Buchan and Seccombe 2006; data provided by the Nursing Standard

The Department of Health has more recently published a report on managing attrition rates for student nurses (Department of Health 2006). It reports that, whilst common definitions for attrition have been agreed in England, based on data collated by the Higher Education Statistics Agency (HESA), there are "basic weaknesses in data coverage and robustness and inconsistent interpretations of the common definitions". For example, it notes that HESA data includes about 15% of "spurious records" (p12)

The report chooses "not to quote national historical attrition figures, as to do so would imply a level of accuracy which could be challenged" (p4) and highlights that "given these difficulties the Department intends to discontinue its current practice of obtaining attrition information from data provided by HESA". The report recommends that in the future "real time data" on attrition be collected by SHAs and forwarded direct to the Department of Health "so that an accurate and comprehensive national data set can be published on a regular basis". The report also suggests that "almost without exception, attrition rates for health care students are lower than for higher education students studying other subjects". (A recent National Audit Office report on student attrition appears to present a somewhat different picture. It reports that completion rates for "subjects allied to medicine" moving from first to second year was below

the average for all subjects in 2004-5. Medicine and dentistry had the highest reported completion rate) (NAO, 2007).

Finally, the DH report highlights that the issue of nurses registering but then not practicing ("post registration attrition") needs to be addressed; comments that "the extent of the problem is not known" and that the Department will be given consideration to commissioning further work to better understand the scale of the problem, the underlying factors and the actions that can be taken. (p45)

International recruitment and international nurses

As discussed earlier in this report there has been a large inflow of international nurses to the UK over the last ten years. Whilst the annual size of the flow is now diminishing, the NHS in England was never able to monitor centrally with accuracy how many international nurses it was actively recruiting. This was a flaw which contributed to unmanaged staffing growth; it also has meant that it has not been possible to assess accurately the impact of the Department of Health Code of Practice on international recruitment, which required NHS trusts not to "actively" recruit from designated developing countries.

Profile and Flows

The other major list of data gaps all relate to the fragmented and incomplete information that exists about nurses. Who are they and what are they actually doing? What is their ethnicity, nationality, age, gender and their current status in employment, whether they are retired, on a career break or in education etc; if employed, where they are working: location(s), sectors, hours worked; job moves (from/to NHS; from/to other nursing jobs, from/to other types of employment etc); relevant qualifications etc.

Improvements in the quality and timeliness of NHS nursing workforce data should emerge with full implementation of the Electronic Staff Record (ESR) in England and Wales. This new data source is currently being implemented, with full "roll out" anticipated by April 2008. The ESR provides a monthly extract of individual employee based workforce information to a "data warehouse" which will enable the aggregation and interrogation of information at trust and SHA level. The information will include earnings, "joiners and leavers" data, age profiles, gender etc. Routine data reports, benchmarking between trusts and SHA's, and more detailed one-off analysis will be enabled, with the NHS Information Centre (IC) playing a major role. Currently about 80% of trusts are linked to ESR. Whilst all trusts should be engaged with the process by April 2008 there will still be issues of quality assurance and user involvement to complete, so it may be another year until the ESR can

begin to be exploited fully. It does hold promise of providing more timely data; its accuracy and completeness, as ever, will depend on accurate local level data inputting, combined with effective regional/national aggregation. However the ESR will not solve the problems of poor data on student attrition, and on non NHS employment of nurses, as it covers NHS staff only.

The need to improve the universal data on nurses in the UK is becoming more critical, because on the supply side, it is evident that nursing labour markets are becoming more fluid, with multiple employers, sectors and jobs. Workforce monitoring, if it is to be effective, needs to cover this pluralistic scenario, particularly in England, with nurses increasingly having the scope to work across, and move between different sectors. If a system to capture this dynamic is not established, a NHS based planning approach which is based only on supply side data on directly employed NHS nurses will become increasingly inaccurate and may be ultimately irrelevant.

There are working examples of approaches to capture and use multi-sector nurse workforce data in other countries. For example, the Province of Ontario uses a stratified sample of all nurse registrants for an annual survey; the Board of Nursing in California commissions periodic sample surveys of its registrants, (see Spetz et al 2007) and the United States Department of Health and Human Services conducts a quadrennial survey of a sample of nurses from each State , which provides information for scenario modelling (see annex for details). New Zealand and the State of Victoria in Australia, amongst others, have used the process of annual re-registration of nurses as a mechanism for obtaining additional information on employment patterns, work location etc. In New Zealand completion by the registrant of a questionnaire on their employment status, work location etc has been a mandatory part of re-certification.

The final section of the report examines some possible solutions to filling current gaps.

6. Improving Workforce Planning and the Planning Information Base

This section discusses in more detail four areas of intervention to improve the workforce planning process and to fill the current gaps in the information base which are undermining the effectiveness of workforce planning in the UK. These are areas where co-ordinated action could significantly improve the planning base and inform policy. These areas are highlighted in the Table below, and discussed in more detail in this final section of the report.

Improving Workforce Planning and the Planning Information Base

A. **Improve consistency, transparency and integration of workforce planning**		High level political and organisational commitment is required to provide stable and integrated platform for workforce planning. Reintroduce protected funding allocation for pre-reg education where this has been removed. Involve stakeholders in planning scenarios; publish full annual workforce plan, including clarified lines of accountability. Identify current capacity constraints on workforce planning capabilities and fund necessary improvements through training.	
B: Improve tracking of pre-reg students through education, registration and into employment		Introduce unique ID to enable attrition during pre-reg education, post reg attrition, and mobility between jobs and locations to be tracked	
C: Improve tracking of international nurses in NHS		Establishing a monitoring system to track actively recruited international nurses- perhaps linked with "new starts" on the ESR	
D: Fill critical information gaps on nurse workforce profile, flows and retirement.		Agree a method to enable systematic and periodic assessment of whole system profile and flows of nurses in UK. Strengths and weaknesses of five options set out below:	
		(+)	(-)
	1. NMC register sample survey	Whole population coverage Ability to stratify sample by geographical region	Response rate unknown
	2. NMC register employment status form completed at re-registration	Captures "new" nurses and re-registrants	Re-registration only every three years Response rate unknown, but if voluntary may be low
	3. Conduct employer based survey	Could give non NHS information Access to aggregate data on profile and flows of nurses	Difficulty in creating and accessing representative sample

	4. Analysis of Labour Force Survey	Gives data for comparison with other sectors; includes non NHS	Sample size of nurses may be too small for detailed assessment at regional level Limited scope for "flow" information
	5. Extend RCN membership survey	Established process, with good response rate Gives opportunity for demographic, profile and employment status to be covered	Does not cover all nurses
	6. Investigate further analysis of NHS Pensions data	Scope to give information on trends and recent pattern of retirement; could be explored as a method of surveying nurses nearing possible retirement age	

A) Improve consistency, transparency and integration of workforce planning

As discussed earlier in this report, one of the key problems with NHS nurse workforce planning in the UK, particularly in England, in recent years, has been the absence of the high level political and organisational commitment required to provide a stable and integrated platform for workforce planning. Some lines of accountability and responsibility have been blurred or disconnected. The Health Committee report earlier this year highlighted the extent to which the workforce planning process had become de-linked from the broader direction of organisational change, and how workforce planning results were set aside when funding difficulties hit the system, with one result being that pre-reg education budgets were "raided" by some SHAs to make good funding deficits. In order to enable workforce planning to be effective and integrated there is a need to re-establish the principle that funding allocated to pre-registration nurse education on the basis of planning should be protected, and not subject to local vagaries and "raids".

The second point is that there must be stakeholder involvement in developing planning scenarios, and that full annual workforce plans should be published in each of the four UK countries. This already happens to an extent in Scotland, and there is a commitment to this in Wales. The level of transparency and contestability enabled by an annual public plan would sharpen the planning focus, give clarity to lines of accountability and would ensure that it was rooted in the reality of local needs and priorities.

The third point is that the effectiveness of workforce planning both locally and nationally is constrained by weaknesses in technical and strategic capacity. The Health Committee report

in England noted that the evidence it had received from various organisations had highlighted that constraints were being placed on effective planning because of a lack of trained planners. Several organisations pointed to the restructuring of NHS organisations as having led to a loss of local and SHA level workforce planning capacity in recent years. There have been developments in providing online training packages in workforce planning, and in working with education providers to develop appropriate post graduate education, but there is a broader need to identify what are the current capacity constraints on workforce planning capabilities, particularly in the new SHAs in England, and fund necessary improvements through training, recruitment and development. If implemented fully and effectively, the ESR should provide more timely workforce data.

B) Improve tracking of international nurses in NHS

International recruitment may not now be a priority, but nurses will continue to enter the UK (for example, there is recent growth in numbers coming from the EU countries), and it is possible that the level of international recruitment activity may grow again in the next few years. The NHS in England should consider establishing a monitoring system- perhaps linked with "new starts" on the ESR- so that it can track the inflow of international nurses. The NHS in Scotland has introduced monitoring.

C) Critical gaps – attrition during pre-registration education, and "take up" of employment on first qualification.

Given the long term and widespread knowledge that there are fundamental flaws in the available data on attrition (see e.g. Buchan and Seccombe 2000; National Audit Office 2001), the latest Department report examining the issue does little to suggest that there will be improvement, in the short term at least. It is mainly a restatement of the well known data flaws and the problems these flaws create for planning and funding.

Given the central importance to planning and funding streams of developing a more accurate and consistent assessment of variations in attrition rates within the four UK countries, and between them, a more comprehensive and strategic approach is required, involving the key stakeholders listed above. It is not just a question of developing better indicators. Accurate tracking of the career paths of nursing students could be developed through their pre-reg education, and beyond it, onto the register and into employment, by using a unique ID (linked to the ESR) for planning/tracking purposes allocated at the time of pre-reg education which was then maintained through their career. This would circumvent the problems created by different and unconnected data sets being used to try to assess pre-reg and "post reg" attrition

rates, and would enable funders, planners and education sector providers to have a clear and consistent picture of non completions, and of the registration history and career trajectory of newly qualified nurses.

D) Critical gaps – profile, working patterns and locations, mobility and retirement patterns of registered nurses

Broadly, there are at least six options to consider which would enable a more complete overview of the nursing population to be developed which would in turn inform a better estimate of supply side dynamics, and would also enable mobility between the four countries to be tracked. The options below do not include the use of the Electronic Staff Record (ESR) which may provide more planning data on NHS nurses in England and Wales when it is fully implemented and operational.

Option 1

Use the NMC register: develop a stratified sample of NMC registrants; conduct an annual or periodic survey to identify demographics, employment status, hours worked, work location(s) etc. Analysis could be undertaken "in house" or contracted out to a research institute

Option 2

Use the NMC register: link mandatory first registration/periodic re-registration with additional data gathering through the use of an additional questionnaire supplied to each nurse who applies for registration. This would give a high level of data on demographics, employment status, hours worked, work location(s) etc. It would also enable data to be collected on 'new' home based and intentional registrants

Option 3

Reach agreement with non-NHS employers for a multi-employer based survey of nurses and/or provision of standardised employment data on non-NHS nurses. Issues of complexity, cost and coverage make this a less viable option. It would be difficult, and complicated, to secure.

Option 4

Additional analysis of census and Labour Force Survey (LFS) data. LFS data can be used to assess patterns of employment, but the sample of nurses is currently not large enough to enable detailed analysis at local level.

Option 5

Additional analysis of RCN membership survey. The RCN member survey already provides highly relevant and useful data across different working environments. However it is membership based and less likely to include nurses currently not practising.

Option 6

There may be scope to give information on trends and recent patterns of retirement of nurses using information held by NHS Pensions; this could also be explored as a method of surveying nurses nearing possible retirement age, to provide more information on retirement behaviour.

Option 1 and **Option 2** presents the best opportunity to provide the required data on nurses' profile and employment status (and **option 6** if retirement is considered a priority issue). The NMC is not currently configured to support this type of activity and there are resource implications to these two options, as with the others. However the NMC provides the best single point of accessing nurse population data which is necessary in order to assess participation rates, multiple employment patterns, level of employment in different sectors, and flows between these sectors etc.

The UK Register is much bigger than New Zealand, state level in Australia, province level in Canada and state level in USA. However all are based on the same principle- that there is a requirement to be registered in order to practice. Information is already collected from each nurses as she/he first registers or goes through periodic re-registration. As such, this information gathering exercise could be expanded to obtain additional data items- current employment status etc. Resources required could be reduced by developing a structured, periodic approach, as is done in the USA (Department of Health and Human Services) and California (Spetz et al, 2007). Decisions would have to be made about sample size, frequency of survey etc. There have been previous one-off surveys of samples of NMC/UKCC registrants which have achieved acceptable response rates (e.g. Seccombe et al 1997).

Where additional resources and effort would be required is in the collation, analysis and interpretation of such data. This is not a primary roles for the NMC, and consideration could be given either to increasing NMC resources for this function, to involving other stakeholders in this exercise, or to contracting a research body to undertake the analysis (e.g has happens in California- see Spetz et al 2007)

The four UK departments and associated stakeholders (professional associations, WRT etc) could work together with the NMC to conduct a UK wide periodic survey; if this was not achievable it would be open to any one UK Health Department to support a survey only within its own country, using postcode data to create an appropriate sample.

The other options set out in the table have some possible strengths, but are less likely to deliver standardised whole population information.

This final section of the report has sought to identify some ways forward to improve some of the critical limitations and gaps in the current workforce planning systems in the UK. The options set out are not mutually exclusive. Primarily there is an need for the major stakeholders in the process of educating and employing nurses - the NMC, educators (Council of Deans etc), the four Health Departments, NHS employers, private sector employers and professional associations to come together and agree how to pool their resources, agree common definitions, allocate lead responsibility, end overlap and duplication, and address these critical information gaps.

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USA: Projected Supply, Demand, and Shortage of Registered Nurses

The National Center for Health Workforce Analysis (NCHWA) in the Bureau of Health Professions (BHPr), Health Resources and Services Administration (HRSA), collects, analyzes, and disseminates health workforce information and to *facilitate national, State, and local workforce planning efforts*. The NCHWA collects data on the nurse workforce through its quadrennial Sample Survey of Registered Nurses (SSRN) and maintains two models to project the RN supply and demand: the Nursing Supply Model (NSM) and the Nursing Demand Model (NDM).

2004 National Sample Survey of Registered Nurses

The National Sample Survey of Registered Nurses (NSSRN) is the USA's most extensive and comprehensive source of statistics on registered nurses (RNs) (whether or not they are employed in nursing). Government agencies, legislative bodies and health professionals have used data from previous national sample surveys of registered nurses to inform workforce policies. Responses are used to estimate the number of RNs living and working in the United States; the educational background of RNs, including State or country of initial education and specialty area; employment status including type of employment setting, position level and salary; geographic distribution; and personal characteristics including gender, racial/ethnic background, age, family status, and job satisfaction.

This sample survey has been conducted periodically (1977, 1980, 1984, 1988, 1992, l996, 2004) and the results have been published and made available to those involved in health care planning and evaluation as well as to the public. The eighth NSSRN began data collection in March 2004 and responses were received through November 2005.

The survey design for the 2004 NSSRN followed that of the previous seven surveys. A probability sample was selected from a sampling frame compiled from files provided by the State Boards of Nursing in the 50 States and the District of Columbia. The sample frame and weighting procedures are designed to provide an unduplicated count of licensed RNs rather than of licenses, given that many RNs have licenses in more than one State. Sampling rates are set for each State based on considerations of statistical precision of the estimates and the costs involved in obtaining reliable national and State level estimates. The 2004 NSSRN eligible sample size of 56,917 licensed RNs yielded 50,691 eligible sampled RNs who were sent surveys, of whom 35,724 individual RNs responded for a response rate of 70.5 percent

Nursing Demand Model

The NDM projects State-level demand for FTE RNs, LPNs and vocational nurses, and nurse aides/auxiliaries and home health aides (NA) through 2020. The NDM projects demand for RNs in 12 employment settings. Nurse demand is defined as the number of FTE RNs whom employers are willing to hire given population needs, economic considerations, the healthcare operating environment, and other factors.

Changing demographics constitute a key determinant of projected demand for FTE RNs in the baseline scenario. The U.S. Census Bureau projects a rapid increase in the elderly population starting around 2010 when the leading edge of the baby boom generation approaches age 65. Because the elderly have much greater per capita healthcare needs compared with the non-elderly, the rapid growth in demand for nursing services is especially pronounced for long-term care settings that predominantly provide care to the elderly.

In addition to State-level U.S. Census Bureau projections of changing demographics, the NDM projects nurse demand as a function of changing patient acuity, economic factors, and various characteristics of the healthcare operating environment.

Nurse demand will be determined, in part, by political decisions, changes in technology, changes in the healthcare operating environment, and changes in other factors difficult to predict. In addition, projection models such as the NDM are relatively simplistic simulations of a complex healthcare

system that try to capture the major trends affecting demand for nurses, so the RN demand projections are made with some level of imprecision. The degree of imprecision is difficult to determine. A sensitivity analysis shows how the projections change as we change key assumptions in the model. Projections are then presented under different alternative scenarios.

Nursing Supply Model

Tracking nurses by age, State, and highest education level attained (i.e., diploma or associate degree, baccalaureate degree, and graduate degree), the NSM produces annual, State-level projections of RN supply through to the year 2020. Starting with the number of licensed RNs in 2000, the NSM adds the estimated number of newly licensed RNs, subtracts the estimated number of separations, and tracks cross-State migration patterns to calculate an end-of-year estimate of licensed RNs by State. The end-of-year estimate becomes the starting value for the next year's projections.

To estimate the number of RNs active in the health workforce and the number of fulltime equivalent (FTE) RNs employed in healthcare, the model projects the number of licensed RNs and then applies workforce participation rates. In computing FTE RNs, nurses who work fulltime are counted as one FTE, while nurses who report working part time or for only part of the year are counted as one-half of an FTE.

The NSM contains three major components: (1) modelling new graduates from nursing programs, (2) modelling location and employment patterns of the current licensed nurse population, and (3) modelling separations from the nurse workforce. For each of these components, we describe the data, assumptions, and methods used to project future RN supply.

1)New Graduates from Nursing Programs

Baseline projections of the number of new nursing school graduates are based on the assumption that the nursing profession will continue to attract its current share of the applicant pool. The population of women ages 20 to 44 is used as a proxy for the size of the applicant pool, and the population projections used in the NSM come from the U.S. Census Bureau's middle series population projections. Combining State-level NCLEX-RN data with State-level estimates of the number of women ages 20 to 44 creates a separate applicant pool share for each State.

2)Licensed Nurse Population

The NSM tracks the population of licensed RNs, or "bodies," regardless of whether the RN is providing nursing services. It applies estimated workforce participation rates to the projections of licensed RNs to forecast the active nurse supply (defined as number of nurses employed or seeking employment in nursing) and FTE supply (defined as the FTE number of nurses providing nursing services).

The model starts with the number of licensed RNs in each State, tracked by education level and age, as estimated using the 2000 SSRN (Exhibit 3). The education level and age composition of the licensed RN population has important implications for the current and future RN supply because workforce participation, cross-State migration, and retirement patterns vary systematically by education level and age.

3)Permanent Separation from the Nurse Workforce

Reasons why RNs permanently leave the workforce and do not renew their license include retirement, mortality, disability, and other factors. The NSM contains one set of attrition rates that combines all reasons for failing to renew one's license. These rates do not, however, reflect temporary departures from the nurse workforce captured through the use of workforce participation rates as described previously.

The models are used to assess the situation in different possible scenarios- e.g. Scenario 1: Change in Output from Nursing Programs, Scenario 2: Change in RN Wages, Scenario 3: Change in RN Retirement Patterns

(see http://bhpr.hrsa.gov/healthworkforce/reports/behindrnprojections/2.htm for more details)