Royal College
of Nursing

A decisive decade
– mapping the future NHS workforce

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Foreword

In 2008, the RCN commissioned researchers at Queen Margaret University to model scenarios for the likely size of the future nursing workforce in England (*Nursing futures, future nurse*). The foreword to that report posed the question "why is the supply of registered nurses needed to address future health care needs and demands being reduced?". Three years ago, we warned that future workforce supply – dependent on policy and workforce planning decisions being taken at that time – was being put at risk.

Since that report, the world looks a very different place. We have experienced a global financial crisis, and the NHS has not escaped the impact. The overall NHS budget is to take a small, real terms, cut over the current Parliament, and the NHS in England needs to achieve up to £20bn in efficiency savings. However, the evidence from the current RCN *Frontline First* campaign shows that the loss of clinical and nursing posts not only continues, but has accelerated in response to these challenges. Meanwhile, this report highlights what the truly shocking scale of losses could be in the near future – in the worst case – a 28 per cent reduction in the nursing workforce. This would undoubtedly be hugely damaging to the quality of patient care.

The report shows just how vulnerable NHS nursing staff numbers are to changes in policy. Even if we continue at the same pace of reductions in nursing commission numbers and hold everything else constant, there is a very real risk of a workforce shortage. And of course, including other factors such as increased workloads, pensions reforms and changes in demand only adds further uncertainty and instability to the situation.

We only need look at the recent history of the NHS to predict the consequences of workforce shortages. The actions needed to avert this potential crisis are equally predictable. We simply cannot afford to return to those boom and bust cycles too often experienced in the NHS.

The RCN, in its response to the Department of Health consultation *Liberating the NHS: Developing the Healthcare Workforce*, called for a comprehensive workforce planning system and strategy, supported by national oversight of workforce planning and backed up with high quality data[1]. Following the pause in the Health and Social Care Bill, the RCN welcomes the Coalition Government commitment to taking more time to get future education and training arrangements right as this provides a crucial opportunity to enshrine these important principles.

The risks and consequences of getting workforce planning wrong are all too obvious: a return to the days of quick-fix overseas recruitment, downgrading of the current workforce and crude substitution between registered and non-registered roles. As an immediate first step, we advocate that the supply of registered nurses should be stabilised and the decision to cut nursing student places by 10 per cent for 2010/11 to 2011/12 reversed.

We are grateful to the researchers at Queen Margaret University for producing this thought-provoking report, which we hope will provide an important contribution to future policy development.

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[1] RCN Response to the Department of Health Consultation: *"Liberating the NHS: Developing the Healthcare Workforce (England)"*. Available at: www.rcn.org.uk/__data/assets/pdf_file/0009/372366/RCN_response_to_Developing_the_Healthcare_Workforce.pdf (accessed 12/07/11) (web).

Introduction

This interim report is taken from the forthcoming *Royal College of Nursing Labour Market Review* (LMR) 2011. This looks at the challenges facing nursing and the nursing workforce across the UK in 2011 which we believe are the greatest for a generation.

In order to shed some light on the current and future status of NHS nursing, this report examines different possible scenarios of the supply of NHS nurses in England over the next ten years. This scenario analysis enables us to examine a number of "what if" situations and model their effects on the NHS nursing workforce in England, allowing the examination of potential future changes, such as changes in retirement decisions, or the numbers of new nurses being trained.

This is an initial excerpt from the forthcoming LMR. While the LMR will contain more contextual information, this initial report highlights the main findings from scenario modelling.

1. Nursing workforce scenarios

As part of this exercise, eight scenarios have been selected and modelled. These are:

A "No change"- current inflows and outflows

B "Redundancies" - current inflow with higher outflow

C "Improved retention" - current inflow with lower outflow

D "Reduced training intakes A" - lower inflows with lower outflow

E "Reduced training intakes B" - lower inflow with higher outflows

F "Pension time-bomb "- current inflow with a higher rate of retirement

G "Pension delayed"- current inflow with a lower rate of retirement

H "Worst case" - lower inflow and higher outflow including higher retirement.

The starting 'stock'

The starting stock for all the scenarios is the NHS nursing workforce as recorded by the *NHS Workforce Census* 30 September 2010. We have used the headcount figure of 352,104 for qualified (for example registered) nurses, midwives and health visitors excluding bank nurses and practice nurses . The model uses headcount figures. Although part-time working is significant in nursing, data on full time equivalent numbers for flows (from education into the workforce and leaving the workforce) are not available.

Model outputs

Projections for each of the eight modelled scenarios are presented graphically below:

Scenario A represents a 'steady state' model. It projects forward staff numbers using the best available recent intake and outflow estimates. Using these estimates the model shows that the NHS nursing workforce would shrink by just over **1 per cent** a year. By 2021/22, the model predicts an NHS nursing workforce of about 309,300. This is a projected decline of **12 per cent** (42,800) over the next ten years.

Scenario B assumes higher rates of outflow (leavers, other than retirements, increase to 6.5 per cent). The effect is a fall of roughly **16 per cent** in the NHS nursing workforce over the period. By 2021/22, the model projects an NHS nursing workforce of around **296,000**, some 56,000 lower than at the start of the projection.

Scenario C assumes lower rates of outflows (leavers, other than retirements, falls to 3.5 per cent). The effect is enough to change the forecast from a deficit into a small increase. By 2021/22, the model projects an NHS nursing workforce of about 385,700, more than **9 per cent** (33,600) higher than at the start of the projection.

Scenario D combines the lower outflow of scenario C with smaller inflows from education. Initially the lower outflow means that the workforce grows slightly. However, from 2016/17 onwards, as lower student intakes start to take effect, the workforce reduces. Overall these effects balance each other out so that by 2021/22 the workforce is **marginally (1.9 per cent or 6,600) larger**.

Scenario E combines the lower intakes of scenario D with higher outflows (other than retirement). This combination of variables generates a very large reduction (almost 81,000) in the nursing workforce within ten years. This produces an NHS nursing workforce of just under **271,200** by 2021/22, some **23 per cent** smaller than now.

Scenario F combines current inflows and outflows with a higher rate of retirement. As a consequence inflows cannot match the outflows and the overall nursing workforce reduces by just over **61,000**, losing one in six nurses currently employed. By 2021/22 the workforce would be around **290,800**.

Scenario G combines current inflows and outflows with delayed retirement. Unlike the previous scenario this produces a comparatively small reduction, of **9,260 (2.6 per cent)** and a workforce in 2021/22 of **342,844**.

Scenario H represents the 'worst case' in which smaller inflows combine with higher outflows and a faster rate of retirement to shrink the nursing workforce very rapidly. Over ten years **more than a quarter** of the nursing workforce (99,000) would be lost leaving staff in post of just over **253,000** in 2021/22.

Table 1. Summary model outcomes

Scenario		NHS England: Staff in post 2021/22 (headcount)	Change on 2010/11	% change
A	Current rates	309,297	-42,807	-12.2%
B	Current inflow & higher outflow	296,083	-56,021	-15.9%
C	Current inflow & lower outflow	385,723	+33,619	+9.5%
D	Lower inflow & lower outflow	358,734	+6,630	+1.9%
E	Lower inflow & higher outflow	271,177	-80,927	-23.0%
F	Current inflow, outflow & higher retirement	290,783	-61,321	-17.4%
G	Current inflow, outflow & lower retirement	342,844	-9260	-2.6%
H	Lower inflow, higher outflow & higher retirement	253,088	-99,000	-28.0%

Labour market inflows and outflows

This section describes the assumptions behind the model and scenarios, explaining the possible changes to inflows and outflows to the nursing labour market.

Inflows – annual intakes to pre-registration nurse training

- Planned commissions in England for nursing and midwifery in 2011/12 are currently estimated at 20,495.

- Annual intakes to education are assumed to remain level for the next 10 years for scenario A (no change), scenario B (redundancies), scenario C (improved retention), scenario F (pension time-bomb) and scenario G (pension delayed).

- Scenarios D and E (reduced training intakes) and Scenario H (worst case) examine the impact of planned commissioned falling below current levels.

- Using figures obtained from the Nursing Standard from higher education institutions, we assume an attrition rate of 28 per cent.[2]

- Not all nurses who qualify go on to work in the NHS. By comparing the number of new qualified nurses aged under 25 in NHS employment (13,040 in September 2010 non-medical workforce census) with the number on the NMC professional register (15,200 as at March 2010) we assume that 85 per cent of all newly qualified nurses were working in the NHS in 2010. This is a crude figure but similar to other estimates. Applying the 85 per cent figure suggests that from a commissioning intake of 20,495 the NHS can expect to recruit around 12,540 nurses and midwives three years later.

- Table 2 shows places commissioned and estimated outcomes, assuming attrition rates of 28 per cent and NHS participation of 85 per cent up until 2011/12.

- From 2015/16 onwards, the number of new qualifiers entering NHS employment is fixed in scenario A (no change), scenario B (redundancies), scenario C (improved retention), scenario F (pension time-bomb) and scenario G (pension delayed).

[2] Waters A (2010) The question for universities: can they win the war on attrition? *Nursing Standard* 24 (24), pp. 10-13.

- Scenarios D and E (reduced training intakes) and scenario H (worst case) assume further reductions in places commissioned and subsequent inflow to employment of new qualifiers. These three scenarios assume an intake reduction of 11 per cent each year for three years. This figure is based on the actual reduction seen in the last major downturn in numbers commissioned (31 per cent between 1991/92 to 1994/95). This scale of reduction would mean the number of intakes falling from 18,445 in 2012/13 to 14,490 in 2014/15. Assuming no change in attrition rates, the number entering NHS employment from 2017/18 would be just under 8,000 (compared with 12,450 now).

Inflows – International nurses

- The international inflow of nurses to the UK has recently fallen due to a combination of reduced demand and stricter entry restrictions from non-EU countries.

- There were 2,000 initial entrants to the NMC professional register from EU countries in 2009/10 plus 550 from non-EU countries.

- We assume that 95 per cent work in England and that 85 per cent of these work in the NHS and this is a constant inflow in all scenarios.

Inflows – other labour market entrants

- We assume an annual inflow of 8,000 of nurses within the UK – people returning to practice after a break or from living abroad or new qualifiers who delayed their entry to the NHS. This is based on 28,348 new joiners among the nursing workforce, and taking out estimates of newly qualified joiners (18,000) and international inflow (around 2,000).[3]

- This figure is kept constant for all scenarios, but we acknowledge the possibility of a 'recession benefit' to the nursing labour market as more nurses come back into employment or increase working hours – however this is a situation which could not continue indefinitely.

Outflows – retirement

- Based on recent trends, likely patterns for retirement for the next 10 years are for all nursing staff aged over 55 and around 40 per cent of those aged 50-55 to retire in the next 10 years (a total of 40,722).

- The NHS Workforce Review Team's (WRT) modelling work predicts that the retirement rate will rise from 1.6 per cent to 2.9 per cent over 2011 to 2020.

- For scenarios A to E, we assume that the retirement rate remains constant.

- For scenario F (pension time-bomb) and scenario H (worst case), we assume that all those currently aged 50 and over will retire in the next 10 years.

- For scenario G (lower retirement) we assume that only those aged 55 and over will retire. Delayed retirement is already a feature of the ageing workforce in the NHS and may grow as a result of a weakened economy and possible pension reforms.

Outflows – other leavers

- Data from the NHS Information Centre shows that 28,697 nurses, midwives and health visitors left the NHS in England between January 2010 and January 2011 – an outflow of around 8.2 per cent.

- Removing the number accounted for by retirement outflows leaves around 22,000 other leavers or 6 per cent.

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[3] Information Centre (IC) NHS (2011) *Monthly NHS Hospital and Community Health Service (HCHS) Workforce Statistics in England - March 2011, Provisional, Experimental Statistics.*
Available from: www.ic.nhs.uk/pubs/provisionalmonthlyhchsworkforce (accessed 12/07/11) (Web).

- This 6 per cent figure is kept as a constant in scenario A (no change).

- We assume it increases to 6.5 per cent in scenario B (redundancies), scenario E (reduced training intake) and scenario H (worst case). The 6.5 per cent is within the range recorded by Office for Manpower Economics surveys conducted for the NHS Pay Review Body.[4]

- We assume this figure to fall to 3.5 per cent for scenario C (improved retention), and scenario D (reduced training intake) due to improved retention rates. The 3.5 per cent figure is used by the WRT for the years 2009 to 2020 in its model of the nursing labour market.

Table 2. Nurses and midwifery education: intakes and outcomes 2009/2010

Start year (September)	Places commissioned	Qualification year	Newly qualified (June)	Enter NHS employment
2009/10	21,746	2012/13	15,657	13,309
2010/11	22,473	2013/14	16,181	13,753
2011/12	20,495	2014/15	14,756	12,543

[4] Buchan J (2008), *Nursing Future, Future Nurses*, Queen Margaret University Edinburgh.

Conclusions

These projections highlight the vulnerability of the size of the NHS nursing workforce to policy changes, particularly in terms of the numbers of education places being commissioned and the impact of changes to pensions and retirement policies. For example, if reforms to NHS pensions lead to more nurses remaining in employment for longer, the nursing workforce could, despite a lower intake from education, shrink comparatively little (2.6 per cent over ten years). Conversely, if these reforms result in a short-term rise in the numbers taking retirement then the NHS could face a rapidly diminishing nursing workforce and staffing shortages.

Until now, the most recent workforce supply modelling is that undertaken by the NHS Workforce Review Team (WRT) released in June 2009. The nursing model projected a decline in headcount from 382,496 in September 2008 to 340,116 in September 2020. Conversely the midwifery model projected an increase in headcount from 25,664 in September 2008 to 28,118 in September 2017. Assuming the numbers in midwifery remain constant thereafter, this implies a combined staff-in-post of 368,234 by 2020. This represents an overall decline of almost 9.8 per cent over the period. This is due, in large part, to the sharp reduction in education commissions in the middle of the last decade. However, as our own projections illustrate, small changes in assumptions can make a substantial difference to the outcomes and it is unwise to base policy decisions on a single projection particularly when source data are far from robust, and when decisions on commissioning numbers can fluctuate significantly year on year.

Using more recent data and a variety of assumptions, we have illustrated how vulnerable NHS nursing staff numbers are to changes in policy. What the projections cannot do, but raise as important issues for debate, is to assess the impact of decisions on changes in career structure, skill mix, productivity or demand.

Policy makers in the four UK countries have important decisions to make about the allocation of NHS funding and priorities. This extract from the 2011 LMR highlights that past decisions by policy makers to reduce intakes to pre-registration education have created nursing shortages. This cautionary note reinforces the point that policy makers continue to have significant control over the major levers that will determine future supply of nursing staff to the NHS.