FEBRUARY 2004

MEDICAL WORKFORCE

# Workforce Planning Initiative Medical Review

Department of Health, Social Services and Public Safety
An Roinn Sláinte, Serbhísí Sóisialta agus Sábháilteachta Poiblí

## Introduction

**This document is a summary of the Comprehensive Review of the Medical Workforce, March 2003. The review was co-ordinated by a Project Group, which comprised representatives of the DHSSPS, providers, education, commissioners and British Medical Association representation. The report includes a profile of the current workforce, a projection of the supply and demand within the HPSS workforce over the 10-year period 2003 - 2013, and recommendations to address issues arising from the review. This information is vital to assist the Department primarily in developing strategies that will ensure that the correct numbers of professionals are trained, in place and working effectively to offer the maximum benefit to patients and clients.**

The aim of the review was to investigate, within the context of workforce planning and deployment, current and future supply and demand factors that will impact on the delivery and development of professional medical services over the next 10 years.

## Methodology

Various stages were utilised to undertake this review:

- an audit to identify the staffing profile and characteristics of the current workforce;
- background research conducted involving a literature review, policy document review, and a review of Trust and Commissioner strategies to identify proposed capital and service developments or changes;
- consultation with stakeholders in the form of 26 Key Informant interviews with relevant personnel across the medical workforce.

**The review set out the following key elements:**

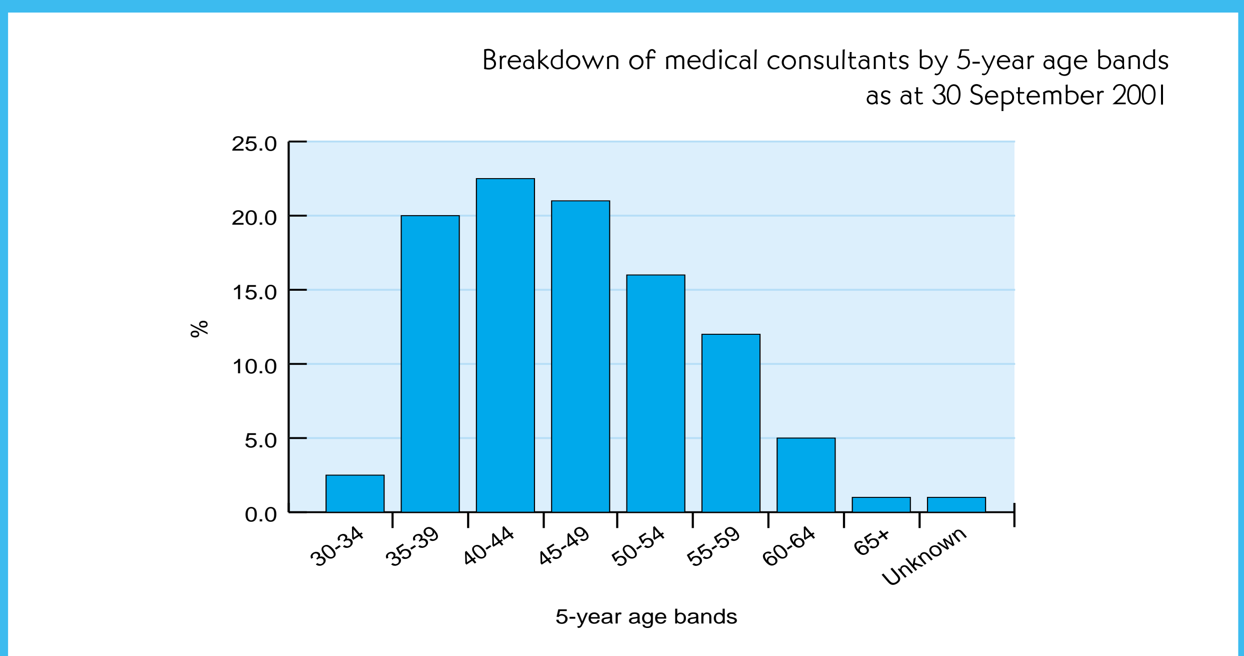
- the estimated number of medical professionals required over the next 10 years;
- a model based on explicit assumptions to predict trends in the supply and demand of medical professionals;
- a model identifying the parameters that will impact on the supply and demand of these professionals within the context of developments both within the professions and in the wider operating environment including economic context and society's requirements; and identifying current and indicative future trends in the development of these.

# Key Findings of The Review

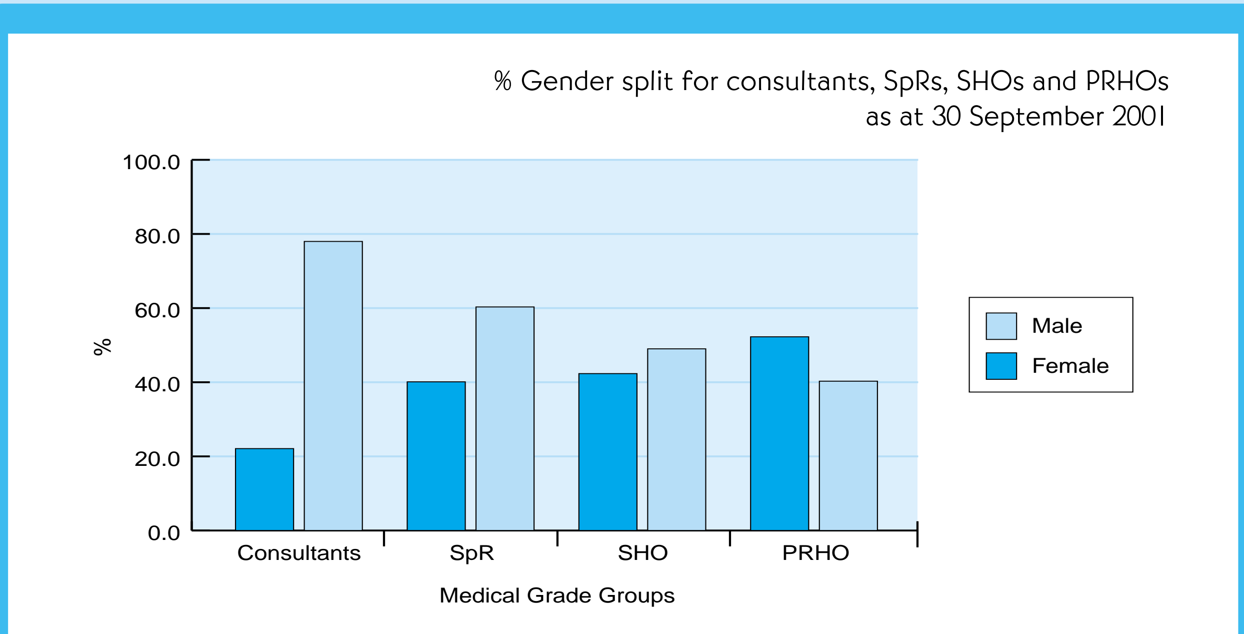
## Workforce Structure

The data used for the review was the HRMS Payroll Information as at September 2001 as supplied by the DHSSPS, supplemented by information supplied by the Northern Ireland Council for Postgraduate Medical and Dental Education (NICPMDE) and the Central Services Agency (CSA). All figures quoted are in headcount.

- **Consultant Medical Staff by Age**



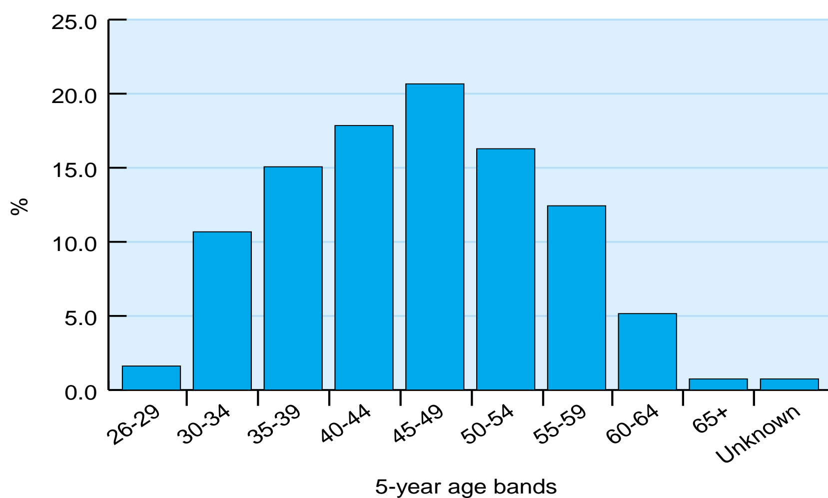

- **Consultants, Specialist Registrars, Senior House Officers and Pre-Registration House Officers: Gender Split**



## Other Medical Practitioners

This group consists of staff classified as Associate specialists, staff grade doctors, hospital practitioners, general/medical practitioners and medical officers, that were employed on a sessional basis. Unlike the Consultant grade, almost 50% of this group of doctors are female and almost 90% work part-time.

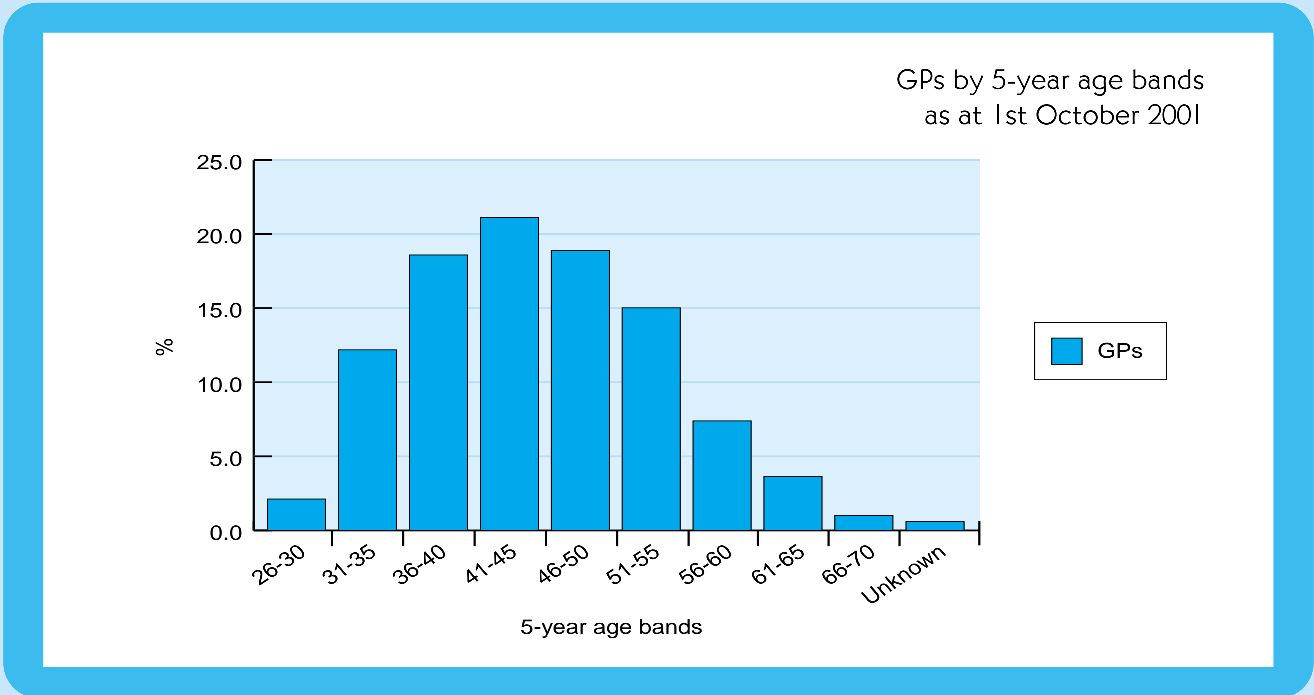
## Other Medical Staff by Age




## General Practitioners by Gender and Full-Time/Part-Time Split

There were 1,069 principals, of whom 33% were female. Amongst women GPs, 41% work part-time, as do 8% of their male colleagues. There were approximately 160-180 registered GPs in NI who were not working as GP principals, many of whom worked on a sessional or locum basis.

## General Practitioners by Age




# Supply and Demand Issues

## Supply Issues

Set out below are the key perceived supply issues raised during stakeholder interviews.

### *Consultants*

There were recruitment and retention difficulties for consultants, manifesting as early retirement or posts proving difficult to fill. Factors contributing towards this include:

- high levels of on-call, compounded by reducing junior doctors' hours of work;
- poor infrastructure in some Trusts, for example the physical estate, or lack of theatre time or nursing support.

These factors were particularly relevant at the smaller acute sites.

### *UK shortages*

There were a number of specialties, such as radiology, anaesthetics and laboratory medicine, where there were significant shortages in consultant staff throughout the UK. These shortages were replicated locally.

### *Queens University Belfast Medical School*

In recent years the number of medical undergraduate places has been increasing at Queens University, at a steady but limited rate, and now the School has reached full capacity.

### *In-Service Training*

Some perceived the capacity for in-service training as a major constraint restricting the system in its ability to produce more consultants in the short-term. However, it was felt that this factor applied to a limited number of specialties.

### *Male/Female split*

More than 60% of new undergraduate medical students were female, as compared to 22% of consultants.

### *General Practitioners*

There was no immediate shortage of GPs in the Province. However, both the changes proposed to the GP contract and the move to a more primary care focused pattern of service delivery were considered significant determinants of the number of GP posts required.

## Demand Issues

Set out below are the key perceived demand issues raised during stakeholder interviews.

### *Service Pressures*

Acute services were experiencing increasing pressures as a result of:

- changing demographics;
- increased public expectations;
- changing care needs;
- advances in medical technology;
- legislation governing working conditions; and
- quality improvement such as clinical governance.

Primary care is experiencing pressure from areas such as:

- care in the community;
- health promotion;
- screening of high risk groups;
- treatment and management of chronic disease.

These are inextricably linked with the current drive to develop the role of primary care to achieve greater integration of service delivery with secondary.

### *Service Configuration*

A fundamental determinant of the number of staff, particularly medical, is the number and distribution of services provided on a 24-hour, 7-day per week basis. The publication of *Developing Better Services* sets out the proposed future pattern of such services.

### *Changes to GP and Consultant Contracts*

The new General Medical Services Contract will impact on working patterns and service delivery and, consequently, on the numbers required in the workforce.

### *Specialisation vs Generalisation*

Training provision and the impact of clinical governance and quality standards were some of the factors driving towards increased specialisation, which had to be accommodated alongside provision of acute out-of-hours systems. Increased specialisation reduces the flexibility of the workforce to meet services changes and demands.

### *New Ways of Working*

Significant work has taken place throughout the UK to look at new ways of working, primarily driven by the need to ensure compliance with the New Deal and as part of the modernisation agenda. Experience so far in Northern Ireland has shown that a major limiting factor in taking some of this work forward is the shortage of nurses and other healthcare professionals available to fulfil alternative or additional roles.

## Projected Supply and Demand Conclusions

### *Data Modelling*

A series of assumptions was developed with the Steering Group and applied to the data collected:

**Retirements:** average retirement age of 62 dropping steadily to 59 after ten years.

**Other Leavers:** the DHSSPS analysis of percentage of staff leaving in 2001 (excluding retirements): Consultants - 3%; NCCG - 5%; SpR - 4%; SHO - 4%; PRHO - 1%; Other - 8%; GPs - 1%.

**Current Vacancies:** consultants 8%; SpR and PRHO 0%; SHO 20 vacancies; and GP Principals 0%.

**Additional staff to accommodate Work/Life Balance:** consultants, GPs and SpRs. It is assumed additional doctors will equate to 1% of the workforce per annum and that this percentage will rise steadily to 2.5% per annum over ten years. For all other staff groups an increase of 1% per annum was assumed.

**Working Time Directive:** the impact on Consultants and GPs was included in the workload increase figures (see below). For SpR, SHO, PRHO and full-time Staff Grades a 14% increase was identified from 2003/04 and a further 14% required from 2008/09. For SHO and PRHO posts the impact was considered to reduce by a third as a result of a transfer of workload to non-junior doctor staff.

**Workload Projections:** an increase of 40% in Consultants and 25% in GPs over ten years has been assumed, along with a 30% increase in NCCG posts over the first five years. Sensitivity modelling has also been carried out on an increase of 60% of Consultants and 40% of GPs.

**Annual Completion of Training Grades:** it was assumed that it takes 1 year to complete PRHO training, 4 years to complete SHO training, 1 year for GP Registrar training and 5 years for SpR training.

### *Data Models*

The following tables set out the results of the data modelling for each staff group. They show the requirement and the forecasted shortfalls for staff each year based on additional service requirements at each grade of staff:

**Projected Requirements for Staff per annum**

| | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
|---|---|---|---|---|---|---|---|---|---|---|
| Consultants | 136 | 137 | 101 | 112 | 112 | 112 | 125 | 126 | 127 | 137 |
| GPs | 75 | 77 | 80 | 87 | 83 | 89 | 98 | 105 | 107 | 114 |
| SpR | 118 | 133 | 139 | 144 | 149 | 154 | 163 | 169 | 176 | 181 |
| NCCG | 34 | 32 | 29 | 23 | 20 | 15 | 20 | 17 | 17 | 21 |
| GP Reg | 75 | 77 | 80 | 87 | 83 | 89 | 98 | 105 | 107 | 114 |
| SHO | 226 | 243 | 241 | 246 | 251 | 256 | 265 | 271 | 277 | 283 |
| PRHO | 216 | 221 | 226 | 231 | 236 | 240 | 246 | 252 | 258 | 264 |

| Shortfalls in Requirements for Staff per annum based on the assumptions detailed | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2002/03 | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 | 2009/10 | 2010/11 | 2011/12 |
| SpR | -42 | -42 | -2 | -9 | -5 | 0 | -8 | -4 | 1 | -4 |
| SHO | -47 | -58 | -56 | -57 | -50 | -51 | -69 | -73 | -76 | -86 |
| GP Reg | -33 | -2 | -3 | -7 | 4 | -2 | -9 | -7 | -2 | -7 |
| PRHO | -38 | -29 | -22 | -22 | -22 | -23 | -27 | -27 | -27 | -27 |
| Graduates | -33 | -48 | -57 | -62 | -56 | -60 | -66 | -72 | -78 | -84 |

### *Sensitivity Analysis*

Sensitivity analysis was carried out on three areas: age of retirement; length of time spent at each training grade; and the increase in Consultants and GPs needed to cover increased workload. All of these had a significant impact on the numbers required at each grade and, therefore, highlighted the need for continuous review of the numbers as new information emerges.

# Recommendations

## Modelling and Overall Results

All of the modelling indicated a need to increase immediately the number of graduates available to fill future posts, and an under-supply of newly qualified SpR staff in the short term.

## Shortfall in New Consultants

Work needs to be carried out in the short term to review potential ways to fill the immediate gap in Consultant posts until additional staff can be trained. Areas that should be considered include:

**Retaining existing Consultants:** ways should be reviewed to encourage existing staff to remain in the health service beyond their current retirement plans. This also enables very experienced staff to be retained within the service to assist in training additional doctors. Work also needs to be carried out to ensure that NHS pension arrangements are such that consultants are not discouraged to take on different work patterns because of the potential impact on their pensionable salary.

**International Recruitment:** Northern Ireland should ensure it remains aware of UK-wide initiatives to attract suitably qualified staff from abroad, either on a temporary or permanent basis.

**NCCGs:** experienced NCCG staff may have the potential to be fast-tracked to Consultant level, and this should be reviewed on a specialty basis. There is the potential to develop the roles of NCCGs in Northern Ireland and to utilise their skills and experience to support the Consultant role.

**GPs:** the role of the general practitioner and the NCCG should be explored to identify opportunities to create posts that combine and expand roles. It has been suggested that these posts would encompass more sessions in hospital and provide care in more stages of the patient journey.

**Other Staff to Support a Consultant Delivered Service:** alternative roles to support the medical profession should be explored and developed from other health care professions.

## Infrastructure Development

The solution to the shortage of medical staff does not lie solely in increasing and changing the skill-mix of clinical teams. Ways of supporting the infrastructure should be developed further to ensure that medical skills are fully utilised and deployed. In particular, the vital role of administrative and clerical staff, and that of information and communication technology, should be improved to reduce the burden of administrative tasks currently undertaken by clinical staff.

## Training Numbers - Specialist Registrars

Work should be carried out at a specialty or sub-specialty level to determine where there is potential to increase training grade numbers, especially SpR numbers in the short term, whilst ensuring criteria for training are met.

## Medical School

The requirements for expanding the capacity at Queens Medical School to 250 students per annum should be determined, including a potential timescale for delivery. The potential for attracting graduates to the PRHO programme from the rest of the UK and the Republic of Ireland should also be explored, especially given that many Northern Irish medical students study in Great Britain, and there is a planned expansion in student numbers across the UK as a whole (at the time of publication, discussions have commenced with Queen's University with a view to expanding medical intake to 250 per annum).

## Additional Teaching Capacity

Any additional investment in training grades requires a review of the cost and infrastructure available for teaching, not only in the educational system as mentioned above, but also in the health service, where additional funding will be required to support the necessary increase in in-service training provision.

## Family-Friendly Policies/Flexible Training

The availability of family-friendly policies and flexible training patterns needs to be extended if we are to retain the high number of females currently coming through medical school. A review should be carried out to determine ways in which this can be achieved in a cost-effective manner.

Further research should be carried out to obtain definitive data to support future modelling assumptions, such as planned retirement ages, reasons for leaving and requirements for additional posts to cover work/life balance.

## Service Strategies

In the short term, networking arrangements across the Province should be encouraged to alleviate the most severe pressures on services. As new and developing service plans and strategies emerge, workforce needs will require continual review.

## Further Workforce Planning at Specialty Level

A more detailed planning process should be carried out on a specialty basis to enable more detailed assessment to be made of service issues and allow alternative service configurations to be modelled.

## Conclusion

Progress has been made on some of the recommendations to date.

In response to the recommendation to expand the QUB medical school the DHSSPS/DEL/QUB Joint Strategic group agreed that a review of the medical school would be timely. Hence a working group with representation from DHSSPS/DEL/QUB was established mid-2003 and is due to report early in 2004. The proposed increase in medical student intake at QUB of 82 per annum represents an increase of approximately 48%. An expansion of this scale has implications beyond funding of students: namely physical accommodation; clinical, academic and support staffing levels; research performance; teaching of students and pre/post registration junior doctors.

QUB is in the process of preparing a business case to identify additional capital and revenue implications associated with the proposed expansion. The Department is working closely with QUB to progress the business case as quickly as possible.

In recognition of the urgent need to increase the number of doctors in Northern Ireland, the Department is also in discussion with QUB about the possibility of increasing the medical student intake on a 'one-off' basis in the 2004/05 academic year, in advance of completion of the business case process. QUB is exploring the feasibility of this project.

Additional training capacity in the SpR grade was generated by investment in additional clinical training posts and allocating training numbers to those undertaking research as part of specialist training.

In conclusion, it must be emphasised that this review provides a baseline from which an action plan must be developed to enable the implementation of the recommendations outlined. In addition, the workforce data and projections presented will be subject to regular review and updating as further and more up-to-date information becomes available. By actively reviewing the workforce planning model, a mechanism exists to inform strategic decision-making about the Medical Workforce within the HPSS for the future.

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