

**National Children's Specialist Services**

**Workforce sub-group**

**Final Draft**

**November 2007**

## Executive Summary

- The demography of Scotland will have an impact on the available workforce and models of care for the future.
- New models of care will require a different set of skills and competencies and working patterns.
- Workforce requirements for doctors in specialist roles can be planned at a national level but it is more difficult for other professions.
- An integrated approach to workforce plans for children's services between Regional Child Health Planning Groups and NHS Boards is required to ensure their nursing and AHP requirements are addressed.
- Data quality and refinement of data is not fit for purpose and should be addressed nationally.
- Groups should be encouraged to share data, where possible and appropriate.

### Medical Staff

- The data reported within in this report is the best available but may continue to contain some inaccuracies.
- In January 2007, the Scottish paediatric medical career grade workforce was made up of 384 doctors. Of these, 220 were consultants, 146 were Staff and Associate Specialist grade doctors and 14 were other grades, mainly academics.
- Consultants comprise 57% of the paediatric medical workforce.
- The census identified 57 consultants (26%) working as specialists, which means that they spend 100% of their time in sub-specialty paediatrics.
- 19 Consultants (8.5%) work 100% in general paediatrics.
- Those working 100% community paediatrics comprise 19 Consultants, 59 SAS grades and 3 other grades.
- There are few SAS doctors in sub-speciality paediatrics.
- The number of paediatricians reported as spending at least 75% of their time in community paediatrics is 124 (39 Consultants).
- The majority of doctors in paediatrics are female, with close to 63% across all career grades.
- Among Consultants aged 55 years or over, men outnumber women by more than two to one.
- 64 doctors are over 55 years of age, 30 men and 34 women.
- 33% of community consultants (working 75% or more in the community) are aged 55 years or over.
- At risk specialities, in terms of age, include Dermatology, Diabetes, Haematology, Nephrology, Neuro-disability and Rheumatology.
- If it is assumed that those doctors who are aged over 55 years and work full-time are replaced in such a way as to retain the current service commitment, between 4.95 and 7 wte additional doctors are required.
- The age profile in some DGHs is also of concern and could lead to non-viable roles and migration of specialist cases currently managed locally.

- In Teaching Hospitals, the majority of doctors are aged less than age 54, although 26 senior doctors are aged 55 or older. However, no age is stated for 37 doctors and could mask a problem.
- Service commitment by academics could be at risk, with 31.25% aged 55 or over and no guarantee of replacement, particularly paediatric respiratory medicine.
- 70% of Consultants work full time.
- The number of Consultants reported to exceed 48 hours per week is 13.3%.
- General surgery of childhood is facing a significant workforce challenge. Not least, a proposal to introduce new curricula for training as early as next year and not yet planned.
- Competency based workforce planning could help but not progressed.
- If CT standards are to be met NHS Scotland needs to invest £1.3m in 19.5 wte staff.
- Not all specialist service reports have been considered but of those that have, there is a recommendation for a further 27.95 wte staff. Assuming that other specialities identify similar increases, questions must be asked about the achievability and affordability of these proposals.

## Introduction

'Delivering a Healthy Future'<sup>1</sup> identified a range of issues that could affect the sustainability of specialist services for children across Scotland. In addition to the specialty specific issues identified in the report, there were also a number of cross cutting issues, including workforce. Workforce sustainability is key to future service sustainability is key to future, and a sub-group was therefore established to review the workforce at a strategic level and to make recommendations for the future. Group membership is detailed in Appendix 1.

The workforce challenges faced by specialist children's services mirror those in adult services, but given the small numbers employed, especially supporting specialty services, the problem is magnified. Whilst geography is important, the problems do not necessarily differ across the different geographical areas of Scotland but that does not mean that there will be one solution pan-Scotland that will resolve all difficulties.

The changing models of care identified for Specialist Paediatric Services have implications for the workforce, both in terms of the way the workforce is organised and the flexibility required. Obligation to provide support between levels of care will be essential and this has implications for the way jobs are constructed and expectations of the NHS Boards, particularly for unscheduled care.

The role of Networks, both traditional Managed Clinical Networks or emerging Service Delivery Networks, has particular relevance to children's services and these will require to be appropriately resourced in terms of workforce, funding and IT. Working as part of a network does mean that roles, responsibilities and the way in which people work will be different. This will be most obvious for doctors.

The need for specialist nursing and AHP roles has been highlighted by a number of specialist services, but it is even difficult to identify current staff in such roles. Training for specialist roles is an issue, particularly for AHPs where there is little or no training for these roles.

There are also a number of issues relating to the training of doctors, especially in sub-speciality and for roles where doctors have a special interest. The contribution of clinical academics to service delivery is also an issue.

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<sup>1</sup> (2006) "Delivering A healthy Future: An Action Framework for Children and Young peoples Health in Scotland" Scottish Executive. Astron B44712 04/06

In some services, particularly cancer services, there is a reliance on the voluntary sector. Whilst these still provide a valuable role, there are particular issues around long term funding and therefore sustainability of the model of care.

Workforce planning must be within the context of service planning, however, on a national level there needs to be a consistent approach and this has not necessarily been evident in the reviews to date.

This group was established at the same time as specialty specific groups and this may have been too early. The work we have undertaken considers primarily the medical staff needs and should support workforce planning for doctors. Little information has been made available for other professions, although it may be that this is better defined bottom up, by specialty.

The service reviews need to be completed using a common approach and from this a second phase of work could be completed. The National Review of Specialist Children's Services group should be aware however that the majority of those who work in children's services have generalist roles. A specialist role, especially outwith the four children's hospitals, tends only to be a proportion of that role and sometimes a very small proportion. Role integration, however, remains vital for service sustainability. This makes a nationally led workforce planning exercise very difficult and we would recommend that an integrated approach between Regional Child Health Groups and NHS boards is required as a minimum.

## **Drivers for Change**

A number of drivers for change affecting the workforce in specialist children's services can be identified including:

### **Demographics**

The Scottish population is ageing and so is the NHS workforce. An older workforce raises two potential risks: experiential loss and the relatively unlikely possibility of replacing like with like.

Children and young people make up approximately 20% of the Scottish population (935,000) and it has been predicted that the population in the 0-15 age group will fall. Recent data shows that births, in some areas, have been increasing over the last few years, although this is not consistent across the country as a whole. In some areas, for example, the Western Isles, the population of young people is expected to fall by 38% by 2018, whereas the population of young people in Glasgow and Lothian are predicted to rise.

Demography within the 0-15 age group is also changing. Premature babies are surviving longer, often with complex health needs which impact on the skills and competencies of the current and future workforce.

These demographic changes will impact on the type of workforce required and the skills and competencies required. Immigration, increasing survival of children with complex needs and the potential changes to caseload in different geographical areas have implications for the way in which children's services are provided and the skills of the health professionals who will care for them. It also has implications for the way in which services should be planned and sustained in the future.

### **Changing Models of care**

Models of care for Specialist Paediatric Services for the future are more likely to be modelled on a network approach, planned and delivered at essentially two levels i.e. regional and national. Managed networks of care and shared care approaches will be appropriate but must be flexible enough to take account of the peaks and troughs of activity. This will require alliances between specialist centres, general paediatric units within District General Hospitals and other services where children will be admitted but there are no specialist paediatricians on site e.g. Rural General Hospitals and Community Hospitals. In these circumstances, the networks will need to support delivery of service, training and education, and crucially support the emergency response.

The role of Networks has particular relevance to children's services where there are smaller patient populations and challenges in ensuring sustainability of services across Scotland. These networks may be organised as traditional Managed Clinical Networks or as Service Delivery Networks, but will in the future need to see an element of obligation, which has not hitherto been seen, and this has important implications for the way in which the workforce is organised.

A number of networks are already in operation at a regional or national level and further services have been identified where a networked approach may be suitable. These networks however will require to be appropriately resourced in terms of workforce, physical and technological infrastructure and funding and not all of those currently in existence are adequately resourced. Workforce is perhaps the biggest challenge, however, given the nature of small professions.

A flexible workforce with a range of skills and competencies within the team will be required. This will include very specialist skills, more general skills and new skills such as remote diagnosis, supporting clinical decision making in a non-specialist workforce, etc. Increasing flexibility and modern communication technology and techniques will support local care, extend the availability of the specialist workforce and allow the wider workforce to develop new skills and maintain these. This will include new

roles, the introduction of amended roles or changed patterns of work. Obligation to support will also have implications for the way in which services are organised and people work.

There are also practical issues on organising a workforce on a regional basis, including the difficulties of appointing clinicians on a regional basis and the need to be processed for disclosure in every Board.

### **The Consultant Contract**

Hospital doctors are employed under a specific contract for hospital consultants which was introduced, in April 2003, and aimed to link consultant pay rates more closely to the number of hours worked and to give NHS organisations more say in consultants' clinical activities through an annual 'job planning' process. If implemented correctly, this will reduce the time available by specialist staff to cover a rota, especially as many staff retain a 12 PA contract which is greater than full time. This has implications for replacement of doctors when replaced a 10PA contract doctor.

### **MMC**

Another significant reform has been the ongoing modernisation of medical careers, which changes the way junior doctors are trained. The first phase implemented 2 years Foundation training for all doctors before moving into specialty training. Within Paediatrics there has been a move to determine specialty training numbers on an all Scotland basis. This is practical given the small number of trainees but could have an impact in local systems in delivery of direct care. MMC is intended to move towards trained doctor delivered care but the transition phase could have an impact on the direct care commitments of Consultants.

The longer-term benefits of shortened training times and supported expansion of Consultant numbers will improve the service but the Consultant delivered service will require enhanced multi-disciplinary team working and role development for all and this will take time to achieve and in some circumstances the need is yet to be defined and even where defined - the training programmes developed.

### **Working Time Regulations**

Compliance with the requirements of the working time regulations have proven challenging for the NHS, particularly for senior medical staff who should already be compliant. By 2009, all doctors in training will also come under the purview of the regulations, which amongst other things will limit the working time available to an average of 48 hours per week. This legal requirements will have an unequal burden on specialist staff, given the small numbers of staff available to cover a 24/7 roster and may require additional 'trained' doctors.

### **Agenda for change**

Due to the scale and complexity of the job evaluation process, it is difficult to assess the exact effect of Agenda for Change on the specialist paediatric workforce but it will undoubtedly have an impact. There is already evidence of variance between bands of specialist nurses e.g. ANNPs banded differently in different regions and specialist nurses with variance in banding within NHS Boards. Agenda for Change requires implementation of an annual appraisal process supported by personal development plans for each staff member, which will support staff to progress through the pay band by improved knowledge and skills. This has implications for staff management and staff time out from direct care.



## **Data collection**

The group attempted to collect workforce data through a census but was only successful in collecting data about Doctors.

### **Medical workforce**

Nationally collected data<sup>2</sup> identify consultant staff and may identify whether a consultant has a specialist role but it is not sufficiently refined to collect a sub-speciality interest data. A census, adapted from a format used by the Royal College of Paediatrics and Child Health, was therefore undertaken at 1<sup>st</sup> January 2007, to establish a baseline of Career grade staff including, general/specialty split, special interest, base location, age and gender. This has identified the percentage contribution of the generalist paediatricians to specialty care. The census is discussed in detail in the next section.

### **Nursing and AHP workforce**

Nationally collected data identifies nurses who have a specialist qualification but there were concerns within the group as to the accuracy of this information and the inclusiveness. There are a number of staff who work in specialist roles, who do not have a formal qualification and for the purposes of this exercise it was seen as crucial that this information was collected. A similar census to that developed for medical staff was developed and agreed by this Specialist Services Workforce Group to be undertaken to provide information on the levels of specialist practice in Scotland, however, it was noted that this would be difficult to determine and success was not guaranteed.

The pilot of the questionnaire was not successful and it also became evident that a number of other work streams were also collecting specialty specific workforce information as part of their ongoing reviews. The group therefore sought to avoid duplication and review the data collected as a first step. The group would suggest that a sharing of the data collected by NHS Scotland might be appropriate, especially for services that are to be planned at an all Scotland or regional basis. The exercise has highlighted the need to improve the quality of workforce data collected within NHS Scotland in relation to specialist services.

Some of the service specific data is discussed later in this report, which does identify needs, however this data is incomplete, as it does not cover all sub-speciality reports. It does however lead to questions surrounding the overall affordability of the emerging model for Scotland. It would be helpful if data be shared e.g.: data collected by the paediatric group of the nursing workload project.

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<sup>2</sup> Reference ISD

## **Medical Workforce Census**

A total of 15 census questionnaires (see Appendix 2) were sent to Clinical Directors of Child Health (or equivalent) in all NHS Boards providing child health services and employing career grade paediatricians. A total of 12 (80%) forms were returned by 31st May 2007. Data from the questionnaires were entered on to an Access database and analysed using Access and MS Excel where appropriate. Whilst the response rate is good, the picture is incomplete and there were a number of data quality issues in the returns. The majority of these have been addressed but it does mean that data presented may be inaccurate.

## **Workforce Numbers**

In May 2007 the Scottish paediatric career grade workforce was made up of 384 individuals. Of these, 220 (57%) were consultants, 146 (38%) were staff and associate specialist grade (SAS) doctors and 14 (3.8%) were other grades, mainly academics. A breakdown of the career grade workforce by NHS Board is shown in Table 1 below.

	Cons	SAS Grades				Academic			TOTAL
		AS	SG	SCMO	CA	Prof	Snr Lec	Reader	
<b>NHS Board / Region</b>									
Grampian	21	4	13			1	2		41
Highland	8	1	4						13
Tayside	14	5	10	1		2		3	35
<b>NORTH</b>	<b>42</b>	<b>10</b>	<b>27</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>89</b>
Greater Glasgow & Clyde	78	8	22			2	3	1	114
Lanarkshire	13	5	13	1					32
Dumfries & Galloway	6	1	3		3				13
Ayrshire & Arran	8	1	13						22
<b>WEST</b>	<b>105</b>	<b>15</b>	<b>51</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>181</b>
Fife	9	5	6						20
Forth Valley	6	0	3						9
Borders	4	3	1						8
Lothian*	53	11	9			1	1		75 (77)
<b>SOUTH EAST</b>	<b>72</b>	<b>19</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>112</b>
<b>TOTAL</b>	<b>220</b>	<b>44</b>	<b>97</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>4</b>	<b>382*</b>

\*2 grades not given = 385 total

Key

SAS grades

AS Associate Specialist  
 SG Staff Grade  
 SCMO Senior Clinical Medical Officer  
 CA Clinical Assistant

Academic grades

Prof Honorary Consultant  
 Snr Lec Honorary Consultant  
 Reader Honorary Consultant

**Table 1: Workforce numbers**

This shows that 23% of medical staff works in the North, 30%<sup>3</sup>, in the southeast and 47% in the west.

## Grade by NHS Board

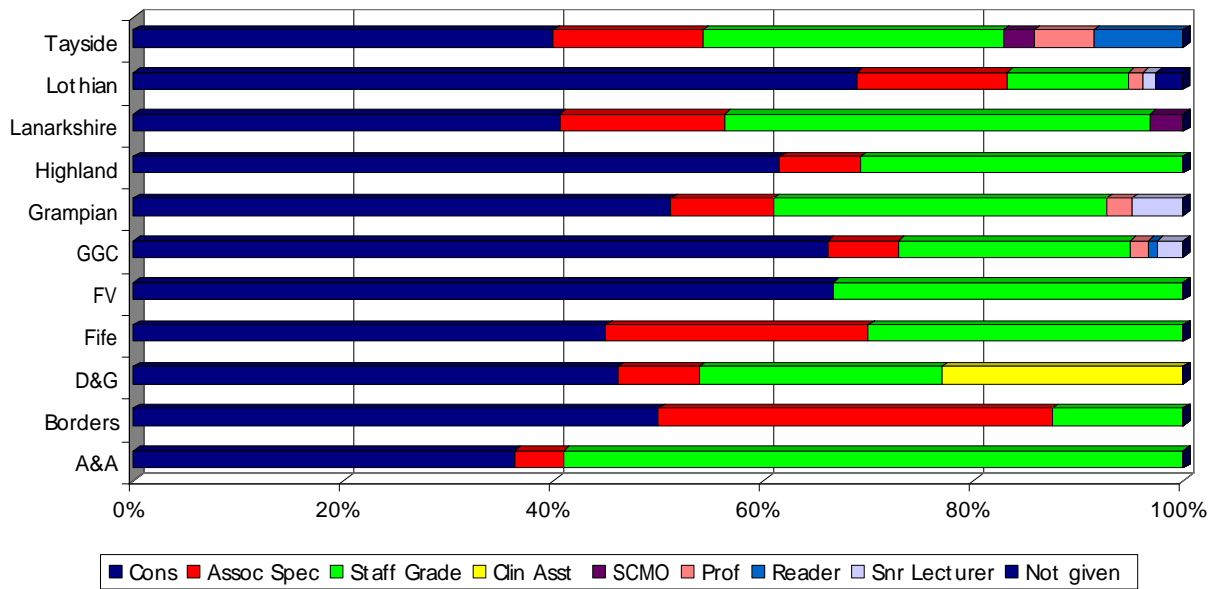


Chart 1: Workforce by NHS Board

It is interesting to note the reliance on non-consultant career grade doctors within DGHs in particular.

## Consultants by Board area

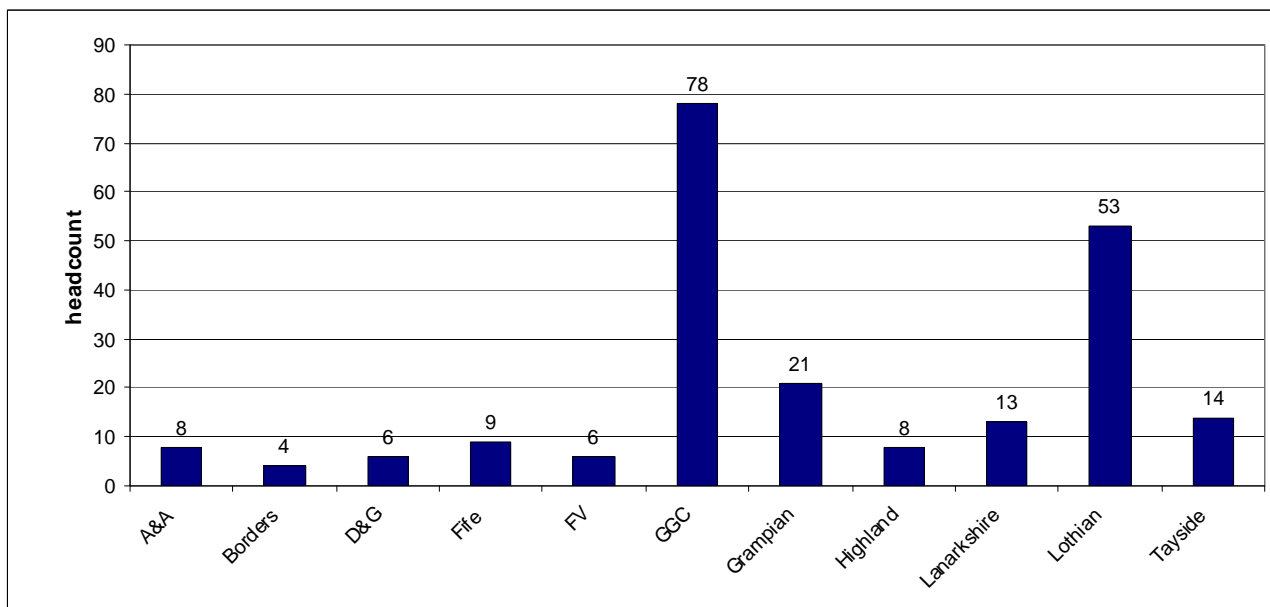


Chart 2: Consultant staff by NHS Board

As might be expected the majority of the consultant staff work in the Boards with a specialist children's hospital, although 53 doctors (24%) work in DGHs. In these hospitals, there are small numbers of paediatricians to cover rotas and are likely to have a mix of general paediatrics and special interest. 35% of the consultant workforce is based in Glasgow, 24% in Edinburgh and 9.5% and 6.4% in Aberdeen and Dundee respectively.

## Job Type

Clinical Directors were asked to classify paediatricians in their Board into the following groups:

- Consultants working as specialists in a tertiary centre.
- General paediatricians spending close to 100% of their time in acute paediatrics.
- Community paediatricians spending close to 100% in community paediatrics.
- General paediatricians undertaking community work for approximately 25% of their time.
- Paediatricians spending approximately equal time in general and community work.
- Community paediatricians spending approximately 25% of their time in general paediatrics.
- General paediatricians spending approximately 25% of their time in acute paediatrics.
- Paediatricians spending approximately equal time in General and subspecialty work.
- Specialists spending 25% of their time in general paediatrics.

The results are summarised in Table 2 below.

	100% Specialty	100% General	100% Comm	75%Gen 25% Comm	50%Gen/ 50% Comm	25%Gen/ 75% Comm	75% Gen/ 25% Specialty	50%Gen/ 50% Specialty	25%Gen/ 75% Specialty	Non response
Job type	1	2	3	4	5	6	7	8	9	
Cons	57 25.9%	19 8.6%	18 8.2%	10 4.5%	3 1.4%	21 9.5%	24 10.9%	17 7.7%	24 10.9%	27 12.3%
AS	2	2	17	0	0	10	1	0	1	11
SG	2	6	23	0	0	10	2	1	1	29
SCMO	0	0	2	0	0	0	0	0	0	0
Clin Asst	1	1	0	0	0	1	0	0	0	0
Prof	3	0	1	0	0	0	1	0	0	1
Reader	0	0	0	0	0	0	1	2	1	0
Snr Lecturer	2	0	0	0	0	1	0	0	2	1
<b>TOTAL</b>	<b>67</b>	<b>28</b>	<b>61</b>	<b>10</b>	<b>3</b>	<b>43</b>	<b>29</b>	<b>19</b>	<b>29</b>	<b>69</b>
<b>% total workforce</b>	<b>17.4</b>	<b>7.3</b>	<b>15.9</b>	<b>2.6</b>	<b>0.8</b>	<b>11.2</b>	<b>7.6</b>	<b>4.9</b>	<b>7.6</b>	<b>18.0</b>

Table 2: job type

In 2007, the total number of career grade paediatricians working 100% of the time in community paediatrics exceeded those working 100% in general paediatrics. Only 14.6% of the total workforce work in jobs containing elements of both general and community paediatrics. The proportion of consultants who were 100% general paediatricians (7.3%) was almost half that of those who are 100% community paediatricians (15.9%). Specialists in tertiary centres accounted for 17.4% of the workforce.

For Staff and Associate Specialist Grades, the majority work either 100% community or 75% community, with only 4 doctors reported as 100% sub-specialty specific.

## Sub-Specialties

The census asked for sub-specialties to be identified for the 137 consultants, including academics<sup>4</sup>, working as specialists (job type 1 and 7-9) and the results are shown in Table 3 below.

Subspecialty	Headcount		No. >55 years		No. who work full time		Male		Female	
	Hc		Hc	%	Hc	%	hc	%	hc	%
Accident & Emergency	5		0	0	4	80	2	40	3	60
Audiology	0		0	0	0	0	0	0	0	0
Cardiology	5		1	20	4	80	4	80	1	20
Child Protection	5		1	20	4	80	1	20	4	80
Dermatology	2		1	50	0	0	0	0	2	100
Diabetes	8		2	25	7	87.5	5	62.5	3	37.5
Diabetes & Endocrinology	4		0	0	3	75	3	75	1	25
Endocrinology	3		0	0	3	100	2	66.6	1	33.3
Gastroenterology	9		2	22.2	7	77.7	7	77.7	2	22.2
Haematology	2		1	50	2	100	0	0	2	100
Infectious Disease, Allergy & Immunology	3		0	0	3	100	1	33.3	2	66.6
Intensive Care Medicine	0		0	0	0	0	0	0	0	0
Metabolic Medicine	2		0	0	2	100	2	100	0	0
Neonatology	36		4	11.1	36	100	21	58.3	15	41.7
Nephrology	6		2	33.3	6	100	5	83.3	1	16.7
Neuro-disability	3		2	66.6	3	100	2	66.6	1	33.3
Neurology	11		2	18.2	11	100	7	63.6	4	36.7
Oncology	4		0	0	3	75	3	75	1	25
Respiratory (inc CF)	13		2	15.4	13	100	12	92.3	1	7.7
Rheumatology	2		2	100	2	100	1	50	1	50
Other (specify)	1		0	0	1	100	1	100	0	0
None given	9		1	11.1	9	100	7	77.8	2	22.2

**Table 3: Sub-Specialties**

The boxes highlighted in orange identify those specialities where 25% or more of the workforce is over the age of 55 years. The data is not further sub-divided and could be skewed towards the younger ages in the group, conversely this could mask a workforce that is aged 60 or over, who could retire with minimal notice. These data suggest that there are potential issues in dermatology, diabetes, haematology, nephrology and Rheumatology. Although not evident from these figures there are also issues in academic respiratory medicine where 33% of that workforce is also over the age of 55.

<sup>4</sup> Includes Professors Senior Lecturers and Readers

## Contract Type

The following table summarises the medical workforce by the type of contract on which they are employed.

	Permanent	Fixed term	Locum Known term	Locum Unknown term	Not stated	Total
Consultant	180	0	5	2	33	220
Associate Specialist	42	0	0	0	2	44
Staff Grade	79	1	4	3	10	97
Senior Clinical Medical Officer	2	0	0	0	0	2
Clinical Assistant	3	0	0	0	0	3
Professor	5	0	0	0	1	6
Reader	4	0	0	0	0	4
Senior Lecturer	6	0	0	0	0	6
No grade stated	0	0	0	0	2	2
<b>TOTAL</b>	<b>307</b>	<b>1</b>	<b>9</b>	<b>5</b>	<b>48</b>	<b>384</b>
<b>% total workforce</b>	<b>79.9%</b>	<b>0.3%</b>	<b>2.3%</b>	<b>1.3%</b>	<b>12.5%</b>	<b>100%</b>

Table 4: Contract type by grade

As might be expected the majority of staff hold permanent contracts, although further work to identify why there are long-term locums is required. Of the known term Consultant locums, one is in neonatology (100% sub-speciality) and one other is in endocrinology (75% sub-speciality). Of the others 3 are Community paediatrics and two are general paediatricians.

## Gender and Age

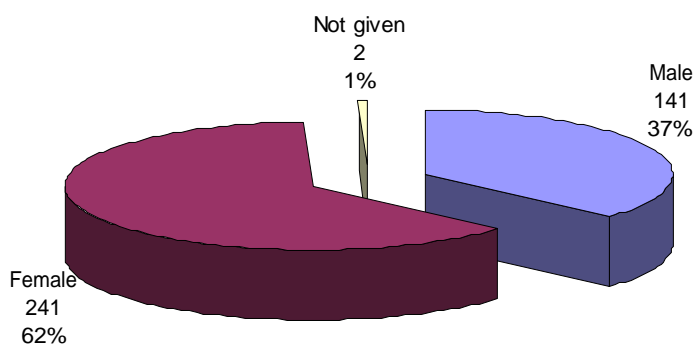


Chart 3: Gender split

The majority of the NHS workforce is female and this is echoed in the medical staff caring for children, with 241 women reported in the workforce (62%). A higher proportion of women in the workforce is often accompanied by increased part-time working, increased turnover and a greater incidence of career breaks. All affect continuity of service delivery and is important in workforce planning.

## Age

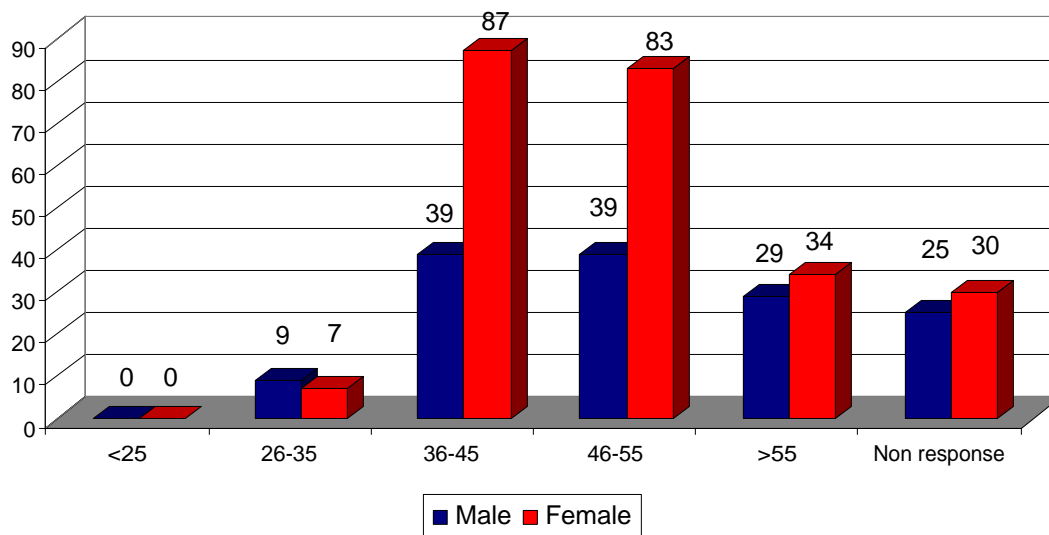


Chart 4: Age and gender

Of the 384 staff, 63 doctors (16.4%) are 55 years of age or over and likely to retire in the next 5 years or so. 20.6% of males are over 55 compared to 14.1% of female staff. Of the women over 55, 19 work full time, with 8 consultants, 1 senior lecturer and 10 SAS. Replacement for these staff is unlikely to be on a like for like basis. Many current consultants continue to be employed on a 12 PA contract but are likely to be replaced by a 10 PA contract. To maintain the current service, assuming no redesign, 2 more consultants would be required to replace those women currently providing a full time service.

Of the men who are over 55, 4 are part time and the rest are full time. The contractual issues will also apply to replacement of these doctors, suggesting that, if these doctors work a 12PA contract an additional 5 wte consultants will be needed to provide the same service, assuming the model does not change.

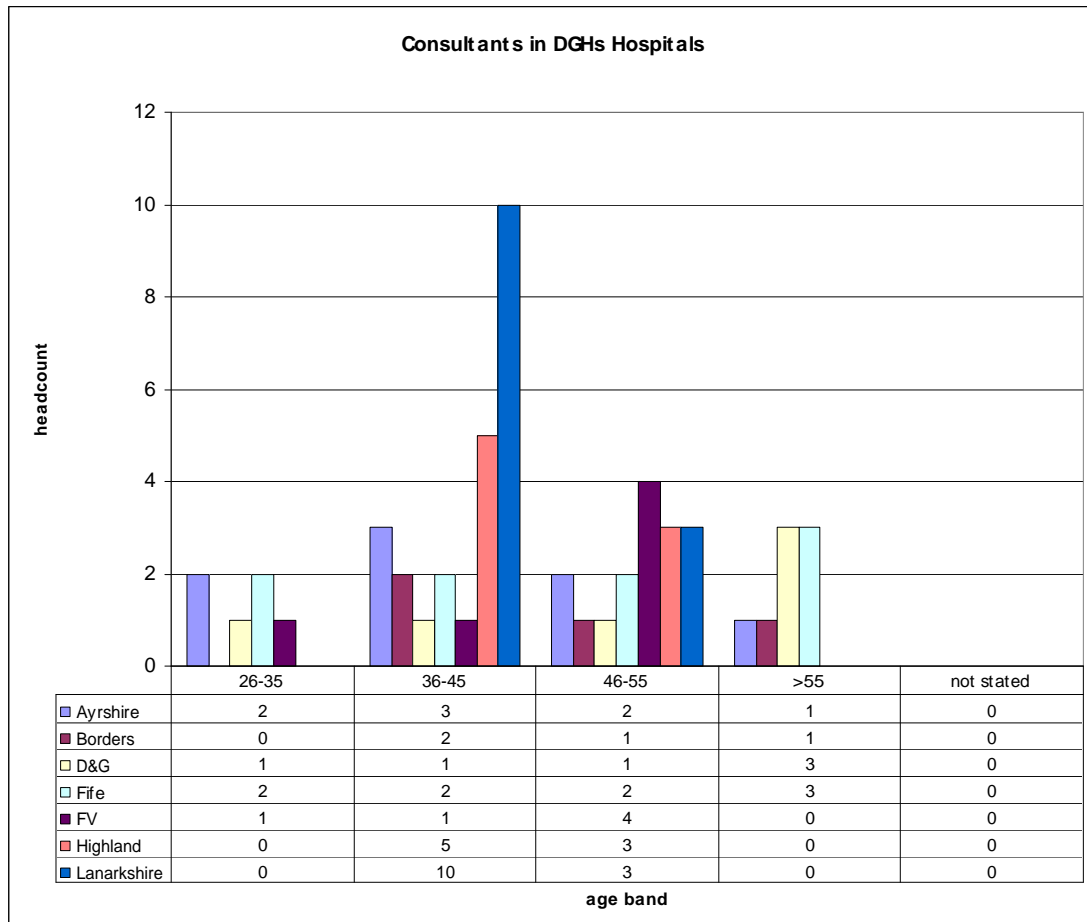
It is noted elsewhere in this report that the overall average PA commitment for all consultants is 11.5. If the above calculations are re-calculated to reduce a 11.5 PA contract to 10, the additional requirement is 4.95 wte.

## Impact of Age on Services

Whilst this work concentrates on the specialist children's workforce, the staffing profiles in the District General Hospitals are of particular interest, with small groups of consultants supported by significant non-

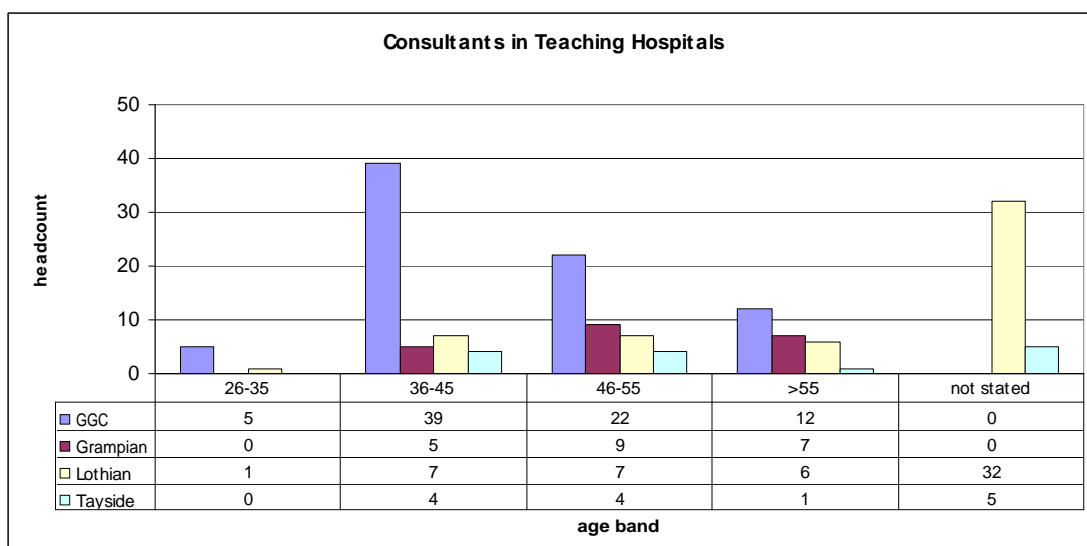


career grade doctors. The age profile of this group (chart 5) suggests some areas of potential risk, with 50% of the paediatricians in Dumfries and Galloway over age 55, 33% in Fife, 25% in Borders and 12.5% in Ayrshire. The potential risks will include non-viable rota's, the loss of special interest from that Board, the knock-on effect on other centres and the recruitment risks that always accompany small specialities.



**Chart 5: Consultants in DGHs by age**

The age profile of the Teaching Hospitals is depicted in Chart 6 below.

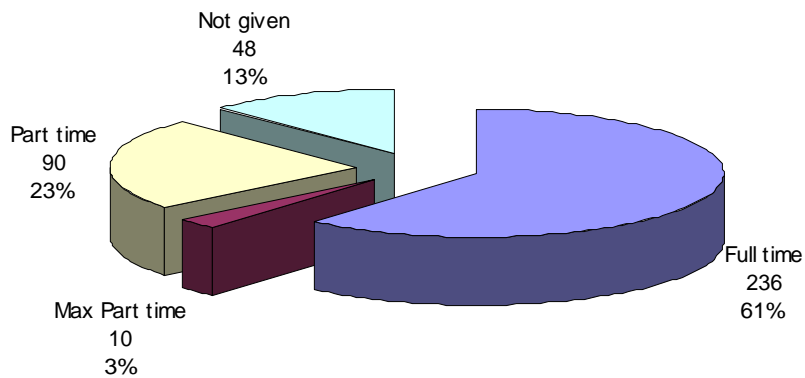


**Chart 6: Consultants in Teaching Hospitals by age**

The age profile is as might be expected, with the majority 103 (62%) no older than 54 years, however, there are two concerns:

1. The age is not stated for just under one quarter of the total workforce. This could mask an ageing workforce, which at this stage cannot be foreseen.
2. There 26 senior clinicians (16%) who are aged 55 or over.

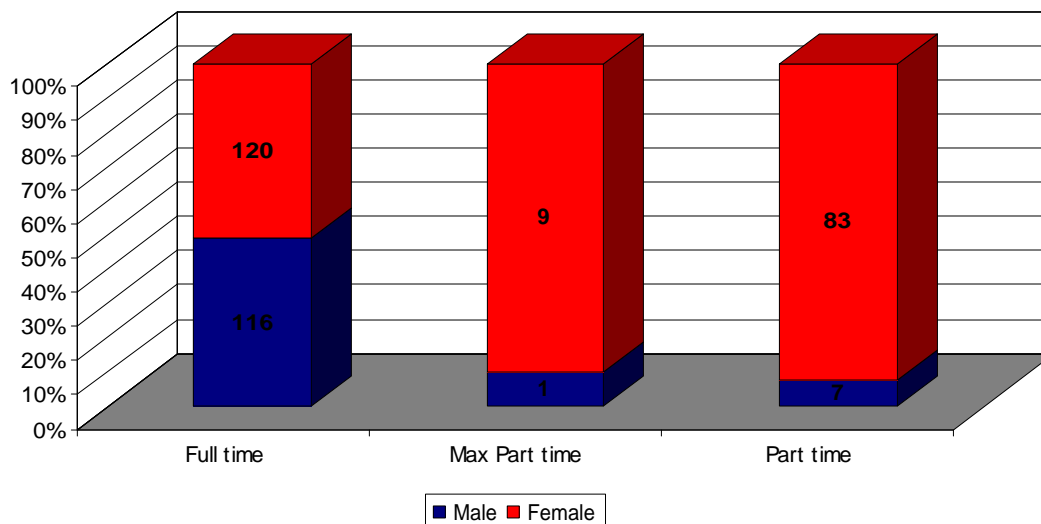
## Working Patterns



**Chart 7: Full time / Part time working**

When taking into account the number of non-response to this question, full time working is 70%, max part time 3% and part time 27%, however this is may to change over time.

## Working Pattern By Gender



**Chart 8: Working pattern and gender**

As expected, women are most likely to work part time or maximum part time than men. If the number of women in the workforce increases then the balance between full time and part time working may change.

## Academics

Data collected identified 16 clinical academics within the child health workforce and is summarised in table 5 below.

	Professor	Senior Lecturer	Reader	Total
Grampian	1	2	-	3
Greater Glasgow & Clyde	2	3	1	6
Lothian	1	1	0	2
Tayside	2	-	3	5
	<b>6</b>	<b>6</b>	<b>4</b>	<b>16</b>

**Table 5: Academics**

The majority (75%) are male and over 46 years of age. Almost two thirds (31.25%) are 55 years or over. This is of particular interest as the Universities need not replace like with like but these doctors also carry a service burden which is likely to endure as a requirement.

A particular concern has been identified within the specialty of Respiratory Medicine (including CF) where there are 6 Academics (43% of total Consultants). All are male; 2 are 55 years or over and all work full time.

## Consultants working fewer than 48 hours per week

	Yes	No	Not stated	Total
<b>Consultant</b>	171	34	15	220
<b>%</b>	77.7	15.5	6.8	

**Table 6: Consultants working fewer than 48 hours per week**

Table 4 shows that over three quarters (77.7%) of all consultants worked fewer than 48 hours per week and 15.5% worked more, exceeding the WTD. Excluding null answers, 83.4% of all consultants reported working fewer than 48 hours per week and 16.6% worked more.

Non-compliance, where it is reported, is an issue, as consultants should have been compliant since 1998. There are also potential risks related to the drive to make doctors in training compliant by 2009.

## Medical Census Summary

The census identifies at a strategic level a number of important considerations for the future planning of the paediatric workforce.

- Good quality data, at sub-speciality data should be collected on an all-Scotland basis for the medical workforce.
- There are a number of identifiable risks, which could have a significant impact on the workforce:
- 64 doctors are over the age of 55, 26 are in Teaching Hospitals and 8 in DGHs and the balance in Community paediatrics.
- It is not possible to identify the age of 37 doctors; therefore this risk might be higher.
- Replacement is unlikely to be like with like and could be as high as an additional 7 wte consultants.
- More than 25% of the workforce is over age 55 in Dermatology, Haematology, Nephrology, Neuro-disability and Rheumatology.
- The age profile of academic medicine is a risk, particularly in respiratory medicine. Most academic posts have a service commitment, which is of significant risk because the universities do not need and often don't replace like with like.
- The majority of consultants report being WTR compliant, but there is a risk that given the limited number of trainees that there will be an impact on the whole medical workforce as it moves towards full compliance in 2009.
- The continued feminisation of the workforce may lead to a need to review and redesign jobs.

## **Service Specific Workforce Issues**

Whilst the above is interesting at a strategic level, workforce planning needs to be considered at a speciality level. Many of the other workstreams have already reported and have identified to varying degrees workforce challenges. Some of these are considered below, however, it is clear that each of the groups have not adopted a single methodology.

### **General Surgery**

This workstream has confined its work to general surgery and has not considered the sub-specialty surgery in children such as ENT, plastics etc. The workstream did undertake a survey of those undertaking general surgery and the supporting clinical teams including anaesthetists and specialist nurses.

The Report has not yet been published but early drafts have identified six main issues that are workforce related:

- The proportion of General Surgery is carried out in DGHs by non-specialist adult General Surgeons is substantial.
- The age profile of the workforce is biased towards the upper age limit.
- There is a potential that adult surgeons may well be replaced by surgeons unwilling or untrained to perform children's surgery.
- Current training opportunities, although limited may reduce further in response to changes in working pattern, training curricula and the reduction of opportunities to work in DGHs for children's general surgery.
- The absence of a defined CPD programme for those performing children's surgery.
- Implications for the future organisation of services, particularly for unscheduled care.

This group have concluded that the adult surgeon should be replaced by a clinician who has a specific interest in children's surgery and it is predicted that this will arise as an issue as early as next year.

### **Competency Based Workforce Planning**

The National Workforce Unit within the Scottish Government suggested that this workstream may benefit from a competency based approach to workforce planning and organised work to be carried out jointly by colleagues in Skills for Health (S4H), the Workforce Review Team and National Workforce Projects in England. An initial scoping meeting has taken place however this work is no further forward at this time.

Methodology:

- The most common patient pathways have been identified and will be mapped to the S4H national workforce competences and national occupational standards using data collected from Boards;
- All roles in general surgery need to be mapped to identify the competences incorporated within existing roles;

- Gap analysis; and
- Re-profiling exercise to match need/competence/role.

This should help to define a career framework in general surgery that will provide a more flexible workforce with clear pathways for career progression, but the work has not commenced and the risks are, as identified above, considerable.

## Cystic Fibrosis

Children and young people with CF are seen in either a general or teaching hospital setting. Affected children generally are cared for in general paediatric clinics by non-specialists. A multi disciplinary team approach is recommended, supported by specialists. Paediatric respiratory medicine is emerging a speciality in its own right, although the numbers are small and tend to be concentrated in tertiary centres.

The Cystic Fibrosis Trust, in 2001, produced minimum standards of care and these included recommended minimum workforce requirements. The standards have not formally been adopted as policy by the Scottish Government, but have been used by this group as a guide to assess the staffing requirements. This group concluded that there remains significant inequity in the care that children receive depending on where they live and that the workforce issues, particularly in relation to AHPs, will need to be resolved before this can be addressed.

This group have recommended the establishment of a national network to support local clinics and reduce any inequalities by enhancing multi-disciplinary teams and developing outreach clinics. Suggested staffing requirements to establish a nationally designated service, supported by a national MCN, based on Cystic Fibrosis Trust standards are, summarised in Table 7 below:

Required Staffing	Number	Cost
Consultant	2.5	£450k
Associate Specialist Staff Grade	1.5	£94k
Specialist Nurse	3	£150k
Physiotherapist	4	£175k
Dietician	1.5	£66k
Pharmacist	1	£45k
Social worker	1.5	£66k
Secretary /data Clerk	1.5	£47k
Network administrator	0.5	£16k
Psychologist	1.5	£85k
Network Manager	1	£38k
<b>Total</b>	<b>19.5</b>	<b>£1.3 million</b>

**Table 7: Cystic Fibrosis – National network requirements**

A breakdown of staff by professional group by Board is available in the report and whilst the needs by board are not great the cost to Scotland, particularly when combined with other services is significant.

## Gastroenterology, Hepatology and Nutrition

A Review of Gastroenterology services was published in 2004, with specific recommendations to increase the staff numbers in all groups. This work has been reviewed as part of the work of the Review of Specialist Services for Children and has confirmed that a regional model of services delivery, linked by a national network, should be progressed. The 3 regions should act as one for specialist advice and management of rare and complex problems.

The group have identified continuing workforce issues including investment in additional medical staff, with an additional 1 wte required in Edinburgh and 1 wte between Aberdeen and Dundee. An additional 2.95 wte specialist nurses and 1.6 wte dieticians are also identified in table 8 below.

Location	Specialist Nurses wte	Dieticians wte
Edinburgh	1	0.8
Glasgow	1	-
North – Aberdeen, Dundee, Inverness	0.95	0.8

**Table 8: Gastroenterology, Hepatology and Nutrition – additional staffing requirements**

## Rheumatology

Until recently, many children with rheumatic diseases in Scotland were managed either by a Paediatrician with no training in Rheumatology or an adult Rheumatologist with no training in Paediatrics. Adult Rheumatology has identified a number of problems of sustainability and these are even more significant in paediatric Rheumatology.

The current service is based on an informal network with the following workforce having been identified:

## Medical workforce

Unit	Staff in post	Headcount	Wte	Additional required (wte)	Additional resources required
Aberdeen	General Paediatrician Paediatric rheumatologist; one clinic per month Rheumatologist (adult); one clinic per month	1 1 1			1.0 Consultant. Glasgow  To support regional / local care  Some Health Board areas are not treating children optimally. This results in long term health / treatment issues with subsequent 'cost' to the child's quality of life, and the financial cost of treatment / joint replacement
Dundee	General Paediatrician Rheumatologist (adult); one clinic alternate months	1 1			
Fife	Rheumatologist (adult) with special interest	1			
Edinburgh	Paediatric Rheumatologist; one day per week	1		1.0	
Stirling	Rheumatologist (adult)	1			1.0 Edinburgh – currently no Rheum Consultant, service provided by Glasgow but session will be withdrawn in Dec 07.
Lanarkshire	General Paediatrician with an interest Rheumatologist (adult) with an interest; joint clinic every 3 months	1 1			
GGC	Paediatric Rheumatologist General Paediatrician with an interest Senior Lecturer General Paediatrician with an interest	1 1 1 1	1.0  0.7 0.5	1.0	
Borders	General Paediatrician	1			
Dumfries	General Paediatrician; joint clinic 2x per year	1			
Crosshouse	No named medic	0			
Raigmore	General paediatrician Rheumatologist (adult); joint clinic once per year	1 1			
	<b>TOTAL</b>	<b>18</b>			

The majority of general paediatricians do not receive training in Rheumatology during their training, therefore the need to identify a network of Paediatricians who are willing to develop a 'special interest' and provide them with training has been identified.

## Nursing workforce

Nursing posts have been difficult to identify with only Edinburgh (0.5 wte) and Glasgow (1.0 wte) stating they have a dedicated resource for Rheumatology. Additional resources identified include:

- 1.0 wte Consultant Nurse post to provide strategic direction and leadership (nursing) at a local, regional and national level.
- 0.5 Specialist Nurse – Edinburgh provides outreach support to Fife
- Aberdeen has no specific nursing input identified although 90 children are currently using the service and demand is unquantified.
- Training of children's community nurses to provide support for families locally.



## **AHP workforce**

Again, only Edinburgh, Glasgow and Inverness have identified dedicated staff. Additional resources are required to provide professional support to Physiotherapists at a local level with a remit to provide treatment to children and young people with Rheumatology disease ensuring the most up to date practice is in place. The service also requires a named person in each HB area, with associated resources at community / local level.

## **Workforce Planning**

Workforce planning must be embedded in and support the service model identified for any service and service plans must be based on population need. The service specific reviews discussed above have a range of different pressures to address and have therefore not addressed the workforce issues using a standard methodology. This is not criticism but it is a gap.

The 'traditional' bottom-up approach to workforce planning consists broadly of three components; measuring supply, identifying demand and matching supply/demand, which includes making projections. Whilst this approach is useful, there is often little consistency within boards and between boards, regions and nationally. The main purpose is often solely for production of the annual workforce plan. It is therefore suggested that a consistent approach is used by all work streams within the National Specialist Children's Services Review.

## **Workforce Information**

All the individual work streams will need to identify workforce requirements and the workforce group agreed that as a minimum, this should include the following:

- Current baseline: Headcount, WTE, age, gender, specialty interest (commitment %);
- College / Professional body workforce recommendations for sub specialties; and
- Projected workforce requirements based on new model of care for 1,2,3,5 and 10 years.
- The National Workforce Planning Framework requires that workforce projections be considered in the light of affordability, availability and adaptability therefore financial consideration, particularly in years 1-3 is required.

Effective long-term, strategic planning requires accurate analysis of future workforce demand and supply which must consider the impact of a wider range of information, including the following:

- Demographic trends, and the impact on their service/specialty;
- Changes in technology, for example the increasing use of telemedicine techniques which will affect the physical location and skill mix of staff;
- Legal changes, including compliance with the Working Time Regulations;
- Social trends, such as the continuing rise in obesity rates, which will have implications for the service and therefore the workforce needs;
- Key policy changes and central targets.

## Recommendations

The Workforce Group make the following recommendations:

1. NHS Scotland should improve the data quality for the specialist children's workforce and collect meaningful data on a regular basis across the country.
2. NHS Scotland should review the data collected nationally and ensure that data is consistent and can be used for a range of purposes.
3. NHS Scotland should develop robust mechanisms for collecting data on specialist nurses and AHPs.
4. Workforce projections should be developed by workstreams using a consistent methodology.
5. Workforce Projections should be based on population need in the future.
6. Emerging models of care will require different roles and workforce patterns and need to be developed strategically to support the needs of Scotland.
7. Where a Scottish network is proposed, the workforce model must contain an obligatory aspect, including ensuring that Boards will replace according to the network plan.
8. Identify the at risk specialities and undertake a service level review to clarify risks and plan for the future.
9. Academic medicine is a risk and NHS Scotland needs to recognise the contribution and make plans to replace this.
10. Ensure that the risk presented by MMC to current service models are identified and appropriate redesign is undertaken.
11. Ensure that training programmes are fit for purpose and that NHS Scotland trains the right type of paediatrician.
12. Urgent action is required to develop a programme for Children's surgery with a special interest in general surgery.
13. Ensure that there is sufficient exposure to Child health in other programmes e.g. Remote and rural healthcare.
14. Regional Planning Groups should work with NHS Boards to review the demography of workforce and develop plans to address.
15. Regional planning Groups should review at risk specialities and identify how service and workforce models will change to ensure sustainability.
16. NHS Boards should review long term locums and seek to replace with permanent doctors.
17. Regional Groups should consider the reliance on staff grades and consider whether this provide the best model for children's services.
18. NHS Boards should work to achieve working time compliance.

## Membership of Specialist Children's Workforce Sub-group

Dr Annie Ingram, Project Lead / Director of Regional Planning and Workforce Development, NoSPG

Ms Marilyn Barrett, National Workforce Unit, Scottish Government

Dr Jim Beattie, Royal College of Paediatrics and Child Health / Head of Service, Yorkhill

Mrs Mary Boyle, Programme Manager for Nursing and Midwifery Allied Health Professions, NES

Mr Kenneth Cochran, Post-Graduate Dean, NES (West), NES

Mr Chris Driver, Paediatric Consultant Surgeon, NHS Grampian

Dr Zoe Dunhill, Consultant Paediatrician, NHS Lothian

Mr Rory Farrelly, National Advisor to Chief Nursing Officer for Children's & Young Peoples Nursing

Mrs Janet Garcia, AHP Programme Manager, SHED

Miss Sandra Hay, Regional Project Manager – Child & Maternal Health, NoSPG

Dr Ros Lawson, Scottish Paediatric Anaesthetic Network

Mrs Patricia Leiser, Regional Workforce Director, WoSPG

Ms Jacqui Lunday, Allied Health Professions Officer, Scottish Government

Mr Alex MacLennan, Paediatric Radiologist, NHS Ayrshire & Arran

Mrs Isobel McCallum, Project Director, NHS Lothian

Mr Ken Mitchell, Senior Project Manager, Women and Child Health Unit, SEHD

Ms Diane Murray, Workforce Employment & Retention Unit, Scottish Government

Mr Derek Phillips, SEAT Regional Director of Workforce Planning

Mr Jamie Redfern, General Manager, NHS Greater Glasgow & Clyde

Mrs Katharine Sharpe, ISD

**SE National Steering Group on Specialist Children’s Services Workforce Subgroup**  
**SCOTTISH PAEDIATRIC CAREER GRADE WORKFORCE AS AT 1<sup>st</sup> JANUARY 2007**

Data to be supplied for each individual paediatrician employed and each vacant paediatric post within the following grades:

- Consultant C
- Professor P
- Reader R
- Senior Lecturer SL
- Associate Specialist AS
- Staff Grade SG
- Clinical Asst (> 4 sessions) CA
- SCMO SCMO
- CMO CMO
- Trust Grade Doctor (Staff Grade equivalent) TGDSG
- Trust Grade Doctor (Associate Specialist equivalent) TGDAS
- Trust Grade Doctor (SpR equivalent) TGDR
- Trust Grade Doctor (SHO equivalent) TGDSHO
- Other Non Training Grade, please specify. (Include Clinical Fellows and Hospital Practitioners) CF, HP

Title	First Name	Initials	Surname	Gender (M/ F)	1. Age band (in years)	2. GMC Number	3. Grade	4. Total no of PAs in contract (Cons only)	5. Number of PAs for Clinical Care (Cons only)	6. Full Time/ PT/ Max PT	7. Whole Time Equivalent	8. Contract Type	9. Job Type	10. Subspecialty ( If job types 1 or 7 –9)	11. Works 48 hours or less? Yes/ No	12. Base Hospital and Health Board

Completion Notes

**Vacant Posts** - Under Column 4 (surname) enter V and approximate no. of months post vacant eg V- 6. Please also enter code for grade in column 8.

1. **Age band** – 1: < 25years. 2. 26 – 35years. 3. 36 – 45 years. 4. 46 – 55years 5. > 55 years
2. **GMC No** - Helps to check information in secondary sources without recourse to individual service or HB.
3. **Grade** The grades to be included are shown at the top of the census page. Please use the abbreviations. Other non-training grades should include any clinical fellows or hospital practitioners.
4. **Total number of Programmed Activities.** Enter the total number of contracted PAs for those on the new consultant contract
5. **Number of Programmed Activities for Clinical Care.** Enter the number of contracted clinical care PAs for those on the new consultant contract
6. **Full Time/Part Time/Maximum Part Time.** Enter F for Full Time, P for Part Time, and M for Maximum Part Time.
7. **(Whole Time Equivalent).** Express as 1.0 for full time, 0.6, 0.8 etc.
8. **Contract Type.** Please use one of the following codes to indicate the doctor's contract type: **1=Permanent 2=Fixed Term 3=Locum: Known Term 4=Locum: Unknown Term**
9. **Job Type.** This is being used to assess the balance of work undertaken by paediatricians in Scotland. Please use the code that describes each doctor most closely. When determining percentages, include time spent on clinical work only.

**1= 100% Subspecialty Paediatrics General/50% Community**      **2= 100% General Paediatrics**      **3= 100% Community paediatrics**      **4= 75% General/25% Community**      **5= 50% General/50% Community**  
**6= 25% General/75% Community**      **7= 75% General/25% Subspecialty**      **8= 50% General/50% Subspecialty**      **9= 25% General/75% Subspecialty**

10. **Subspecialty** This data to be completed in respect of doctors where Job Type = 1, 7, 8 or 9. Please use the following codes:

<b>1= A&amp;E</b>	<b>5= Diabetes and Endocrinology</b>	<b>8= Gastroenterology</b>	<b>11= Intensive care medicine</b>	<b>14= Nephrology</b>	<b>18= Cardiology</b>
<b>2= Audiology</b>		<b>9= Haematology</b>		<b>15= Neuro-disability</b>	<b>19= Respiratory (inc. CF)</b>
<b>3= Child protection</b>	<b>6= Endocrinology</b>	<b>10= Infectious disease, allergy &amp; immunology</b>	<b>12= Metabolic medicine</b>	<b>16= Neurology</b>	<b>20= Rheumatology</b>
<b>4= Diabetes</b>	<b>7= Dermatology</b>		<b>13= Neonatology</b>	<b>17= Oncology</b>	<b>21= Other (specify)</b>