

**Recommendation**

Assess the competency of staff grade and Trust doctors and take this into account when allocating anaesthetic and surgical sessions.

**3 MEDICAL  
WORKFORCE  
IN THE NHS**

**INTRODUCTION**

WOW I recommended a repeat of the study in five years' time to see what changes there might be as a result of the Calman reforms, the introduction of shorter working hours for junior doctors and the promised increase in consultant numbers.

Have the numbers of the different grades of staff changed since then and how easy is it to judge the competency of different grades of doctors?

## STAFF NUMBERS

The numbers of staff in post increased between 1996 and 2001 for all grades. The biggest increase, of 124%, was in the number of staff grade doctors.

Data was obtained from the DoH [10] on the number of doctors in post in 2001 and in 1996, by grade and specialty. The data are presented in Table 3.1. Numbers for vascular surgery are included in general surgery because vascular surgery was not considered as a specialty separate from general surgery in 1996.

All specialties saw an increase in consultant numbers. The average expansion was 28% with a range from 3% in oral and maxillofacial surgery to 68% in paediatric surgery. The expansion in training grades has been smaller, with the number of SHOs virtually unchanged and an increase of 16% in

registrar numbers. The number of staff grade doctors has risen from 891 to 1992, an increase of 124%.

NCEPOD decided not to collect data on vacancies because any data obtained would not be meaningful. The DoH does not regard consultant posts as vacant until they have been advertised and unfilled for three months. The advisors had evidence of potential consultant vacancies that were not advertised when there was no prospect of an appointable candidate applying. No information was available for trainee doctor vacancies.

### Proportions of SAS doctors and trainees per specialty

Table 3.2 shows the proportions of each staff group as a percentage of the consultant numbers in each specialty in 2001, using the data from the DoH shown in Table 3.1. There was considerable variation between specialties.

Table 3.1 Doctors in post

Specialty	Non consultant career grades									
	Consultants		Registrars		SHOs		Associate specialists		Staff grades	
	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001
Anaesthetics	2620	3549	1470	1652	1219	1304	206	219	283	592
Cardiothoracic surgery	154	204	165	209	139	152	2	4	10	29
General surgery	1143	1389	677	772	866	938	72	97	94	240
Neurosurgery	124	152	113	134	119	117	1	1	3	16
Obstetrics & Gynaecology	982	1219	863	950	1501	1318	74	87	146	281
Ophthalmology	564	683	309	359	419	398	123	144	90	222
Oral & Maxillofacial surgery	248	256	117	98	339	342	40	49	44	124
Otolaryngology	411	459	197	205	364	355	52	66	54	107
Paediatric surgery	68	114	46	69	98	86	2	1	2	9
Plastic surgery	143	198	117	165	139	157	6	13	11	21
Trauma and Orthopaedic surgery	992	1267	606	823	944	1032	113	131	126	270
Urology	315	427	162	204	152	207	12	25	28	81
<b>Total</b>	<b>7764</b>	<b>9917</b>	<b>4842</b>	<b>5640</b>	<b>6299</b>	<b>6406</b>	<b>703</b>	<b>837</b>	<b>891</b>	<b>1992</b>

**Table 3.2** Grade of doctor by specialty

	Consultants	% SAS	% Registrar	% SHO
Anaesthetics	3549	22.9	46.5	36.7
Cardiothoracic surgery	204	16.2	102.5	74.5
General surgery	1389	24.3	55.6	67.5
Neurosurgery	152	11.2	88.2	77.0
Obstetrics & Gynaecology	1219	30.2	77.9	108.1
Ophthalmology	683	53.6	52.6	58.3
Oral and Maxillofacial surgery	256	67.6	38.3	133.6
Otolaryngology	459	37.7	44.7	77.3
Paediatric surgery	114	8.8	60.5	75.4
Plastic surgery	198	17.2	83.3	79.3
Trauma and Orthopaedic surgery	1267	31.6	65.0	81.5
Urology	427	24.8	47.8	48.5
<b>Total</b>	<b>9917</b>	<b>28.5</b>	<b>56.9</b>	<b>64.6</b>

The numbers of staff available in the various grades would have affected the amount and proportion of service work done by each grade in a particular specialty.

### Locum doctors

One of the questions asked by NCEPOD for each operation was whether the senior surgeon present was acting as a locum. Table 3.3 shows the percentage of patients operated on when the surgeon was or was not a locum, for each grade of surgeon, for NHS hospitals (no such question was asked about the most senior anaesthetist present). The responses relate to the number of patients, not the number of surgeons.

**Table 3.3** Locum surgeons by grade

Grade of surgeon	Was the surgeon a locum?		
	% Yes	% No	% Blank
Consultant	6.9	85.5	7.7
SAS	5.6	89.1	5.2
SpR 3 and above	3.7	92.0	4.3
SpR 1/2	6.7	83.5	9.7
SHO	5.2	85.0	9.8
Other	7.2	76.3	16.5
Blank	5.7	46.7	47.6
<b>Total</b>	<b>6.4</b>	<b>83.9</b>	<b>9.7</b>

### Factors affecting the availability of trainee doctors for service work

The ability to change the proportion of clinical work done by trainee doctors will be affected by the increase in numbers of trained and trainee doctors detailed in Table 3.1 above. The volume of service work that the trainee workforce can do is also influenced by other factors. NCEPOD has found it difficult to measure the effect of these factors.

A series of initiatives have reduced the hours worked by trainee doctors, but the DoH was unable to supply any figures on the overall reduction in the hours worked by trainees.

Trainee doctors divide their time between educational and service commitments. More of trainees' hours may now be allocated to educational activities than in 1995/96. There are no data to quantify the effect of such a change, and the impact may vary between specialties.

The Calman reforms have led to a reduction in the length of training for doctors. Together with the reduction in hours worked, this can mean that a trainee of a particular grade is less competent to carry out procedures than in the past; for example, it was the opinion of the advisors that the competency of a SpR 1 in 2001 was equivalent to that of an experienced SHO in 1995/96.

## COMPETENCY OF GRADES OF STAFF

The title of a doctor's post may not be sufficient to judge whether the doctor has the skills to care for a particular patient.

Several tables in this report compare the grade of doctor caring for a patient with the patient's ASA status. It is assumed as evident that inexperienced trainees should not be caring for the sickest patients, that is, patients assessed as ASA 4 or 5. Conversely it is assumed as evident that the involvement of a consultant guarantees that the care will be satisfactory. The advisors considered that it was not always possible to judge from the title of the post held by a doctor whether that doctor had sufficient training and experience to care for a particular patient.

### Trainee grades

As noted above, the competencies of trainee doctors may be less than might have been expected from their grade in the past. However, medical royal colleges are moving towards more structured training. This means that the competencies that a trainee should display at a particular stage of their training are closely defined. There should be no difference in the competency of, for example, a SpR 2 in one hospital compared to another.

### Staff grade doctors, associate specialists and trust doctors

There are published criteria of eligibility for appointment to the grades of associate specialist and staff grade. If these are adhered to, then one can be assured that an associate specialist has had a significant level of experience at the registrar level. The criteria for appointment to the post of staff grade are less stringent. Some staff grade doctors may be as experienced as an associate specialist, others may have had relatively little experience and taken up appointment as a staff grade directly from the SHO grade. The post of Trust doctor is unregulated, so that it is impossible to make any judgement on whether it is appropriate or not for a doctor in such a post to be carrying out the work that they are

doing. Whatever their competency when appointed, doctors in these posts will continue to extend their capabilities as time passes, by virtue of continuing professional development and increasing experience.

Given that this group of doctors encompasses such a diverse range of abilities it is not possible to make any overall comment about whether or not a particular pattern of practice for SAS doctors is appropriate. Because of this diversity of abilities, it is essential that Trusts assess the competency of each doctor in these posts on an individual basis. SAS doctors should be allowed to make full use of their talents but should not be expected to provide care that is beyond their capabilities.

### Consultants

As one of the advisors observed:

#### Consultant anaesthetist:

*"I am not sure that the assumption that consultant equals good, both surgically and anaesthetically, is in fact the truth any more."*

Sub-specialisation amongst consultants is common, which improves the care for elective patients, but if the consultant covers a wider range of patients for emergency work, non-elective patients may suffer. On some occasions, this is explicit; a surgeon may specialise on colorectal work by day, with no involvement in the care of vascular patients, but be responsible for ruptured aortic aneurysms out of hours. Sometimes, the deficiency is not so obvious; a consultant anaesthetist may nominally cover general duties, but have little recent experience of upper airway problems. Many consultants, both anaesthetists and surgeons, are gaining little exposure to the care of young children.

It may be difficult to find a solution when a consultant does not feel fully competent to handle a clinical case. In some cases the problem can be solved by the attendance of a consultant who is not on-call. In others, a consultant may decide on the management plan, but an experienced specialist registrar may be the better person to perform a particular procedure than the consultant.

The issue of whether there is a minimum or optimal size of hospital for taking emergency cases is considered elsewhere in the chapter discussing facilities.

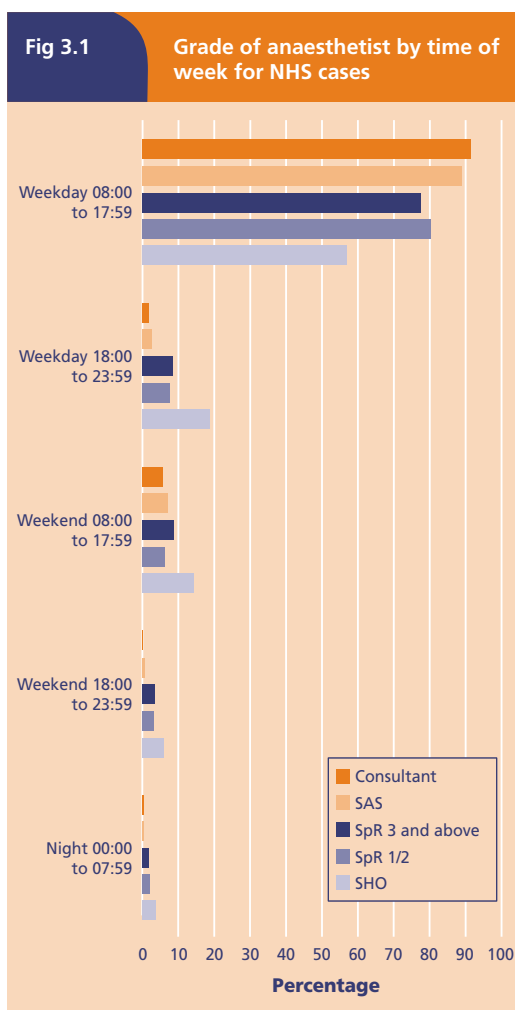
## THE WORK PATTERNS OF DOCTORS

Most of the tables and figures elsewhere in this report consider staffing issues from the perspective of the patient or the hospital; for example, what are the chances that the surgeon will be a consultant for an elective patient during the daytime on a weekend? It is useful to look also at the data from the viewpoint of the doctor.

### Anaesthesia

#### All cases, elective and non-elective

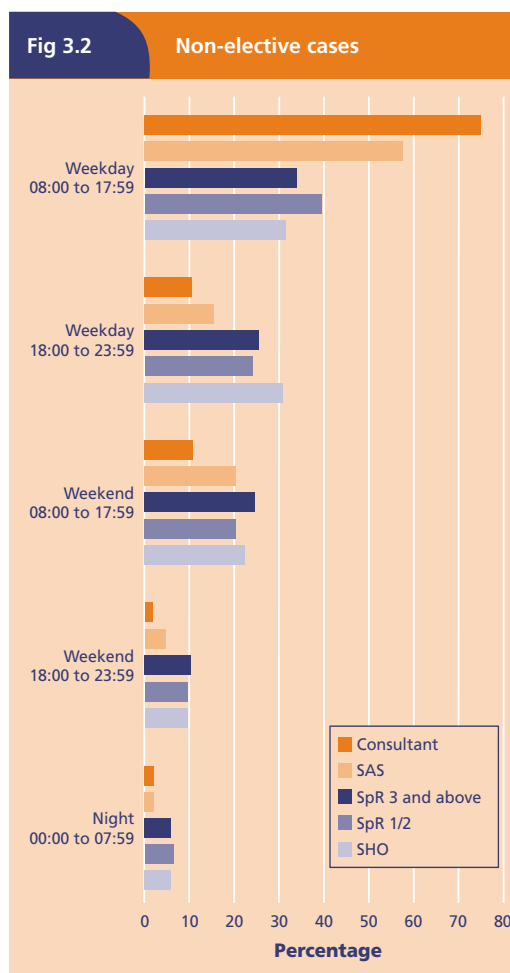
Figure 3.1 shows the theatre workload of each grade of anaesthetist that was done at each time of the week (workload for each grade defined as the total number of cases where the most senior anaesthetist present was of that grade).



Trainees, and some SAS doctors, will have spent further time in theatre accompanying consultants as part of training or professional development. For all grades of anaesthetist, most of the elective work was carried out during the daytime during the week. This did not apply to non-elective work.

#### Non-elective work

Figure 3.2 shows the theatre non-elective workload of each grade of anaesthetist that was done at each time of the week (workload for each grade defined as the total number of cases where the most senior anaesthetist present was of that grade).



Looking at non-elective work only, consultants did 75% of their non-elective work during office hours, whereas trainees carried out 60% to 70% of the emergency work that they did outside office hours.

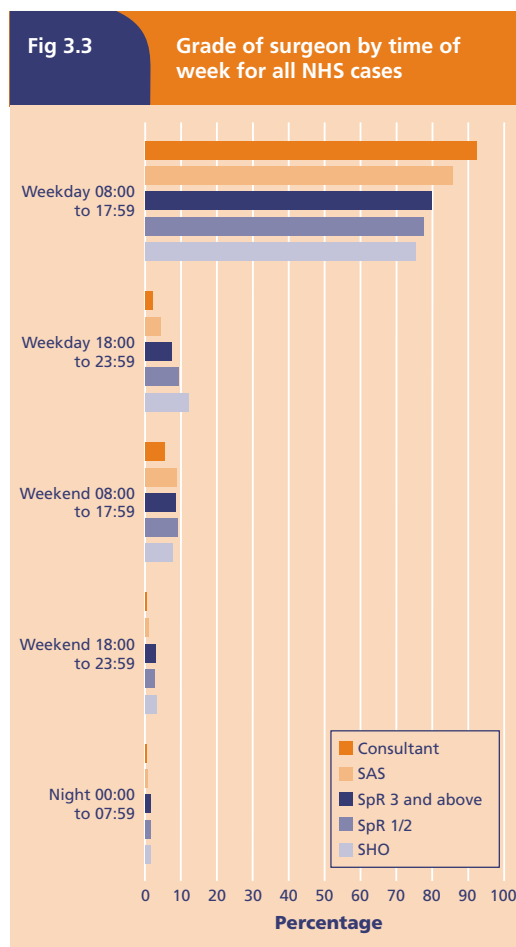
It is not possible to tell from the data collected for this report how much teaching on the management of non-elective cases trainees received by

accompanying more senior anaesthetists or when this experience was gained. However, it is possible to say that trainees gained most of their experience in anaesthetising non-elective cases on their own when working outside of office hours.

## Surgery

### All cases, elective and non-elective

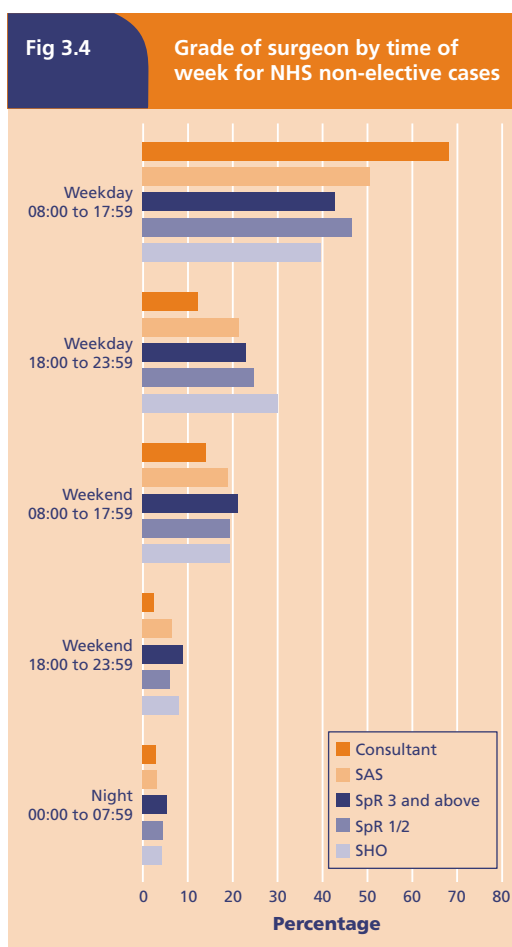
Figure 3.3 shows the total theatre workload of each grade of surgeon that was done at each time of the week (workload for each grade defined as the total number of cases where the most senior surgeon present was of that grade).



Consultant surgeons did the greatest proportion of their total workload during office hours and SHO surgeons the least, with the position reversed on weekday evenings, but the differences were not large.

### Non-elective work

Figure 3.4 shows the non-elective theatre workload of each grade of surgeon that was done at each time of the week (workload for each grade defined as the total number of cases where the most senior surgeon present was of that grade).



Consultant surgeons did over two-thirds of their non-elective operating during office hours. In contrast, trainees spent only about 40% of their time as the most senior surgeon for non-elective cases operating during office hours.