7 NON-ELECTIVE SURGERY IN THE NHS

Recommendations

Debate whether, in the light of changes to the pattern of junior doctors' working, non-essential surgery can take place during extended hours.

Ensure that all essential services (including emergency operating rooms, recovery rooms, high dependency units and intensive care units) are provided on a single site wherever emergency/acute surgical care is delivered.

INTRODUCTION

Non-elective operations are those which meet the NCEPOD criteria as either:

"Emergency", operation simultaneously with resuscitation, usually within one hour, or:

"Urgent", operation as soon as possible after resuscitation, usually within 24 hours.

Non-elective operations made up nearly 16% of the surgical workload in NHS hospitals.

WHICH SPECIALTIES ARE INVOLVED IN NON-ELECTIVE WORK?

There were large differences between specialties in the proportion of the total specialty workload made up of non-elective cases.

Table 7.1 Breakdown by specialty and classification

Surgical specialty	Elective	Non-elective	Non-elective %	Total
Accident and Emergency	65	10	13.3	75
Cardiac/Thoracic/Cardiothoracic	802	165	17.1	967
General	7470	2008	21.2	9478
Gynaecology	6172	921	13.0	7093
Neurosurgery	390	165	29.7	555
Ophthalmology	5984	165	2.7	6149
Oral & Maxillofacial	1899	179	8.6	2078
Orthopaedic & Trauma	7547	2632	25.9	10179
Otorhinolaryngology	4209	221	5.0	4430
Paediatrics	558	191	25.5	749
Plastic	1841	627	25.4	2468
Transplantation	66	25	27.5	91
Urology	4493	188	4.0	4681
Vascular	962	291	23.2	1253
Other	1054	148	12.3	1202
Blank	5683	1274	18.3	6957
Total	**49195**	**9210**	**15.8**	**58405**

Table 7.2 Time of non-elective NHS operations by specialty

Specialty of surgeon	Weekday 08:00 to 17:59		Weekday 18:00 to 23:59		Weekend 08:00 to 17:59		Weekend 18:00 to 23:59		Night 00:00 to 07:59		Blank		Total	
Accident and Emergency	7	0.1%	0	0.0%	2	<0.1%	1	<0.1%	0	0.0%	0	0.0%	10	0.1%
Cardiac/Thoracic/ Cardiothoracic	120	1.3%	21	0.2%	13	0.1%	2	<0.1%	9	0.1%	0	0.0%	165	1.8%
General	867	9.4%	561	6.1%	300	3.3%	139	1.5%	121	1.3%	20	0.2%	2008	21.8%
Gynaecology/Obstetrics	533	5.8%	207	2.2%	96	1.0%	31	0.3%	41	0.4%	13	0.1%	921	10.0%
Neurosurgery	81	0.9%	35	0.4%	24	0.3%	9	0.1%	15	0.2%	1	<0.1%	165	1.8%
Ophthalmology	124	1.3%	18	0.2%	16	0.2%	1	<0.1%	4	<0.1%	2	<0.1%	165	1.8%
Oral & Maxillofacial	102	1.1%	23	0.2%	38	0.4%	10	0.1%	3	0.0%	3	<0.1%	179	1.9%
Orthopaedic & Trauma	1400	15.2%	374	4.1%	610	6.6%	155	1.7%	55	0.6%	38	0.4%	2632	28.6%
Other	75	0.8%	31	0.3%	26	0.3%	10	0.1%	4	<0.1%	2	<0.1%	148	1.6%
Otorhinolaryngology	139	1.5%	27	0.3%	27	0.3%	15	0.2%	12	0.1%	1	<0.1%	221	2.4%
Paediatrics	106	1.2%	42	0.5%	26	0.3%	7	0.1%	10	0.1%	0	0.0%	191	2.1%
Plastic	321	3.5%	122	1.3%	137	1.5%	37	0.4%	4	<0.1%	6	0.1%	627	6.8%
Transplantation	12	0.1%	5	0.1%	8	0.1%	0	0.0%	0	0.0%	0	0.0%	25	0.3%
Urology	118	1.3%	28	0.3%	23	0.2%	11	0.1%	5	0.1%	3	<0.1%	188	2.0%
Vascular	162	1.8%	68	0.7%	30	0.3%	14	0.2%	16	0.2%	1	<0.1%	291	3.2%
Blank	689	7.5%	233	2.5%	177	1.9%	76	0.8%	49	0.5%	50	0.5%	1274	13.8%
Total	**4856**	**52.7%**	**1795**	**19.5%**	**1553**	**16.9%**	**518**	**5.6%**	**348**	**3.8%**	**140**	**1.5%**	**9210**	**100.0%**

Table 7.1 illustrates the elective and non-elective work for surgical specialties. NHS cases where no classification of the theatre case was given, totalled 5,104/63,509.

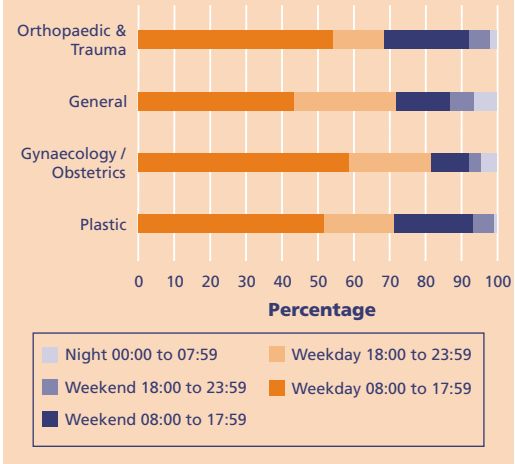
Overall, 15.8% of the total workload were non-elective cases. This figure disguises considerable variation between specialties. Ophthalmology, otorhinolaryngology and urology had large numbers of cases, but very few were non-elective. Other specialties had much larger numbers of non-elective cases forming a significant part of their workload. Obviously different specialties will require different strategies to manage their elective workload whilst ensuring that non-elective cases are treated promptly.

Table 7.2 details when non-elective operations took place throughout the week. Just over 50% of cases were done during normal working hours.

Specialties carry out non-elective operations at different times. Figure 7.1 analyses the times when surgery was done in the four specialties with the biggest non-elective workload.

Gynaecology patients were most likely to have their operations during the week, whilst orthopaedic and trauma and plastic surgery had a bigger proportion of their non-elective workload at weekends. General surgery performed the smallest proportion of non-elective cases in the daytime during the week.

Fig 7.1 Specialty of surgeon by time slots for non-elective operations in NHS hospitals

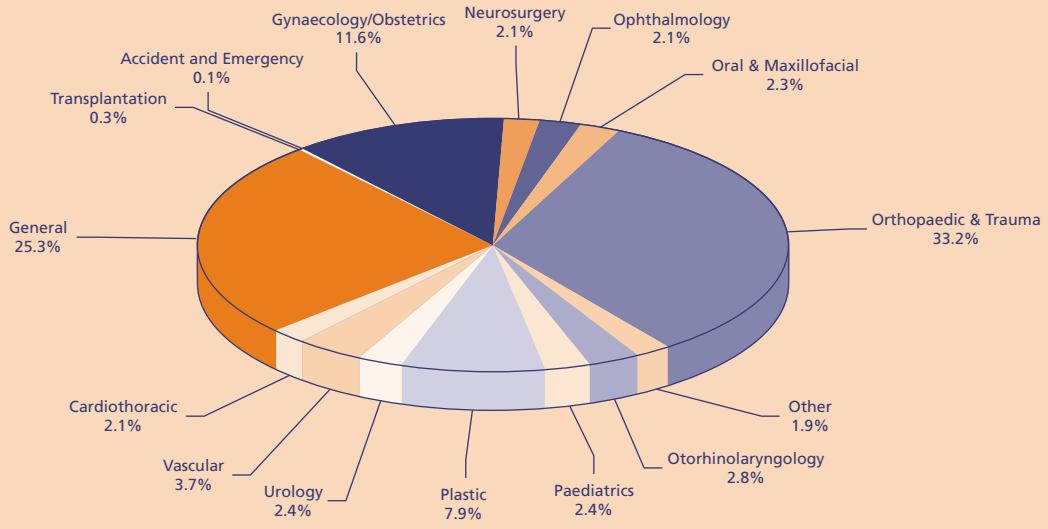


The impact on hospitals

The data can also be used to examine which specialties contribute to the total non-elective workload (Figure 7.2).

This chart shows all the data reported to NCEPOD. The proportions relating to the common specialties are probably applicable to most hospitals. Only tertiary hospitals will have carried out non-elective operations in such specialties as neurosurgery and cardiothoracic surgery. These specialties may have had a significant impact on the overall pattern of non-elective work in their hospitals.

Fig 7.2 Specialty of surgeon for NHS non-elective cases



USE OF NCEPOD LISTS

The 1990 NCEPOD report [7] recommended the provision of dedicated emergency operating theatres. Table 7.3 shows how many non-elective cases were done on planned emergency operating lists.

162 hospitals out of 294 that responded reported that they provided scheduled daytime staffed lists for trauma patients, and 171 out of 294 hospitals ran scheduled daytime staffed lists for general emergencies. Trusts may manage more than one hospital, with only one hospital in the Trust having scheduled emergency lists. Data returned to NCEPOD for the 2001 report [20] showed that in a random sample of 1,467 patients who died within 30 days of surgery, 86% had been treated in a hospital with daytime trauma lists and 78% had been treated in a hospital with daytime lists for general emergencies.

During the week, the majority of daytime non-elective operations were done in sessions scheduled for emergency operating. The number of operations at weekends reported as being done in scheduled emergency sessions is surprisingly high.

Between 08.00 and 17.59 on weekdays, 26% (1,269/4,856) of non-elective cases were done on scheduled lists (Table 7.3). There are at least two possible explanations for this. Some elective lists are planned to have enough spare capacity for non-elective cases to be added as necessary. Secondly, if elective patients planned for an elective list have to be cancelled (for example, because of a shortage of available beds in the hospital) then the time can be used for patients waiting for non-elective surgery.

Consultant surgeon:

"…if you don't get your elective admissions in, you can often do emergency cases on those lists…it ameliorates our emergency surgery problems considerably."

One of the earliest recommendations of NCEPOD was that "Essential services (including emergency operating rooms, recovery rooms, high dependency units and intensive care units) must be provided on a single site wherever emergency/acute surgical care is delivered" [7]. It is worth rehearsing the reasons why this recommendation is still valid.

If emergency operating theatres are not made available, all the operating theatres in a hospital will be allocated during the day to elective work. An elective list might be interrupted for an emergency case, but the great majority of non-elective cases would wait until the evening when elective operating had finished. This policy is unsatisfactory. Firstly, it shows no consideration for the mental state of the patient, or the pain and discomfort suffered whilst waiting for surgery. Secondly, the physical condition of the patient might deteriorate because of the delay. Thirdly, there is usually a queue of patients waiting for surgery when a theatre does become available at 18.00, so that inevitably operations that could have been done in daylight hours start well into the evening or even after midnight. Finally, operations that are urgent, but not emergencies, that might be able to wait until morning, will be done at night because the staff know that a wait until the morning of the next day actually means a wait until the evening of the next day.

These concerns are compounded by the problems associated with anaesthesia and surgery out of hours.

Theatre staff at night may be less experienced in certain surgical specialties or in using sophisticated

Table 7.3 Breakdown of NHS non-elective cases by session type

	Scheduled	Emergency surgical	Emergency trauma	Unscheduled	Blank	Total
Monday to Friday 08:00 - 17:59	1269	1927	1316	248	96	**4856**
Monday to Friday 18:00 - 07:59	35	1289	403	315	5	**2047**
Saturday to Sunday 00:00 - 23:59	81	1065	741	292	16	**2195**
Blank	16	43	43	4	6	**112**
Total	**1401**	**4324**	**2503**	**859**	**123**	**9210**

equipment. Some specialised surgery may require teams to be brought in from home, delaying the start of non-elective cases and possibly compromising elective work next day. There are fewer staff in the rest of the hospital, such as radiographers, ward nursing staff, laboratory staff and porters, and this may reduce the quality of care and cause delays. Work is more likely to be performed by trainee doctors who at times have underestimated the severity of a patient's condition and undertaken work beyond their competence.

The institution of daytime lists for emergency operating has been a major improvement in the quality of care delivered to surgical patients. The role of this enquiry in bringing about this change is reflected in the name usually given to these facilities, NCEPOD lists or NCEPOD theatres. Unfortunately the provision of these emergency operating theatres is still subject to problems.

As shown in Chapter 8 as to why operations were done out of hours, some hospitals still do not have emergency operating theatres at all; one consultant commented:

"We do not have an emergency gynaecology theatre."

and another,

"This 22 year-old patient … waited over 30 hours for appendicectomy due to unavailability of theatre space during daytime working hours."

Staffing an emergency theatre continues to be problematic. When an emergency theatre is established, resources are usually made available for theatre staff, and there will often an anaesthetist allocated to emergency duties.

It has been more difficult to ensure that surgical staff are available to operate in NCEPOD theatres during the day. Figures given above show that the non-elective workload varies considerably between specialties. Trauma theatres work well for orthopaedic urgent cases. In some hospitals, consultants in general surgery are now released from elective work to concentrate on non-elective work.

It is recognised that for smaller specialties such as paediatric surgery and maxillofacial surgery it is more difficult to have senior staff available for non-elective work because there are fewer surgeons and the emergency workload is less. This is shown by the replies in Chapter 8 detailing "Surgeon of the correct grade not available".

Hospitals may have established NCEPOD theatres, but if they serve a large population and have a heavy emergency load, this capacity may not be enough to ensure that no non-elective cases that could be done in daylight hours are left to be done out of hours. Many respondents reported that there was too much emergency work in their hospitals to be done in the NCEPOD operating time available.

"There are inevitable delays on these emergency operating lists and sometimes patients with hand injuries wait a good number of hours. The problem would be solved with a plastic trauma list." (reply to an out of hours questionnaire)

Another problem for emergency operating sessions is that emergency work is not given the same priority as elective work.

"Although a separate CEPOD (sic) theatre is available during most days of the week, the political situation means that often in practice the elective lists take precedence over the CEPOD (sic) theatre. On the day in question only two small cases were done during the day." (reply to an out of hours questionnaire)

The Audit Commission recently reviewed the efficient use of scheduled theatre time [2]. Based on their findings that scheduled general emergency operating sessions were used for between 38 and 63% of the allocated time it specified an arbitrary target of 60% utilisation for these sessions. The caption to one exhibit in the Audit Commission report states, "Trusts above the 60% utilisation line have too many scheduled sessions". This comment was picked up in a British Medical Journal news item [21], which reported it as "To get more out of each theatre, hospitals could reduce the number of sessions they leave clear for emergencies". This was misleading because the Audit Commission report then examined why scheduled emergency sessions might be underused, echoing the factors listed above. If sufficient facilities are provided so that most patients will not have undue waits for treatment, then there will be occasions when the facilities will not be used.

The information collected by NCEPOD indicates that scheduled emergency operating sessions are essential for good patient care, and that Trusts should address the obstacles to the proper use of these facilities. Patients admitted as emergencies deserve as much consideration as elective patients admitted from waiting lists.

WHO OPERATES ON NON-ELECTIVE CASES?

The involvement of senior staff has markedly increased since WOW I.

Anaesthetics

Table 7.4 shows each grade by time period, for non-elective NHS patients. The corresponding figures for WOW I have been included for comparison. The figures for the different grades that were collected for this report have been combined, so that the grades in the figures for "SpR 3 and above" approximate to a senior registrar in WOW I, and the grades "SpR 1/2" approximate to a registrar.

Consultants and SAS doctors were much more involved than in 1995/96, at all times of the day and night. This is commendable. Comment was made in WOW I that whilst routine (elective) cases were mainly done by consultants or other experienced staff, emergency (non-elective) work was the province of the trainee. There has been a definite change in the anaesthetic management of non-elective work but the tradition continues for out of hours cover to be provided mainly by trainees.

Surgery

Table 7.5 shows the numbers for each grade of surgeon as percentages of the total for each time period, again compared to WOW I.

Again, "SpR 3 and above" approximates to the grade of senior registrar in WOW I, and "SpR 1/2" to registrar.

Surgical consultants, and SAS doctors, were much more involved than in 1995/96, at all times of the day and night. This is again commendable. Comparing the figures from WOW I and WOW II, the reduction in the proportion of non-elective work done by SpR 1/2 doctors is remarkable.

A number of factors have to be taken into account when deciding how best to allocate non-elective

Table 7.4 Grade of anaesthetist by time of day compared to WOW I

Grade of anaesthetist	Day		Evening		Night	
	WOW I	WOW II	WOW I	WOW II	WOW I	WOW II
Consultant	26.2%	44.5%	9.4%	17.6%	9.0%	18.0%
SAS	7.4%	12.7%	4.8%	8.9%	4.6%	6.1%
SpR 3 and above	7.7%	7.3%	8.8%	12.4%	12.2%	13.4%
SpR 1/2	15.9%	4.7%	19.3%	7.3%	23.3%	9.0%
SHO	35.3%	18.5%	51.5%	38.2%	44.3%	36.9%
Other	5.2%	6.2%	3.8%	9.8%	4.0%	9.6%
Blank	2.2%	6.0%	2.3%	5.7%	2.7%	7.0%
Total	**4645**	**6425**	**2871**	**2320**	**524**	**348**

Table 7.5 Grade of surgeon by time of day compared to WOW I

Grade of surgeon	Day		Evening		Night	
	WOW I	WOW II	WOW I	WOW II	WOW I	WOW II
Consultant	28.5%	41.4%	14.2%	20.6%	11.4%	25.6%
SAS	7.3%	14.5%	5.9%	16.1%	5.6%	11.5%
SpR 3 and above	13.3%	14.1%	13.1%	19.4%	15.0%	22.1%
SpR 1/2	33.0%	11.0%	41.5%	13.9%	42.9%	13.5%
SHO	13.4%	5.0%	21.9%	9.0%	22.3%	6.6%
Other	2.1%	9.2%	1.3%	14.7%	0.9%	12.6%
Blank	2.4%	4.8%	2.1%	6.3%	1.9%	8.0%
Total	**4993**	**6425**	**2986**	**2320**	**534**	**348**

work between different grades of staff. Non-elective cases have the potential to be very challenging. The patient may be very sick, both because of their presenting condition and because of co-morbidities, yet there may be limited time available to improve the patient's condition. In such circumstances it is essential that senior staff are involved, to decide the optimal time for surgery and to perform the actual anaesthesia and surgery. On the other hand, many non-elective patients are fit and require simple surgery, so that the case may be within the competence of relatively inexperienced trainees. Trainees need to spend time working independently as part of their training, but such opportunities are becoming less common. In the right setting, simple non-elective cases done by trainees working on their own, with appropriate supervision available, can be an important and appropriate part of their training, without detriment to the patient.

One of the reasons for restricting non-essential operating at night is that doctors working on-call rotas would be tired having worked all day. It has been suggested that trainee doctors should be doing more cases at night now that their hours are protected. Because of the new working patterns, trainees will be fresh when coming on duty in the evening, and they will not be expected to be involved in patient care the next day if they have been working during the night.

The advisors expressed concerns about how this would be implemented in practice. Hospitals effectively shut down at night, so that the resources of ward staff, radiology and laboratory staff would not be able to support a significant extra operating at night. Of particular concern is how consultant supervision is going to be provided without shift working and a dramatic increase in the number of consultants. The issues should be debated as a matter of urgency by Royal Colleges, professional bodies, DoH and the British Medical Association (BMA) amongst others.