

8. Patients who died

Appropriateness of referral

Table 1 shows that 92% of referrals to ICU were thought to be appropriate. In the remaining 8% of cases the advisors felt that referral was inappropriate due to very poor predicted outcome and the fact that ICU admission was not likely to be of benefit. In these cases it was felt that the medical team responsible should have been able to make the decision that critical care was not appropriate and to document this decision in the notes following discussion between a senior doctor and the patient and/or family.

Table 1. Appropriateness of referral to ICU		
Referral appropriate	Total	(%)
Yes	387	(92)
No	34	(8)
Sub-total	421	
Insufficient data	18	
Total	439	

The decision to refer patients to ICU is often difficult, based on the perceived likely benefits to the patient and the limited critical care resource that is available. These decisions are difficult and should ideally be informed by consultant medical staff. Table 2 shows the grade of staff that referred patients to ICU who were classified as expected to die or had a definite risk of dying.

Table 2. Patients classified as expected to die or definite risk of dying on admission to ICU by practitioner who referred them			
Referring practitioner		No. of patients expected to die	(%)
Not referred by consultant physician	Referred by registered nurse	1	
	Referred by SHO	36	
	Referred by SpR Yr 1-2	30	
	Referred by SpR Yr 3	30	
	Referred by Staff / Associate specialist	8	
	Other	7	
Sub-total		112	71
Consultant physician notified in these cases?	Yes	45	
	No	57	
	Unknown	10	
Referred by consultant		41	26
Referring practitioner not supplied		4	3
Total		157	

As can be seen from Table 2, 71% (112/157) of patients classified as expected to die, were referred to ICU by non-consultants. In this group of 112 patients, consultants were involved in the decision or process of referral in only 45 cases (40%). The low level of consultant physician input in this very sick group of patients must be questioned. It could be argued that consultant physicians should be involved in all patient referrals to critical care. One argument against this is that it would potentially introduce unnecessary delays

and may not increase the appropriateness of referral. However, the structural changes in acute medicine that are being proposed by the Royal College of Physicians should increase the availability of consultants to participate in this process⁸. Furthermore it would seem difficult to argue that consultants, with the benefit of training and experience, would not make more appropriate decisions about the process of care than doctors still in training.

The involvement of consultant staff in intensive care in difficult decisions regarding admission of patients who may not benefit from the process of intensive care is also crucial. Table 3 shows that there was a higher degree of consultant input from critical care than medicine but that 23% of patients classified as likely to die were accepted to ICU without consultant involvement.

Table 3. Patients classified as expected to die or definite risk on admission to ICU by grade of accepting physician	
Accepting grade	Number of patients where death was expected
Intensive care consultant	108
Staff Grade / Associate Specialist	4
SpR	17
SHO	7
Registered nurse	2
Other	3
Sub-total	141
Not answered	5
ICU questionnaire not available	11
Total	157

It is of vital importance that acutely unwell patients receive prompt therapy. Patients who require critical care often have limited physiological reserve and delays in providing appropriate therapy can worsen outcome. In the opinion of the advisors, 22% of this patient population were not referred to critical care at the correct time and were considered to be patients who could have potentially benefited from earlier referral (Table 4). Although this could be criticised as subjective opinion, it should be remembered that a significant number of patients had documented prolonged physiological disturbance (see chapter on Pre ICU care). There was no difference in the timeliness of referral by consultant or other grades.

Table 4. Timing of referrals to critical care								
Referral at correct time?	Referring consultant	(%)	All others	(%)	Sub-total	Not answered	Total	(%)
Yes	55	(79)	165	(77)	220	69	289	(78)
No	15	(21)	48	(23)	63	18	81	(22)
Sub-total	70		213		283	87	370	
Insufficient data	3		22		25	13	38	
Not answered	3		22		25	6	31	
Total	76		257		333	106	439	

There are a number of patients who will not benefit from the process of intensive care, primarily due to lack of reversibility of pathophysiological process and lack of physiological reserve. It is also the reality that the supply of ICU beds is limited. It is therefore of great importance to carefully select patients who are to be admitted to ICU. In this population it was felt that 88% of admissions were appropriate (Table 5a). The remainder were thought to be inappropriate due to poor predicted outcome. As can be seen there was a

small, but not statistically significant difference, in the appropriateness of admission when broken down by grade of referring staff. It should be of no surprise that consultants would be better placed to assess the appropriate level of care for their patients. Table 5b shows the grade of ICU staff who accepted the patients felt to be inappropriate admissions. As can be seen, 36% of these patients (17/47) were accepted by non-consultants, with consultant intensivists accepting the remaining 64%.

Table 5a. Appropriateness of admission to ICU								
Admission appropriate	Consultant	(%)	All others	(%)	Sub-total	Not answered	Total	(%)
Yes	68	(93)	205	(86)	273	88	361	(88)
No	5	(7)	34	(14)	39	10	49	(12)
Sub-total	73		239		312	98	410	
Insufficient data	3		18		21	8	29	
Total	76		257		333	106	439	

Table 5b. Grade of ICU staff who accepted patients felt to be inappropriate admissions	
Accepting grade	Total
Consultant	30
SHO	2
SpR	14
Staff Grade / Associate Specialist	1
Sub-total	47
Not answered	2
Total	49