

## 6. Referral process

### The referrer

Table 1 shows the health professional who referred the patient to the critical care service. Where it was possible to discern from the casenotes, 64% of patients were referred by SHOs or SpRs and consultant referral only took place in 23% of cases.

<b>Table 1. Grade of referrer to ICU</b>		
<b>Health professional who referred patient</b>	<b>Total</b>	<b>(%)</b>
Consultant physician	256	(23)
Registered nurse	10	(1)
SHO	238	(21)
SpR year 1 or 2	255	(23)
SpR year 3+	229	(20)
Staff Grade / Associate Specialist	68	(6)
Other	74	(7)
<b>Sub-total</b>	<b>1,130</b>	
Not answered	105	
<b>Total</b>	<b>1,235</b>	

The direct referral of critically ill patients by staff in training may be appropriate and desirable in some settings, e.g. a young patient with severe acute asthma. However, in other settings more consultant physician involvement in assessment of the patient and the process of referral is probably required. This is particularly important in complex medical patients with multiple comorbidities, in whom decisions about the most appropriate treatment plan are difficult. This may take the form of a bedside review by the consultant or a telephone conversation between resident junior medical staff and the consultant who knows the patient. Table 2 shows that in the patients not referred to critical care by consultants, consultants were informed prior to referral in 43% of cases. This means that 422 patients were referred to critical care by junior doctors, without prior knowledge of a consultant physician.

<b>Table 2. Patient referral to ICU by junior doctors</b>		
<b>Physician notified</b>	<b>Total</b>	<b>(%)</b>
Yes	320	(43)
No	422	(57)
<b>Sub-total</b>	<b>742</b>	
Unknown	181	
Not answered	56	
<b>Total</b>	<b>979</b>	

## Case study

A patient in their early seventies with a history of severe chronic obstructive pulmonary disease was admitted as an emergency complaining of increasing breathlessness. The patient used oxygen at home and was unable to walk more than five metres on the flat due to dyspnoea and had a history of ischaemic heart disease and severe peripheral vascular disease. On admission the patient was drowsy, tachypnoeic and unable to speak. On high flow oxygen, arterial blood gas analysis showed pH 7.05, PaCO<sub>2</sub> 13.1 kPa, PaO<sub>2</sub> 6.0 kPa. Initial therapy, instituted by the medical SHO, included steroids, bronchodilators, 24% oxygen and intravenous fluids. After the institution of controlled oxygen therapy the arterial oxygen saturation fell to 68%. As the patient remained drowsy and in respiratory distress the medical SHO referred the patient to the ICU. The ICU SHO admitted the patient and instituted non-invasive ventilatory support for this presumed acute exacerbation of chronic obstructive pulmonary disease. The patient had a cardiac arrest two hours later. Resuscitation was attempted but proved unsuccessful.

This case illustrates the difficulties of providing care without senior doctor input. Whilst the patient was very unwell (and may have met criteria for ICU admission because of acute physiological disturbance), they had significant comorbidities that made decision-making more difficult.

A consultant physician ought to have been involved in the decision to refer this patient or not, on the basis that the outlook was extremely poor. Similarly, an intensive care consultant should have participated in the decision to admit this patient and subject them to the process of intensive care. In addition, the use of low concentrations of oxygen in an already hypoxic patient and the use of non-invasive ventilation in a patient with this degree of respiratory failure appear inappropriate.