5. Patient observations and review criteria

Physiological monitoring plan

If patients are not responding to therapy, and continue to deteriorate, it is important to provide clear instructions to the nursing staff when to call for assistance for further review of the patient. Table 4 shows that it was very uncommon for instructions to be given to the nursing staff for parameters that should trigger these reviews. In the absence of instructions detailing factors that should prompt a review of the patient it is not surprising that clinical deterioration can exist for some time before remedial action is taken. This is of particular concern as a large number of observations are now carried out by health care assistants and/or nursing auxiliaries who may not appreciate the clinical relevance of abnormal signs [25].

Table 4. Provision of instructions to nursing staff for assistance and further review of patient

Nurse instructions to alert medical staff	Total	*(%)*
Yes	18	*(5)*
No	366	*(95)*
Sub-total	**384**	
Insufficient data	55	
Total	**439**	

One potential explanation for the lack of a physiological observation plan and parameters for further review would be the use of outreach services and early warning systems, as these systems would provide default values that may trigger a review. However, these systems are patchy and often do not cover all patients.

Table 5 shows that 73% of hospitals used some form of 'early warning system' or 'track and trigger system'. The aim of these track and trigger systems is to allow early identification of patients who have physiological abnormalities and to facilitate rapid and appropriate management. The system most often used is the 'early warning score' (modified or not). It is notable that respiratory rate forms an integral component of these track and trigger systems and that, as shown in Table 2 this is poorly recorded. This has the potential to reduce the utility of this approach. The finding that one in four hospitals did not use a track and trigger system combined with the lack of parameters for further review of patients gives cause for concern.

Table 5. Hospitals' use of early warning systems		
Early warning system used	**Number of hospitals**	***(%)***
Medical emergency team	3	*(1)*
Patient at risk team	19	*(9)*
Early warning score	28	*(14)*
Modified early warning score	89	*(42)*
Combinations of above	8	*(4)*
Other	2	*(1)*
System not specified	4	*(2)*
Sub-total	**153**	***(73)***
No early warning system used	58	*(27)*
Total	**211**	

Track and trigger systems may stand alone and feed into the normal ward care structure or may exist in conjunction with a critical care outreach service. Outreach services have been suggested as a means of improving the care of patients since the publication of *Critical to success* [12]. In this document the Audit Commission gave the 'highest priority recommendation' that acute hospitals develop an outreach service to support ward staff in managing patients who were at risk. The concept of outreach services was promoted in the publication *Comprehensive Critical Care* [10] and has been subsequently further supported by the Royal College of Physicians [7]. Furthermore, Alan Milburn (then Secretary of State for Health) recommended that "we should see outreach services developing in every hospital" [29]. However, the development of outreach services has been largely unplanned and is not uniform as Table 6 shows. It is of concern that there appears to be a great disparity between England and the rest of the areas covered by NCEPOD with respect to the provision of outreach.

Table 6. Outreach services available in the United Kingdom					
	Outreach service				
Country	**Yes *(%)***	**No *(%)***	**Sub-total**	**Not answered**	**Total**
England	108	65	173	2	175
Independent hospitals	5	7	12	1	13
Wales	3	9	12	0	12
Northern Ireland	0	9	9	0	9
Guernsey	0	1	1	0	1
Isle of Man	0	1	1	0	1
Total	**116 *(56)***	**92 *(44)***	**208**	**3**	**211**