



# **GUIDELINES ON THE USE OF PHYSIOLOGICAL EARLY WARNING SYSTEMS**

**May 2007**

These guidelines have been published by the Clinical Resource Efficiency Support Team (CREST), which is a small team of health care professionals established under the auspices of the Central Medical Advisory Committee in 1988. The aims of CREST are to promote clinical efficiency in the Health Service in Northern Ireland, while ensuring the highest possible standard of clinical practice is maintained.

The guidelines have been produced by a sub-group of health care professionals from varied backgrounds chaired by Dr Glenda Mock. CREST wishes to thank them and all those who contributed in any way to the development of these guidelines.

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## INTRODUCTION

Patients today move in and out of hospital much more rapidly than in the past. The observation chart at the end of the bed is a familiar feature, and its use can be critical in determining whether a patient is making a satisfactory recovery from illness, or on the other hand, deteriorating. The importance of the careful use of the observation chart to detect clinical deterioration is well known. Early Warning Scoring Systems are evidence based tools to flag these changes up at an earlier stage when they are easier to correct.

Physiological Early Warning Scoring Systems are based on the allocation of points to clinical physiological observations such as pulse, blood pressure and respiratory rate. The points for each observation are added to give a score. A supporting Action Plan triggers certain actions, including referral to more senior or specialised staff, when certain scores are reached. Different systems have been devised in different hospitals, as a result of the enthusiasm of clinical staff.

In Northern Ireland the use of Physiological Early Warning Scoring Systems in the HPSS was assessed following the Regulation and Quality Improvement Authority report *“Review of the Lessons Arising from the Death of Mrs Janine Murtagh”*. This report recommended that this type of clinical assessment of patients should be used in all acute hospitals. There is a need to provide clinical teams with formalised protocols and guidance to support critically ill patients until critical care outreach services are fully developed.

Responses from Trusts showed that all but one had an Early Warning Scoring System in place, but the systems used different formats for recording observations, allocated different scores for observations, and were applied in different ways, to different patient groups in different hospitals.

As a result, a sub-group of CREST was established to define minimum standards for Physiological Early Warning Scoring Systems, and advise on their use in the HPSS.

Any Physiological Early Warning System is only an aid to clinical decision making. Staff should use their professional judgement in managing patients. There is no need to wait for specific physiological trigger scores before seeking senior advice about the management of patients with clinical deterioration.

## **RECOMMENDATIONS FOR THE USE OF PHYSIOLOGICAL EARLY WARNING SCORING SYSTEMS**

1. Trusts should have a policy on the routine use of a Physiological Early Warning Scoring System.
2. Staff should receive training in the use of the Physiological Early Warning Scoring System during induction to the Trust or Unit, and as part of ongoing training. Training in the concepts and practical use of Physiological Early Warning Scoring Systems should be included in undergraduate teaching.
3. Trusts should use Patient Observation Charts. These should incorporate a Physiological Early Warning Score, and be based on the Model Physiological Early Warning Observation/Scoring Chart (Appendix 1). For consistency the order of parameters should be the same across Trusts, although in some settings different parameters may be used. The scores for each parameter should be 0, 1, 2 & 3.
4. Trusts should develop an Action Protocol to include actions to be triggered by certain scores on the Observation/Scoring chart. This should be based on the format of the Model Physiological Early Warning Action Protocol (Appendix 2). Trusts will need to ensure that the details in the Action Protocol, such as who to contact, are appropriate for each unit.
5. Trusts may wish to develop additional Observation/Scoring Charts and Action Protocols for use in particular specialties (e.g. paediatrics, obstetrics). The format of the Observation/Scoring Charts and Action Protocols should be based on the Model Observation/Scoring Charts and Action Protocols, but values would be amended as appropriate for the group.
6. All patients admitted to hospital, whether the admission is elective or emergency, should have observations initiated for all physiological parameters on a chart that incorporates a Physiological Early Warning Scoring System. The frequency of observations/scoring may change depending on the patient's clinical condition and risk of deterioration eg more frequent in immediate post-operative period, but as a minimum should be recorded once a day throughout their admission.
7. It may still be appropriate to discontinue the use of routine observations and the Physiological Early Warning Scoring System, for example when a patient is on the Care of the Dying Pathway. The decision to discontinue either

routine Observation/Scoring or the Action Protocol should be made at a senior level, and recorded in the patient's notes.

8. Trusts should audit the use of the Physiological Early Warning Scoring System on a regular basis. A suggested audit tool is included at Appendix 3.

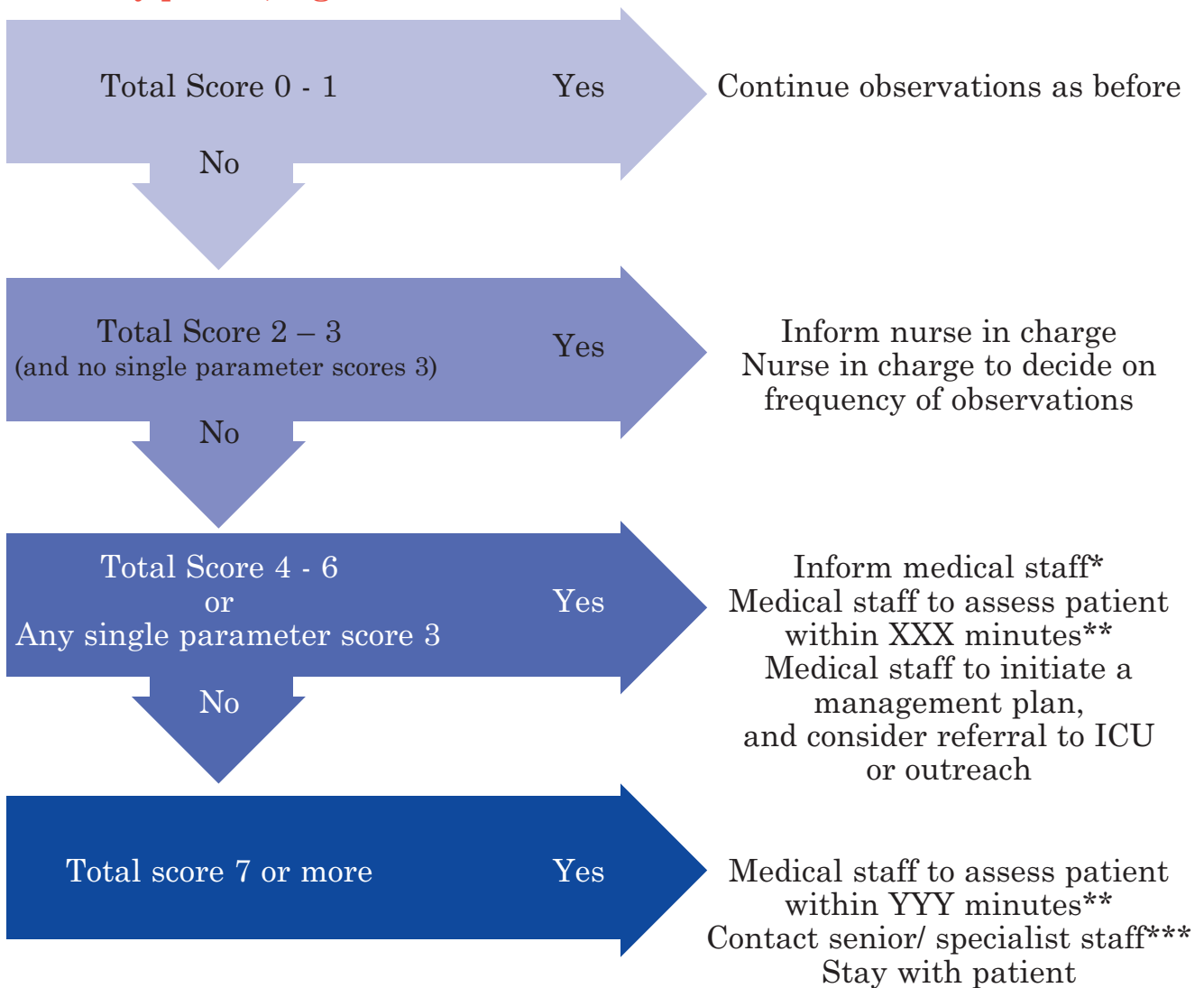


## APPENDIX 2

### MODEL ACTION PROTOCOL FOR PHYSIOLOGICAL EARLY WARNING SYSTEM

The Scoring System and Action Protocol are designed to help identify patient deterioration and ensure appropriate early intervention.

**Staff should use their clinical judgement, and seek advice if they have concerns about any patient, regardless of the score**



\* Trusts or specialties should indicate appropriate medical staff  
e.g. F1, F2, Registrar, Staff Grade, hospital at night co-ordinator

\*\* Trusts should indicate maximum response time  
e.g. XXX 30 minutes, YYY 10 minutes

\*\*\* Trusts or specialties should indicate specialist staff  
e.g. Consultant, ICU team

**APPENDIX 3**

**MODEL AUDIT TOOL FOR  
PHYSIOLOGICAL EARLY WARNING SYSTEM CHARTS**

	YES	NO	COMMENTS
1 Is patient clearly identified on observation/ scoring chart?	<input type="checkbox"/>	<input type="checkbox"/>	
2 Are consecutive dates and times recorded on chart?	<input type="checkbox"/>	<input type="checkbox"/>	
3 Are all parameters completed for each set of observations?	<input type="checkbox"/>	<input type="checkbox"/>	
4 Was Total Score completed for each set of observations?	<input type="checkbox"/>	<input type="checkbox"/>	
5 Was Total Score correctly calculated for each set of observations?	<input type="checkbox"/>	<input type="checkbox"/>	
6 Was time for next observation appropriate for the score?	<input type="checkbox"/>	<input type="checkbox"/>	
7 Was decision to discontinue using Physiological Early Warning System recorded?	<input type="checkbox"/>	<input type="checkbox"/>	
8 Was any Total Score 4 or higher?	<input type="checkbox"/>	<input type="checkbox"/>	
9 Was any single parameter score 3?	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Only complete questions 10-12 if total score 4 or more or single parameter 3</b>			
10 If any Total Score 4 or higher or single parameter score 3, is there a record of who was contacted, and at what time?	<input type="checkbox"/>	<input type="checkbox"/>	
11 If medical staff were contacted is there a record of when they assessed the patient?	<input type="checkbox"/>	<input type="checkbox"/>	
12 Was the patient medically assessed within the time set in the Action Protocol?	<input type="checkbox"/>	<input type="checkbox"/>	





