



## Service Priorities and Programmes Electronic Presentations

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### **Integrated Observation Chart with Color Alert - Modified Early Warning System (MEWS) Enhances Identification And Report of Deteriorating Patient in Surgical Unit**

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#### **Introduction**

Integrated observation chart with Modified Early Warning Score (MEWS) is an assessment tool used among health care professionals for identification and reporting of deteriorating cases. However, inaccuracy and inconvenience in calculation of MEWS led to delay in alerting doctor for providing timely treatment to patients. As a result, a revised Integrated Observation Chart with Color Alert - MEWS was introduced.

#### **Objectives**

1.)To enhance alertness in detecting patients' condition changes 2.)To maintain a high standard of patient observation for ensuring timely assessment and treatment

#### **Methodology**

The Color Alert System was applied to determine the interventions. When patients had abnormal vital signs, different parties should be informed according to the color zone in which the vital sign parameters fall in. For the less severe patients whose vital signs fall in YELLOW zone, case nurse and House Officer would be informed. The frequency of vital signs monitoring should be increased if necessary. For the serious patients whose vital signs fall in RED zone, ward in-charge and case doctor / on-call doctor must be informed. Treatments and clinical care would be intensified.

#### **Result**

From 1st March 2015 to 31st March 2015, 40 cases were audited to evaluate the sensitivity and specificity of this system. To compare the sensitivity of traditional MEWS and the Color Alert - MEWS, the number of the alert episode should be measured. In the Color Alert - MEWS, the total number of yellow alert and red alert are 70 episodes. However, in traditional MEWS, there were only 16 episodes for the warning score more than 4. The result showed that the Color Alert – MEWS was 4

times more sensitive in detecting deteriorating patients than calculating the traditional MEWS. Besides, to measure the specificity of the Color Alert – MEWS, we have calculated the active treatment given per the episodes of Doctor informed, and active medical treatments were given to 87.1% of the informed deteriorating cases, it revealed the specificity of the Color Alert – MEWS. The Color Alert – MEWS is effective in the detection of patient deterioration as a result of its high sensitivity and specificity. Therefore, it enhances patient safety and reduced the medical cost.