

ABSTRACT

Introduction

Vital signs observation is an important function performed in in-ward settings. It is critical for better outcome of patients. Early identification and appropriate response for deteriorating vital signs ensure the effectiveness of patient care. When the number of patients in critical conditions or in risk of deterioration is high, the efficiency and effectiveness of the techniques and tools which are used for monitoring of vital signs should be improved and user friendly. Therefore, this study was planned to improve the monitoring of high risk patients by introducing an improved vital sign monitoring tool, and assess the effectiveness of it by satisfaction of users and efficiency by measuring the response triggering time.

The objective was to improve the vital sign monitoring system by introducing a newly developed system and to assess the effectiveness of it in NHSL.

Methodology

The study has two components and both qualitative and quantitative research methods were used. The 1st component was to assess the present patient observation and response chart, designing of a new system and piloting it. New system was developed by adopting a format developed by the commission of quality and safety for health care in Australia, which has been tested successfully. Series of focus group discussions and key informant personal interviews were used to collect consensus which was adjusted to the study setting.

The second component was to assess the effectiveness of the system by user satisfaction on contextual factors and content of the system by qualitative methods.

The efficiency of the new intervention was quantitatively assessed by three methods. One is to measure statistical difference of response triggering time and second is to measure statistical difference of correction rates of responses in OSPE by staff

In addition to that, feasibility of applying the new format was assessed by measuring the correction rate of recording in new format in real ward setup for two week period.

Results

The qualitative assessments showed a satisfactory level of improvement regarding recording, interpretation and effectiveness of triggering response processes of vital sign observation of patients after implementation of new Observation and Response Chart (ORC).

Results of quantitative analysis proved significant statistical difference between responses triggering time and correction rate of recordings for current monitoring chart and new ORC format. Results of paired t-test fall in to a significant level below 95% confidence levels ($p < 0.05$) in both.

Results of implementation of new ORC format in real ward setup for two week period showed 93% correction rate compared to the recordings of current monitoring chart.

Conclusion

The study results proved that the new ORC format is a more efficient and effective technique compared to the existing observation format of vital signs observation of high risk patients of the inward setting. This study processes and tools can be applied to similar settings with the consideration of local contextual factors.