Effects of Modified Early Warning Score on the Level of Sepsis Progression and Mortality among Hospitalized Medical Patients

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Background: Early recognition of sepsis is very important because it may result in better patient outcomes. It is very critical for nurses to recognize early signs of sepsis and to take appropriate action to prevent the progression of sepsis.

Objective: To examine the effects of the implementation of a modified early warning scores on the level of sepsis progression and mortality among hospitalized medical patients.

Methods: This study was a quasi-experimental study. The before implementation was between November 2014 and March 2015, while the after implementation was from April to November 2015. Data were collected in 72 patients who admitted at the medical unit, Maharaj Nakorn Chiang Mai Hospital. This study was conducted under approval from the Institutional Review Board of the Faculty of Medicine, Chiang Mai University. Data entry and analysis were performed using the software package SPSS, version 22.

Results: 1. There was a strong association between period (i.e., before and after implementing modified early warning scores) and the level of sepsis progression (i.e., sepsis, severe sepsis, septic shock, and no infection) among hospitalized medical patients ($x^2 = 38.63, p < 0.001$). Before implementing modified early warning scores, 26 patients ended up with septic shock (72.22 percent) while three patients had septic shock (8.33 percent) after modified early warning scores was implemented. 2. According to the mortality, the relationship between period of implementing modified early warning scores and status before discharge from the unit (i.e., discharge, refused for further treatment, transfer to Intensive Care Unit (ICU), transfer to sub-ICU, and dead) was statistically significant ($x^2 = 45.45, p < .001$). After implementation of modified early warning scores, the mortality went from 17 cases (47.22 percent) to zero.

Conclusion: The implementation of modified early warning scores provides great outcomes among hospitalized medical patients. Since modified early warning scores uses only vital signs and requires no additional equipment or manpower, understanding and implementing modified early warning scores and providing care based on patient’s modified early warning scores are critical to health care providers for better patient outcomes.

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Validation of Child Health Status Questionnaire for Thai School-Aged Children

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Background: Perceived child health status is an important factor related to physical activity of school-aged children with congenital heart disease after corrective surgery; however, currently there is no instrument to measure it in Thailand.

Objective: To validate a new instrument, the Child Health Status Questionnaire for Thai children that consists of two forms; Form I assesses child health status as perceived by the children and Form II assesses child health status as perceived by parents.

Methods: The comparative, correlational design was employed. Construct validity was examined by contrast group technique and concurrent validity was tested through correlation with child’s quality of life. One hundred and sixty children with congenital heart disease were purposively recruited from the cardiology clinic of one hospital; 80 were those after corrective surgery (group A) and 80 were waiting for the surgery (group B). Moreover, 160 parents of the children in both groups participated in the study. Instruments included two forms of the Child Health Status Questionnaire for Thai children and Thai Quality of Life in Children. Data were analyzed using independent t-test, and Pearson’s correlation.

Results: Mean scores of child health status as perceived by children in groups A and B were significantly different ($t = 6.899, p < 0.001$). There was also a significant difference between mean scores of child health status as perceived by parents of the two groups ($t = 4.250, p < 0.001$). Self-rated child health status was positively correlated with quality of life in both groups ($r = 0.304, p < 0.05$; $r = 0.348, p < 0.05$). Significantly positive relationships were also found between parent-rated child health status and quality of life of children in both groups ($r = 0.396, p < 0.05$; $r = 0.650, p < 0.001$).

Conclusion: These findings provide evidence of validity of the Child Health Status Questionnaire for Thai children. It is recommended that this measure be used in further research and clinical practice among Thai school-aged children with congenital heart disease.

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