An Investigation of the Relevant Factors of Unplanned Readmission within 14 Days of Discharge in a Regional Teaching Hospital in South Taiwan

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Abstract : Background: In Taiwan, the Taiwan healthcare care Indicator Series regards the rate of hospital readmission as an important indicator of healthcare quality. Unplanned readmission not only effects patient's condition but also increase healthcare utilization rate and healthcare costs. Purpose: The purpose of this study was explored the effects of adult unplanned readmission within 14 days of discharge at a regional teaching hospital in South Taiwan. Methods: The retrospectively review design was used. A total 495 participants of unplanned readmissions and 878 of non-readmissions within 14 days recruited from a regional teaching hospital in Southern Taiwan. The instruments used included the Charlson Comorbidity Index, and demographic characteristics, and disease-related variables. Statistical analyses were performed with SPSS version 22.0. The descriptive statistics were used (means, standard deviations, and percentage) and the inferential statistics were used T-test, Chi-square test and Logistic regression. Results: The unplanned readmissions within 14 days rate was 36%. The majorities were 268 males (54.1%), aged >65 were 318 (64.2%), and mean age was 68.8±14.65 years (23-98years). The mean score for the comorbidities was 3.77±2.73. The top three diagnosed of the readmission were digestive diseases (32.7%), respiratory diseases (15.2%), and genitourinary diseases (10.5%). There were significant relationships among the gender, age, marriage, comorbidity status, and discharge planning services ($\chi2$: 3.816-16.474, p: 0.051~0.000). Logistic regression analysis showed that old age (OR = 1.012, 95% CI: 1.003, 1.021), had the multi-morbidity (OR = 0.712~4.040, 95% CI: 0.559~8.522), had been consult with discharge planning services (OR = 1.696, 95% CI: 1.105, 2.061) have a higher risk of readmission. Conclusions: This study finds that multi-morbidity was independent risk factor for unplanned readmissions at 14 days, recommended that the interventional treatment of the medical team be provided to provide integrated care for multi-morbidity to improve the patient's self-care ability and reduce the 14-day unplanned readmission rate.

Keywords : unplanned readmission, comorbidities, Charlson comorbidity index, logistic regression
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