Risk Factors associated with difficult discharge: A retrospective observational study in Queen Elizabeth Hospital

WONG WING YEE(1), YEUNG SY(1), LEE YF(1), NGAI JSC(1), HUNG SYK(1), MAK YF(2)

(1) CENTRAL NURSING DIVISION, QUEEN ELIZABETH HOSPITAL
(2) MEDICINE & GERIATRIC, QUEEN ELIZABETH HOSPITAL

Keywords:
PRE-DISCHARGE SERVICE
LONG STAY PATIENTS
LENGTH OF STAY
DISCHARGE PLANNING

Introduction
Prolonged hospitalization affected patients' outcome, increased staff stress and induced adverse effect on utilization of the hospital resources. Early identification of discharge problems and initiating discharge planning to address the risks by adopting an integrated approach on discharge support could help to reduce the length of hospital stay and avoid unplanned readmission.

Objectives
To study the risk factors inducing prolonged hospitalization.
To derive a predictive model for prolonged length of stay (LOS)

Methodology
A multi-disciplinary discharge planning model has been introduced by pre-discharge service for more than 1.5 years. This research project employed a quantitative review of archived data comprised of patients that had been discharged with average LOS more than 30 days. The independent variables included patients' demographic data, physical, social and functional status. A discharge planning instrument was adopted for identifying reasons of prolong hospitalization. Statistical analysis included frequencies, correlations, multivariates, and regression analyses were conducted, and the dependent variable was LOS.

Result
From Feb 2015 to Aug 2016, the distribution of length of stay among 892 patients: 555 (62%) discharged at 30-59 days, 208 (23%) 60-90 days, and 129 (14.5%) > 90 days.
According to the discharge planning instrument, the following factors showed a significant correlation with LOS. Those who need special nursing care upon discharge such as tube feeding, tracheostomy care, or total parenteral nutrition. Besides, unstable medical condition with acute neurological deficit, infectious disease and required active treatment such as repeated surgery / procedure / investigation or radiotherapy/ chemotherapy, tracheostomy care, and mechanical ventilator therapy. Nevertheless, elderly with cognitive impairment live alone and poor social support need longer time for placement arrangement and community resource to support a safe discharge.

To conclude, this project has demonstrated a promising and yet sustainable outcome on reducing LOS for high risks group clients. There was a significant reduction of patients with LOS ≥ 90 days from 28.3% to 14.5% was identified, which was a 49% relative reduction. In addition, the unplanned readmission rate was reduced among all studied departments. This retrospective study provides valuable information about the risks factors associated with the length of stay from the analysis of variables extracted from the data set. The discharge planning process is very important for addressing Patient™s health needs, managing relative expectations and effective use of health resources. Assessment & discharge planning would be performed upon patient admission and engage relevant parties and stakeholders as early as possible to facilitate a smooth discharge.