

**Abstract**

**Background:** Discharge planning meeting (DPM) was introduced into the health insurance system in Japan for the purpose of successful transitions of care and reduction in hospital readmissions. The aim of this study was to examine the association between DPMs and unplanned hospital readmissions within 28 days.

**Methods:** This study enrolled patients aged 65 years or older who were admitted to the St. Luke's International Hospital between April 1, 2009 and March 31, 2019. The primary outcome was 28-day unplanned all-cause hospital readmission, and the secondary outcomes included 28-day emergency department (ED) visits and all-cause death after hospital discharge. Multiple logistic regression, Firth logistic regression, and propensity score analysis assessed the association between DPMs and outcomes of interest. Both complete cases and multiple imputation (MI) analyses were performed.

**Results:** A total of 15,324 patients were analyzed in this study. Multiple logistic regression showed no significant association between DPMs and 28-day hospital readmission (Odds ratio [OR]: 0.58, 95% confidence interval [CI]: 0.20-1.69 for not using MI; OR: 0.63, 95% CI: 0.37-1.08 for using MI). In addition, no significant associations were demonstrated by Firth logistic regression (OR: 0.53, 95% CI: 0.16-1.69 for not using MI; OR: 0.65, 95% CI: 0.38-1.10 for using MI) and propensity score analysis (OR: 0.93, 95% CI: 0.86-1.01). In terms of 28-day ED visits and all-cause death after discharge, no significant results were obtained.

**Conclusion:** The findings of this study may indicate that it is necessary to review and refine DPMs and communication between the hospital and community care providers.