

“The development of a hospital-based intervention program to prevent functional decline: a quasi-experimental study”

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Numerous studies have shown that most markers of function deteriorate steadily during hospitalization and such deteriorations significantly affect clinical outcomes. Functional decline, defined as a decrement in physical, nutritional, and/or cognitive functioning is a leading complication of hospitalization for older patients. Such decline is very costly both in economic and human terms.

The Hospital Elder Life Program (HELP) was first initiated at Yale University. The Yale-HELP works with the hospital nursing staffs to ensure that older patients remain as independent as possible throughout hospitalization and the outcomes have been superior. The purpose of this 3-year study is to evaluate the feasibility of replicating and extending Yale-HELP in National Taiwan University Hospital and to pilot test the effectiveness of NTU-HELP in preventing common geriatric syndromes and minimizing functional decline in older patients. Specifically, three study phases are proposed:

Phase I: Given the dearth of prevalence data on these outcomes of interest, a hospital-wise epidemiological survey with probability sampling will be conducted to assess the prevalence of common geriatric syndromes and iatrogenic complications including delirium, malnutrition, dehydration, urinary incontinence, pressure sores, depressive symptoms, polypharmacy, urinary catheter insertion, restraint utilization, and activities of daily living (ADL) impairment among older Taiwanese patients during hospitalization. Based on power analyses, 300 randomly selected older subjects will be enrolled and face-to-face assessed once during their hospitalization.

Phase II & III: A quasi-experimental study with a nonequivalent control pre-and post-test design is planned to pilot test the effectiveness of NTU-HELP. In phase II, based on the power analyses, 120 comparison subjects admitted to the designated unit (15B), who did not receive intervention, will be enrolled and assessed during their hospitalization and three months post discharge (admission, discharge & 3-month post). In phase III, another 120 experimental subjects who received NTU-HELP interventions (house at 15B) will be enrolled and assessed under the same assessment schedule & enrollment criteria.

Data will be analyzed by the SAS statistical package version 8. Due to the exploratory nature of the study, test statistic significant at $P < .05$ will be reported. Descriptive, logistic regression and growth modeling will be performed. The findings will inform clinical practices and serve as an evidence base in refining and disseminating the target intervention aims to prevent functional decline during hospitalization for older Taiwanese patients.

Key words: Aged, Functional Decline, Intervention Study, Quasi-Experimental Study