

Title:**Development and evaluation of an integrated medication management model in a medical center****Authors:**

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Abstract

Objective: To improve medication safety, we developed a pharmaceutical care model (NTUH-Integrated Medication Management [IMM]) in our hospital. This report describes how we developed, implemented, and evaluated this model.

Methods: In the planning phase of NTUH-IMM, we formed a discussion group between the university and the hospital, consisting of professors, pharmacy managers, a clinical pharmacist, and a central-pharmacy pharmacist. During the developing phase, we discussed how to retrieve and process patient medication history, and implement the NTUH-IMM within the existing workflow. After implementing the NTUH-IMM in a ward for one year, we conducted an interrupted time-series (ITS) study to evaluate its impact on patient care. To further understand the impact of NTUH-IMM on other healthcare professionals, we used a mixed-methods approach to explore their perspectives.

Results: NTUH-IMM has three main components: medication reconciliation, medication review, and ward-based clinical pharmacist services. Through ITS, we found that the NTUH-IMM can effectively increase the number of medication errors detected by pharmacists and reduce the number of medications used by patients over 75 years old. In the mixed-methods study, we found that healthcare professionals in

the ward implementing NTUH-IMM were more intended to discuss with pharmacists. The healthcare professionals considered the NTUH-IMM allowed them to understand pharmacists' role better, improve communication, and provide better pharmaceutical services.

Conclusion: NTUH-IMM can improve medication safety and enhance collaboration between pharmacists and healthcare professionals.