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# Applying Smart Technology to Improve Pharmaceutical Practices

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## Abstract

A refrigerated automatic dispensing cabinet combines the concepts of a vending machine and automatic dispensing cabinets to accurately measure and automatically dispense medicine after pharmacists scan a prescription barcode. The system can also automatically track and renew inventory and send notifications when a refill is needed. These functions drastically decrease the rate of dispensing errors and improve inventory management. However, the results of the survey used in this study indicated low satisfaction with the refrigerated automatic dispensing cabinet. Thus, the application and design of the refrigerated automatic dispensing cabinet still have room for improvement.

The novel refrigerated automatic dispensing cabinet can be used in outpatient, pediatric vaccination, and emergency department pharmacies to track the batch number of medicines such as vaccines and biologic agents.

**Keywords:** automatic dispensing cabinet with refrigeration, vending machine, intelligentization

# 應用智慧科技提升藥事作業

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## 摘要

以跨產業導入「冷藏智慧藥櫃」，運用自動販賣機的概念及智慧藥櫃功能，藥師刷讀取處方箋條碼後藥品可精準計量且自動出藥，系統會自動更新庫存量，並進行藥品追蹤、清點及補藥通知。活動成果可顯著降低調劑錯誤率、改善藥品庫存管理，但問卷調查顯示對冷藏智慧藥櫃整體的滿意度偏低，整體而言，對於冷藏智慧藥櫃的設置及設計是可以再改進。

未來新型冷藏智慧藥櫃可適用如疫苗、生物製劑，以便藥品批號追溯等為佳，其應用場景可考量於門診針劑藥局、健兒疫苗藥局、急診藥局等。

**關鍵詞：**冷藏智慧藥櫃、自動販賣機、智能化