

# Policy satisfaction for separation of dispensing from medical practices in Taiwan: Success of the prescription-release information system



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## ABSTRACT

Although the policy of the separation of dispensing from the medical practice (SDMP) has been promoted by the Department of Health (DOH) in Taiwan for many years, it has never been significantly successful. Instead of transferring prescriptions to the insurance-contracted pharmacy (ICP) in the community, most of the patients still fill their prescriptions in the hospital or clinic. This is because the policy lacks the necessary supporting measures and incentives. Therefore, we propose a prescription-release information system (PRIS) that makes the prescription release more convenient under the governmental healthcare policy. This test-run system is integrated into the hospital information system (HIS) of Sinying Hospital, which allows the outpatient to choose a preferable pharmacy and transfer prescriptions there via the virtual private network (VPN) in a self-guided way. We posit that this PRIS is a major factor in the successful promotion of the SDMP policy. Therefore, a research model is built, and the corresponding survey is administered to validate our hypotheses. The results indicate that most of the respondents are satisfied with the PRIS and the SDMP and that the PRIS concretely supports the prevalence of the SDMP policy.

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## 1. Introduction

The policy regarding the SDMP has prevailed around the world for many years (College of Pharmacy, 2011). In western countries, a physician's job is to examine the patient, diagnose the problem and prescribe the appropriate medication, and the responsibility of the pharmacist is to dispense medication according to the prescription, provide consultation and advise the patient regarding drug use (Abood, 1989). However, this is not the case in many Asian countries. In Taiwan, for example, after giving medical advice and appropriate treatment, the physicians are legally allowed to dispense the prescribed medications to the patients. Hence, many small clinics hired unlicensed assistants to dispense medications in the early days. Because physicians do not release the prescription, the licensed pharmacist cannot dispense medication. Rather, they can only handle over-the-counter drugs. Even though this situation is improving, most of the prescriptions are still not being filled at the local ICP. Therefore, the specialty of many pharmacists is being wasted, and the medical safety of the patient is an ignored problem. To protect the patient's medical safety and to provide convenience for outpatients, especially for those who live in remote areas, the DOH in Taiwan decided that National Health Insurance (NHI) should be implemented based on the policy of the SDMP as defined at the National Healthcare Administration Meeting in 1990. In 1995, the NHI came into

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effect. However, after more than 10 years, the implementation of the SDMP is still not successful, and it continues to face many intangible obstacles nationwide.

Currently, many physicians in clinics install small clinical pharmacies in compliance with the requirements of the SDMP. However, this is a waste of medical resources, and it results in inefficiency. To achieve the goal of SDMP, prescription release is mandatory. Accordingly, it will allow patients to fill or refill their prescription at any convenient ICP. According to the literature, prescription refilling is defined as a prescription that chronic patients can refill a few times without returning to see their healthcare providers (De Smet and Dautzenberg, 2004). Therefore, especially for the rural areas, it is neither reasonable nor economical for patients to return to the hospital or clinic to refill a prescription. Hence, an important step of the SDMP is to encourage the release of refilling the prescription to the local pharmacist who can dispense medications according to the instructions of the physician when filling and refilling the prescription. One other important note is that small clinical pharmacies do not have the capability to address drug interaction problems because they cannot retrieve the medical history of outpatients.

Because it is difficult for many ICPs in local communities to handle inventory, especially for rare, expensive or controlled drugs, outpatients may frequently fail to fill or refill their prescriptions. Additionally, it is not difficult for some malicious users to counterfeit or tamper with the paper prescriptions to illegally obtain controlled drugs. Therefore, the important measure for the advancement of this policy depends on the efforts to develop a PRIS that makes the dispensing process more secure and more efficient while helping pharmacies to manage their stock.

According to the practical requirements, we design a networking structure and develop a PRIS to help in the release of prescriptions. This system requires access to the hospital information system (HIS) to retrieve the prescription, and it uses virtual private network to safely transmit the prescription to the designated ICP for the outpatient. The prescription can be printed out in the drug store. When the outpatient arrives at the pharmacy and presents the original prescription, the pharmacist can then double-check the content of the prescription. Moreover, the client of the PRIS, which is available at the pharmacy, can provide the function of the inventory management. Hence, the rare, expensive, controlled, or out-of-stock drugs can be prepared in advance. The goal of PRIS, therefore, is to (1) improve the communications between physicians and pharmacists; (2) educate patients that they have the right to understand their prescription and, more importantly, to choose where to fill the prescription; (3) assist the physician and pharmacist as they strive to provide professional services.

## 2. Prescription-release information system

The PRIS is designed to help users retrieve prescriptions from the HIS and then transfer them to the designated ICP. The patient's complete medicinal records are saved in the database of the NHI, so the pharmacist can provide instructions and consultation based on the current prescription and the patient's historical records. To efficiently and securely transmit prescriptions to the pharmacy, the following functionalities are necessary while we design the structure of this system.

- (1) The releasing server can retrieve prescriptions from the HIS and store and manage them in the local database.
- (2) The releasing server can identify the outpatients and also authenticate the pharmacy.
- (3) The releasing server should construct a VPN between itself and the ICP.
- (4) The releasing server should provide a user-friendly interface for patients.

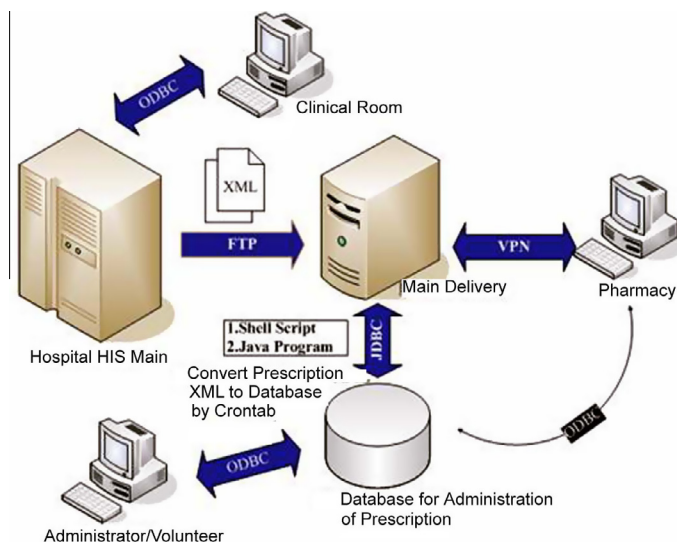


Fig. 1. The schematic structure of PRIS.

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