Threats of Medication Process in Outpatients: Qualitative Study With Physicians, Nurses, and Pharmacists

Taipei Medical University College of Nursing

Sophia Hu, PhD, AGNP
The number of prescription medications increased as the number of chronic diseases increased

- At least one medication
- Five or more medications

* Proper medication management is important
In Outpatient

- Most chronic diseases managed there
- 329.2 millions medication prescribed

- Complicated
  - Professionals
  - Patients/families/care givers
Methods

* Qualitative study with semi-structured interviews

* 15 professionals
  * Medical doctors
  * Nurses
  * Pharmacists
Hospital-based outpatient

- Community hospital: 481 beds
- 11 medical outpatient units
- 43 RNs
- 16,000 adult patient visits per month
Semi-structured interviews

* What is your experience of the medication process among outpatients?
* What are your perceptions of physicians’, nurses’, and pharmacists’ roles and responsibilities in regard to the medication process for outpatients? and
* What are your suggestions to ensure the safety of medication process for outpatients?
Data Collection

- IRB approval
- Contact directors/eligible participants
- Signed consent forms
## Participant Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Frequency (%)</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7 (46.7%)</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>8 (53.3%)</td>
<td></td>
</tr>
<tr>
<td><strong>Age (mean = 35.5 ± 4.5)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor ($n = 5$)</td>
<td></td>
<td>39.0 (3.0)</td>
</tr>
<tr>
<td>Pharmacist ($n = 5$)</td>
<td></td>
<td>31.0 (2.9)</td>
</tr>
<tr>
<td>Nurse ($n = 5$)</td>
<td></td>
<td>36.4 (4.5)</td>
</tr>
<tr>
<td><strong>Years of experience (mean = 8.8 ± 5.0)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor ($n = 5$)</td>
<td></td>
<td>9.2 (4.3)</td>
</tr>
<tr>
<td>Pharmacist ($n = 5$)</td>
<td></td>
<td>5.0 (2.2)</td>
</tr>
<tr>
<td>Nurse ($n = 5$)</td>
<td></td>
<td>12.3 (5.4)</td>
</tr>
</tbody>
</table>
Themes

* Double-edged sword of professionalism
* Communication gaps
* Information technology challenges and opportunities
* Involvement of patients/families/caregivers
I don’t really like to prescribe other specialty’s medications because I am less familiar with those medications. . . . For people who have many chronic diseases, blood sugar would be managed by the endocrinologist. I [cardiologist] manage blood pressure. We will then figure out who would manage the patient’s cholesterol.

(Physician #2)
For patients who have a lot of prescription medications, people think the family doctor might be the most appropriate professional to manage patients’ medications, but sometimes it is difficult for them to do that because some medications should be managed by specialists. They [family doctors] can’t handle that. (Physician #5)
If patients use some medications outside of the doctors’ subspecialty, which the doctor is not familiar with, I should be able to reconcile those medications first for any side effects and educate the patients for proper medication use. (Pharmacist #2)
Medication safety has been managed by physicians and pharmacists. We [nurses] may not be able to be involved in that. It requires a lot of training for us to know the medications in that specialty to identify any medication errors. . . . If I find it is not a common instruction or is different from the instruction I heard from the doctors, I double check with the doctor. . . . we [nurses] can be the first medication safety keeper, but I can only do that in ear, nose, and eye outpatients because their medications are relatively simpler. We don’t have the training in medications for outpatients with surgical and medical problems. (Nurse #1)
Sometimes, it is difficult to decrease the number of medications or the complexity of medication regimen because I was not the one to initiate the treatment. . . . If I don’t know the prescribing doctor, I remind my patient to tell that doctor what I recommended, or I ask the patient to pass the note I wrote to that doctor during the doctor’s next visit . . . but the information sometimes gets lost . . . the patients often don’t get what I said to them so they don’t know what information to pass on. (Physician #2)
Pharmacists provide medication education for outpatients, but I don’t know what they teach, what the outcomes are, how frequently this service has been used. . . . They [pharmacists] don’t share this information with us. (Physician #4)
For outpatients, we [pharmacists] receive limited clinical information, such as patients’ diagnoses, lab data, etc., compared with the in-hospital setting. It takes me a lot of time to retrieve the information in various computer information systems. It is very time consuming and not realistically possible to do so in a busy setting such as the outpatient department. (Pharmacist #2)
Our hospital IT is okay [in terms of seeing the patient’s prescription medications within the seven branches], but using PharmaCloud [claim data of the Taiwan National Health Insurance for prescription medications] to check the medications prescribed outside of our hospital branches is troublesome. (Physician #3)
PharmaCloud is not convenient to use. Almost half of the time, the screen is frozen when I click on it. . . . I don’t have that much time to fix it in the outpatient department . . . there is a lot of information, but it is not user friendly yet. (Physician #2)
The IT can’t automatically identify and remind us that patients have two appointments in the same day, so we won’t be able to find the patient’s medication problems in this situation. For example, the patient might go to a gastroenterologist for pain and also go to neurologist with a compliant of pain during the same day. We won’t identify that patients have been prescribed two pain medications unless patients mention this to the two doctors seen in one day. (Pharmacist #5)
hospital purchased medications from different companies for better prices. We need to keep remembering the names of the different medications and check very frequently. Sometimes, the doctors might be confused about the new medications they prescribed, not to mention nurses’ being confused as well. I think it indicates that hospital administrators don’t consider the influence of changing medication frequently on medication safety because they only consider the cost. (Nurse #1)
It is safer [for medication], if we can stay in one specialty outpatient department. However, we need to rotate in various specialty outpatients. . . . we don’t have sufficient training [in medication safety] for outpatients. (Nurse #1)
In the past, patients were not so involved in the medication management. It was more like one direction [the doctor decides], but now, the medication treatment plan is discussed with the patient, and we both agree on it. . . . The difficulty is that some patients insist on taking or not taking some medications. They don’t understand what I’m saying. . . . It is good if their family accompanies them, so the family can help me to explain further. (Physician #2)
We hope that patients only see one doctor so we can better reconcile and manage their medication. However, they prefer to see three to four doctors to manage their different chronic conditions, so we continuously manage medications across various subspecialists, which increases the complexity of medication management. (Physician #5).
Sometimes when I stop some unnecessary medications, patients come back after a couple of days and ask me to prescribe those medications again. They have been on those medications for so long, so they don’t feel comfortable with not taking them. If I don’t prescribe them, they would go to another doctor to get their medications that have been stopped by me. (Physician #5)
Continuum of medication management
Administrative support:
- Develop a consistent medication supply plan
- Provide necessary training and a staffing plan
- Update outpatient medication management plan

Pharmacists:
- Conduct medication reconciliation
- Provide medication use consultation

Doctors:
- Collect comprehensive medication history
- Conduct necessary physical examination and laboratory/imaging tests
- Prescribe appropriate medication

Nurses:
- Identify high-risk patients
- Provide initial medication-use education

Patients/Families/Healthcare aides:
- Understand the use of patient’s medication
- Participate and adhere to patients’ medication management plan

IT support:
- Facilitate communication
- Integrate information resources
- Identify important information efficiently
THANK YOU!

sophiahu@tmu.edu.tw