

Management of Minor Ailments by Community Pharmacists in Cebu, Philippines – An Exploratory Study

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ABSTRACT

Background. Community pharmacists play a central role in the management of minor ailments and their clinical knowledge is vital in improving treatment outcomes of these ailments. The provision of minor ailment service in developed countries has been successful yet the practice in the Philippines has not been documented.

Objectives. The aim of this study was to document the involvement of community pharmacists in the management of minor ailments, the practices, and the perceived challenges in the provision of pharmacy service.

Methods. This was an exploratory descriptive study. Using qualitative research technique, a guided interview questionnaire was employed for data gathering. The practices employed and perceived challenges encountered by pharmacists were interpreted using conventional content analysis.

Results. Colds, cough, skin allergy, diarrhea were the four most common ailments managed by community pharmacists. Pharmacists had underdeveloped roles in consultation. Community pharmacists were knowledgeable on the causes of the minor ailments and the medications dispensed were compliant with approved product indications. The absence of institutional guidelines (66%), lack of ailment-specific training (100%), insufficient clinical skills (76.7%), and a dominant patient self-selection behavior for OTC medicines (73.3%) were perceived as challenges in the provision of minor ailment services.

Conclusion. Community pharmacists managed common ailments with non-prescription medicines however consultation roles were found to be underdeveloped.

Key Words: community pharmacist, minor ailments, nonprescription drugs, Philippines

INTRODUCTION

A community pharmacy is an ideal setting for health care service delivery because it is an accessible health care site.^{1,2} A pharmacist, being one of the most accessible primary health care professional in the community, can manage patients with symptoms of minor ailments at an early stage. A minor ailment is defined as a health complaint which, by simple action, patients could handle themselves. These conditions are self-limiting or uncomplicated with the use of over the counter (OTC) products for relieving symptoms and thus improve the patient's health condition.^{3,4}

Pharmacy-based management of minor ailments provides rapid and convenient access to timely care through a pharmacist skilled in providing advice on self-limiting conditions and recommending products to alleviate the symptoms of a condition.^{4,5} Moreover, community

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pharmacists have the potential to improve patient outcomes, reduce the cost of care by promoting health, preventing illnesses and circumventing adverse events.⁶⁻⁹

The practice of a community pharmacist in developing countries is hindered by factors such as an underdeveloped health care system and pharmacists who are educationally and professionally less well-equipped.¹⁰ In addition, the optimal management of minor ailments is compromised because majority of patients practice self-selection of over-the-counter medications, bypassing health care providers.¹¹⁻¹³

To effectively contribute to minor ailment management, community pharmacists need to have the basic knowledge foundation on pharmacy. An important factor that may influence patients to patronize the minor ailment services of a community pharmacy is a well-trained and accessible pharmacist.¹⁴

The clinical knowledge of a community pharmacist in the management of minor ailments is vital in the improvement of healthcare and ailment outcomes. Insufficient clinical knowledge is one of the main barrier in providing appropriate interventions.^{15,16}

The provision of minor ailment services as well as other expanded pharmacist-roles (e.g., medication therapy management, immunization) in developed countries has been successful^{17,18} yet these practices and the knowledge of Filipino pharmacists on these roles have not been investigated. The majority (77%) of Filipino pharmacists practicing in a community setting,¹⁹ their experience and knowledge on the management of minor ailments remain undocumented. A basis for the improvement and development of community pharmacies as a competent and accessible health care facility to manage minor ailments need to be established.

To the best of our knowledge, this is the first study to document the practices of Filipino community pharmacists in managing minor ailments. The aim of this study was to document the involvement of community pharmacists in the management of minor ailments, their practices, and perceived challenges in the provision of pharmacy service. Common minor ailments reported by the community pharmacists were presented in this study.

METHODS

Research Design

This exploratory, descriptive study was conducted from June 2015 – November 2015. The study was divided into two phases. In the first phase (pre-evaluation), a guided interview with structured questionnaire was employed to determine minor ailments encountered by community pharmacists in Cebu City.

The second phase of the study focused on the four most common ailments reported by the community pharmacists from the first phase. The second phase aimed to establish the practices of pharmacists in the management

of the four most common ailments and the perceived challenges in the provision of services for minor ailments in a community setting.

Selection of Participants

The participating chain community pharmacies (N=43) in Cebu City were grouped into north and south based on their locations. Sample size was calculated using Slovin's formula with a confidence level of 90%. As to the choice of the location of pharmacy, a lot was casted. The selected location of the pharmacy was the basis for inclusion of the community pharmacists in this study. Thirty (30) community pharmacies located in the north (n=15) and in the south (n=15) served as research sites. The research subjects were licensed pharmacists practicing in the community pharmacy belonging to a chain community pharmacy. The community pharmacies were visited and the pharmacist on shift was identified as research participant. This allowed exclusive and non-repetitive participation of a community pharmacist.

Research Instrument and Data Collection

The research instrument used in the first phase was a questionnaire with pre-defined categories consisting of pharmacist demographics, minor ailments encountered, and their basis for the management of minor ailments. Questions were formulated based on known and published theme clusters on the management of minor ailments.^{3,5,9,20} The resulting questionnaire was validated among 10% of the respondents. Respondents informed consent was sought prior to interview.

The first phase of the study served as the basis for the development of the final instrument, focusing on the four most common ailments encountered by community pharmacists. The scope of the final instrument included demographics, questions on how the pharmacists managed the ailments (cough, colds, allergies, diarrhea) in terms of their knowledge about the ailment (patient history, disease etiology) and their practices (medications dispensed, counselling provided, non-pharmacologic interventions recommended). Open-ended questions to uncover barriers encountered by the pharmacists and their practices in the management of minor ailments were also included.

Data collection was completed on sites visited, using a guided structured interview instrument with the pharmacist-on-shift that lasted for 45 to 60 minutes. Linkage with the community pharmacy was established through written communication.

Data and Statistical Analysis

The frequency of responses were tallied and were expressed as mean standard deviation and percentage (%) where appropriate, using Microsoft ExcelTM. Conventional content analysis was applied to responses for open-ended questions in the qualitative study. Key thoughts were gathered from the raw data which were used in the

derivation of codes. The frequency of the resulting codes by category (consultation and medication dispensing practices, knowledge on ailment and its medication, patient behavior) were used to analyze the qualitative data.

Ethical considerations

The study was approved by the University of San Carlos Institutional Ethics Review Committee (approval number: 001/07-15). Institutional approval from participating community chain pharmacy with written consent from the participating pharmacist were obtained prior to commencement of the interview.

Limitations

The study initially intended to document pharmacists knowledge and practices in the management of minor ailments in several chain community pharmacies operating in Cebu City. However, only one community chain pharmacy agreed to participate in the study while other chain community pharmacies declined for undisclosed reasons.

RESULTS

Demographics of respondents

The community pharmacists (n=30), each representing a single community pharmacy situated in Cebu City, participated in the study. Table 1 describes the profile of the respondents. Majority of the pharmacists were females with a median age of 26. All of the respondents completed the degree Bachelor of Science in Pharmacy.

Table 1. Demographics of study participants

Age (years)	Mean	26.4 (SD=3.9)
	Range	21–40
Gender	Male	4 (13.3)
	Female	26 (86.7)
Educational attainment	Bachelor of Science in Pharmacy	30 (100.0)
	Advanced pharmacy specialty training	0 (0)
	Master of Science in Pharmacy or equivalent	0 (0)

Minor ailments encountered by community pharmacists in Cebu City

Cough (80%), colds (80%), diarrhea (73%), and allergy (dermatologic, 66.6%) were the four most common minor ailments encountered by community pharmacists as documented during the first phase of the study. Details are presented in Table 2. The four (4) ailments reported by the pharmacists served as the basis for the common ailments used for the second phase in this study.

Knowledge and practices in the management of minor ailments

The practices of community pharmacist on the four most encountered ailments are presented in Table 3.

Table 2. Minor ailments encountered by community pharmacists in Cebu City (Pre-evaluation)

Ailments	Frequency (%)
Cough	24 (80)
Colds	24 (80)
Diarrhea	22 (73)
Allergy (dermatologic)	20 (66.6)
Constipation	17 (56.7)
Sore throat	17 (56.7)
Dehydration	15 (50)
Fungal infection	14 (46.7)
Nausea & vomiting	14 (46.7)
Sore eyes	13 (43.3)
Dyspepsia	13 (43.3)
Minor wounds	11 (36.7)
Asthma	10 (33.3)
Peptic ulcer	10 (33.3)
Musculoskeletal pain	9 (30)
Sunburn	8 (26.7)

In the management of colds, majority of the pharmacists did not verify if patients had the ailment. Bed rest (50%), physician visit (50%), along with phenylephrine + chlorpheniramine + paracetamol tablet preparation (53.3%) were recommended by the pharmacists.

For cough, majority of the pharmacists asked patients on the prior exposure that possibly led to the ailment. Community pharmacists recommended physician visit (66.7%) if the cough persisted for more than two weeks. In addition, carbocisteine (76.7%) and guaifenesin (56.7%) capsules were dispensed to manage the cough.

In the management of dermatologic allergies, 63.3% of the pharmacists did not verify if the patient had the ailment. Cetirizine (86.7%) and loratadine (73.3%) tablets were the non-prescription medicines recommended.

For diarrhea, majority of the pharmacists inquired patients on the frequency of defecation. Loperamide capsules (100%) were recommended for management.

There were no formularies used in the management of minor ailments. The pharmacists dispensed non-prescription medicines which were appropriate based on the approved product indications.

Consultation and medication dispensing practices of community pharmacists in Cebu are presented in Table 4. Half of the respondents dispensed medications as requested by the patients without any intervention. A limited number of pharmacists (3 – 10%) had the intention to counsel patients on their medications and ailments.

Table 5 presents the knowledge of community pharmacists on the four (4) minor ailments and medications used for treatment.

Majority (93%) of the pharmacists knew that “colds” is self-limiting and that drowsiness is an adverse effect of colds medications.

Table 3. Minor ailment management practices

	Practices	Frequency (%)	
Colds	<i>Questions asked by pharmacist to verify if patients have colds</i>		
	Asked patient on the duration of symptoms	6 (20)	
	Asked patient on the prior exposure that possibly led to the disease	2 (6.7)	
	Asked patient on the prior medications taken	2 (6.7)	
	None	20 (66.7)	
	<i>Pharmacists' advice</i>		
	Bed rest	15 (50)	
	Physician visit	15 (50)	
	Multivitamins intake	2 (6.7)	
	Increase fluid intake	1 (3.3)	
	None	1 (3.3)	
	<i>Non-prescription medicines dispensed by community pharmacist</i>		
	Phenylephrine + chlorphenamine + paracetamol tablet preparation	16 (53.3)	
	Phenylephrine + paracetamol tablet preparation	6 (20)	
	Chlorpheniramine + paracetamol + phenylpropanolamine	3 (10)	
	Dextromethorphan + phenylpropanolamine + paracetamol	2 (6.7)	
	Ascorbic acid	2 (6.7)	
Cetirizine	1 (3.3)		
Cough	<i>Questions asked by pharmacist to verify if patients have cough</i>		
	Asked patient on the duration of symptoms	12 (40)	
	Asked patient on the prior exposure that possibly led to the disease	26 (86.7)	
	Asked patient on the descriptive characteristics of phlegm	2 (6.7)	
	Asked patient on the presence of fever	2 (6.7)	
	<i>Pharmacists' advice</i>		
	Increase fluid intake	4 (13.3)	
	Bed rest	2 (6.7)	
	Physician visit or health center visit (for possible referral to Directly Observed Treatment, Short Course – Tuberculosis) if cough persists for more than 2 weeks	20 (66.7)	
	None	8 (26.7)	
	<i>Non-prescription medicines dispensed by community pharmacist</i>		
	Carbocisteine capsule	23 (76.7)	
	Guaifenesin capsule	17 (56.7)	
	Dextromethorphan + phenylephrine + paracetamol capsule	12 (40)	
	Butamirate tablet	15 (50)	
	Vitex negundo tablet*	1 (3.3)	
	Allergy (dermatologic)	<i>Questions asked by pharmacist to verify if patients have allergy</i>	
Asked patient on the duration of symptoms		2 (6.7)	
Asked patient on the prior exposure (food) that possibly led to the disease		7 (23.3)	
Asked patient on skin condition (i.e., color, sensation)		2 (6.7)	
None		19 (63.3)	
<i>Pharmacists' advice</i>			
Physician visit if symptoms persist		2 (6.7)	
None		28 (93.3)	
<i>Non-prescription medicines dispensed by community pharmacist</i>			
Cetirizine tablet		26 (86.7)	
Loratadine tablet		22 (73.3)	
Hydroxyzine tablet		1 (3.3)	
Diphenhydramine capsule		1 (3.3)	
Zinc oxide ointment		1 (3.3)	
Diarrhea		<i>Questions asked by pharmacist to verify if patients have diarrhea</i>	
		Asked patient on the frequency of defecation	20 (66.7)
		Asked patient on the food consumed	4 (13.3)
	Asked patient on the duration of symptoms	3 (10)	
	Asked patient on the characteristics of the stool (i.e. consistency)	3 (10)	
	<i>Pharmacists' advice</i>		
	Physician visit	2 (6.7)	
	Avoidance of fatty foods	2 (6.7)	
	None	26 (86.7)	
	<i>Non-prescription medicines dispensed by community pharmacist</i>		
	Loperamide capsule	30 (100)	
	Oral rehydration salts	3 (10)	
	Rehydration beverages	3 (10)	
	Domperidone tablet	1 (3.3)	
	Bacillus clausii suspension	1 (3.3)	

*standardized and Philippine FDA-approved herbal preparation

Table 4. Consultation and medication dispensing practices of community pharmacist in Cebu

Practices	Frequency (%)
Asked patient on the intention or use of the (patient) selected medicine	2 (6.7)
Asked patient on the disease and its symptoms	3 (10)
Verified patient knowledge on medication use	1 (3.3)
Provided medication counseling (patient-initiated)	3 (10)
Provided medication counseling (pharmacist-initiated) on instruction for use, dosage, interaction, and precautions	6 (20)
Dispensed patient's self-selected medication (non-prescription) without intervention	15 (50)

Table 5. Knowledge on minor ailments and its medications

	Statements/Questions	Frequency (%)
Colds	<i>Is colds self-limiting?</i>	
	Yes	28 (93.3)
	No	2 (6.7)
	<i>Drug information on adverse effects provided by community pharmacist</i>	
	Drowsiness and rebound nasal congestion (rhinitis medicamentosa)	28 (93.3)
	None	2 (6.7)
Cough	<i>Do you advise patients with non-pharmacologic intervention?</i>	
	Yes	23 (76.7)
	No	7 (23.3)
Cough	<i>What factors are known to cause cough?</i>	
	Allergens	12 (40)
	"Abrupt changes in weather"	12 (40)
	Stress-induced	4 (13.3)
	Colds	2 (6.7)
	<i>Do you ask patients' type of cough (dry or productive)?</i>	
	Yes	30 (100)
	No	0
	<i>What medications do you recommend for productive cough?</i>	
	Carbocisteine	23 (76.7)
	Guaifenesin	17 (56.7)
	<i>What medications do you recommend for dry cough?</i>	
	Dextromethorphan preparation	15 (50)
	Butamirate	15 (50)
	<i>Drug information on adverse effects provided by community pharmacist</i>	
Dizziness and drowsiness	5 (16.7)	
None	25 (83.3)	
<i>Do you advise patients with non-pharmacologic intervention?</i>		
Yes	25 (83.3)	
No	5 (16.7)	
Allergy (dermatologic)	<i>What factors are known to cause allergy?</i>	
	Food	18 (60)
	Pets	3 (10)
	Dust	12 (40)
	Medications	1 (3.3)
	<i>Drug information on adverse effects provided by community pharmacist</i>	
	Drowsiness, dizziness	29 (96.7)
	Burning sensation at site of application	1 (3.3)
	<i>Do you advise patients with non-pharmacologic intervention?</i>	
	Yes	4 (13.3)
No	26 (86.7)	
Diarrhea	<i>What factors are known to cause diarrhea?</i>	
	Unhygienic food preparations	25 (83.3)
	Contaminated water	5 (16.7)
	<i>Drug information on adverse effects provided by community pharmacist</i>	
	Constipation	8 (26.7)
	Nausea and vomiting	4 (13.3)
	None	18 (60)
<i>Do you advise patients with non-pharmacologic intervention?</i>		
Yes	18 (60)	
No	12 (40)	

Nasal congestion (93%) as adverse effects for colds medications were known to most pharmacists.

Forty percent (40%) of the pharmacists knew that allergens and “abrupt changes in weather” were factors known to be the cause of cough. All of the pharmacists were able to distinguish the type of cough along with the recommended medications for each type.

Sixty (60%) percent of the respondents knew that food was known to cause an allergic reaction and ninety-six (96.7%) knew that drowsiness and dizziness were the adverse effects associated with anti-allergy drugs.

Lastly, for diarrhea, unhygienic food preparation was the main factor known to pharmacists that caused diarrhea. Majority of the pharmacists declared that the use of drugs for diarrhea was not associated (60%) with any adverse effects.

Our study revealed that community pharmacists were knowledgeable about the causes of the minor ailments as described in Table 5. Of note, pharmacist had a distinctive dispensing behavior on cough medications wherein all of them were able to distinguish medicines intended for dry cough from productive cough. Moreover, pharmacists were aware of the adverse effects of non-prescription medicines for colds, diarrhea, and skin allergy. Non-pharmacologic interventions, e.g., increase fluid intake, bed rest and use of household remedies, were described in the management of cough and colds but none were recommended for skin allergy and diarrhea.

Perceived challenges in the management of minor ailments

Table 6 presents the challenges perceived by the community pharmacists in the management of minor ailments. Of the thirty respondents, twenty (66%) declared that there were no institutionalized guidelines on management of minor ailments while ten (33%) attributed the presence of a “guideline” through their week-long in-house training prior to their field assignment. Moreover, no ailment-specific trainings were reported at the time of investigation, to equip the pharmacists in the management of minor ailments.

In terms of the perceived challenges in patient counseling, majority (93.3%) of the pharmacists identified the lack of available drug information tools (e.g., case-specific clinical guidelines, “practice-aid” mnemonics) in the community pharmacy and 76.7% of them felt that they had insufficient knowledge to execute the role of drug information provider in the management of minor

ailments. Notably, 73.3% of the pharmacists cited a “know-it-all” behavior of the patients where they have self-selected medications prior to pharmacy visit and unconvinced of pharmacists’ interventions. Moreover, pharmacists (50%) relayed experiences of dispensing patient’s self-selected medication without intervention.

DISCUSSION

In health care delivery, the management of minor ailments and community pharmacists as a source of treatment and advice offers numerous benefits to the community. Minor ailments managed by a community pharmacist could minimize physician visits, hospitalization and hospital readmissions, and emergency department visits entail economic, clinical and humanistic consequences.⁹ The provision of minor ailment services in community pharmacies has long been established, implemented, and expanded in many countries. In developing countries, challenges were reported and mitigation plans set to implement these services. In Cebu City in the Philippines, there are no documented reports of the role of the community pharmacists in the management of minor ailments.

Cough, colds, diarrhea, and dermatologic allergies were the four most common ailments encountered by the pharmacists in this study. They managed these ailments by recommending and dispensing non-prescription medicines based on the approved product label indications. Our findings suggested that the pharmacists were generally knowledgeable on the medicines used in the management of minor ailments.

Community pharmacists in the study intended but failed to verify patient ailments with questions on the symptoms, duration, possible causes, and the intended use of “self-selected” medicines (Tables 3 and 4). Community pharmacists reported minimal execution of the ideal dispensing practice.

The management of minor ailments revolves around three main components: consultation (information gathering or provision); counseling (self-care, lifestyle advise; physician referrals); and dispensing (selection of medicine, quality use of medicines).^{6,17,21-25}

In this study, the role of the pharmacist in consultation was underachieved. Patients displayed “passive-transactional” behavior when purchasing medicines. This first step in the pharmacist-patient encounter is critical on how the counseling step is performed.

Table 6. Perceived challenges in the management of minor ailments

Perceived challenges	Frequency (%)
Lack of drug information tools (i.e., case-specific clinical guidelines, practice-aid mnemonics)	28 (93.3)
Lack of knowledge about the ailment and its pharmacotherapy	23 (76.7)
Patients unconvinced of pharmacists’ intervention	22 (73.3)
Lack of institutional guidelines in the management of minor ailments	20 (66%)
Passive dispensing secondary to dominating patient self-selection of medicines	15 (50)

Pharmacists reported dispensing medicines and provided ailment-related advices only when patients sought for them. A noticeable gap observed in this study was that pharmacists did not ask for whom the medications were intended for. Community pharmacists were receptive to patient demands rather than initiating a pharmacist-driven medication choice in managing minor ailments. Patients presented a pre-determined selection of medicines before visiting the pharmacies (Table 4). Our findings suggest that patient self-selection behavior dominates in the management of minor ailments in Cebu. This is clearly not an ideal practice for pharmacist-patient engagement.

Patient self-selection is regarded as suboptimal with only 15% of them selecting the appropriate non-prescription medicines for their ailments.^{12,26} Moreover, patients lack medical knowledge about their condition and its treatment which leads to many misconceptions about their medications.²⁷

While minor ailments are universally classified as uncomplicated and may be managed within a pharmacy setting, physician referrals continue to be a common advice to patients with cough and colds. These observations reflected two points: First, physician care are still sought for even for minor ailments; Second, pharmacists may either be unaware of or not confident of their role in pharmacy-based management of minor ailments.

Community pharmacists have experienced barriers and challenges in the management of minor ailments. In this paper, pharmacists raised the need for tailored and accessible tools on drug information. Moreover, they cited the lack of confidence in their own clinical ability which could stifle the provision of these services. Alongside with these challenges, pharmacists had varying skill levels in consultation. Pharmacists recommendations on minor ailments appeared to be non-specific and limited. It is a fact that inconsistent information gathering leads to inappropriate recommendations.²⁸ However, with the use of appropriate tools and materials, pharmacists may obtain sufficient information needed in providing pharmaceutical care for minor ailments. The implementation of training activities for minor ailment services has been established as a valuable approach to advancing the quality of pharmaceutical care.²⁹

This study bared important findings on the lack of ailment-specific clinical guidelines, trainings, and several components of minor ailment services.

At the time of investigation, pharmacy-based minor ailment scheme is not yet a part of the national health services in the Philippines. Likewise, management of minor ailments with non-prescription medicines is not a part of most pharmacy curricula in the Philippines. The absence of standardized tools will not only contribute to practice inconsistencies between pharmacists and other health care providers, but may lead to variation in clinical practice and appropriateness of care.²⁵ Without definite practice

guidelines and skill-based trainings, the opportunity to engage patients and encourage discussion about their ailments and medications may be overlooked by the pharmacist. The focus should then be shifted on upskilling pharmacists to expand their role competently, by adapting institutional, perhaps national practice standards in the management of minor ailments.

This paper has its limitations. Not all intended pharmacy chain outlets shared interest in this study. Hence, the findings of this study may not reflect other institutions or pharmacists practices in the management of minor ailments in Cebu, Philippines. Moreover, the veracity of the responses is beyond the control of the researchers. Appropriateness of the product for a specific case or patient condition were not evaluated since the data gathered were solely based on the comprehensive experience of community pharmacists in the management of minor ailments (i.e. self-reports). This study serves as an important foundation in developing guidelines and creating materials for training aimed to provide clinical skills and knowledge to community pharmacists. It is hoped that this study will invoke interest among pharmacy leaders, health policy makers, and researchers in the academia to consider the opportunity to strengthen the role of community pharmacists in the management of minor ailments.

CONCLUSION

Colds, cough, skin allergy, and diarrhea were the four (4) most common ailments managed by community pharmacists in one pharmacy chain in Cebu city. Community pharmacists were knowledgeable in dispensing non-prescription medicines for minor ailments but had underdeveloped consultation roles. The absence of clinical guidelines, lack of ailment-specific training, insufficient clinical skills, and dominant patient self-selection behavior contribute to the challenging pharmacist-patient relationship in the management of minor ailments.

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Statement of Authorship

All authors contributed equally in this work. All authors participated in the data collection and analysis, and approved the final version of the manuscript.

Author Disclosure

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