

OBSERVANCES OF THE CORONAVIRUS DISEASE 2019 CONTROL AND PREVENTION MEASURES AMONG THAI COMMUNITY PHARMACIES

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Abstract

Objectives: To investigate the observances of the Coronavirus disease 2019 (COVID-19) control and prevention measures of the Ministry of Public Health among Thai community pharmacies.

Methods: This survey study gathered the data through an online questionnaire from 25 February to 5 March 2022 among the community pharmacists. Accidental sampling was used to sampling the participants. Descriptive statistics were used in statistical analysis. Community pharmacies' practices were compared before and after the COVID-19 pandemic using the Wilcoxon Signed-Rank Test. Significance level was determined at $p < 0.05$.

Results: A total of 50 pharmacists responded to the survey. The most common measures that drugstores followed were wearing a facemask during service ($n=49$, 98.0%), hand cleaning before and after service ($n=49$, 98.0%), and routine sanitizing of equipment and service areas ($n=48$, 96.0%). The least common measures undertaken by drugstores were hand washbasin installation ($n=14$, 28.0%) and placing warning labels to limit exposure ($n=22$, 44.0%).

Conclusion: Drugstores cooperated in complying with the COVID-19 control and prevention measures, but they still need to encourage some additional actions to provide safety, standardized and convenient service to customers.

Keywords: Coronavirus disease 2019, COVID-19, Drugstores

1. Introduction

Coronavirus disease 2019 (COVID-19) has emerged as an international public health crisis. The number of individuals contaminated with COVID-19 in Thailand reached a level that prompted the hazardous contagious disease designation on February 26, 2020 ^[1]. Conversely, community

pharmacies serve as establishments where medications, medical supplies, and other health goods are sold to both healthy and sick individuals, including those who are at risk of contracting COVID-19. There are some pharmacies that are rather modest, and there are also those that offer their services in enclosed, air-conditioned facilities. Hence, service providers and service customers maintain close proximity, hence increasing the likelihood of exposure and transmission of infection. As a result, Ministry of Public Health provides guidelines for pharmacies to apply in coping with the COVID-19 situations, according to Regulations Issued Under the Decree on Public Administration in Emergency Situations B.E. 2548 (2005)^[2].

In the past, pharmaceutical service of drugstores in Thailand is conducted only in a form of face-to-face service at drugstores due to legal requirements in drug sales. However, after the COVID-19 pandemic, public health service of all professions in medical facilities and drugstores have to be adapted to reduce risk contact and chance of transmission among people according to the government measures^[2]. The situation of COVID-19 pandemic accelerates drugstores to change a form in giving services, adjust places and equipment to be ready for disease control and prevention. In the past 2 years since the outbreak of COVID-19 in Thailand, no studies were conducted about observances of the COVID-19 disease control and prevention measure among community pharmacies in Thailand. Therefore, this study was implemented with the objective to study the observances of community pharmacies according to the COVID-19 disease control and prevention measures of the Ministry of Public Health, Thailand. The findings can be fundamental data for planning quality development in giving pharmaceutical services in the pandemic situation.

2. Materials and Method

Design

This research was a cross-sectional survey study by using an online questionnaire to collect the data. This study was conducted as a component of a larger study that focused on pharmacy services and public perceptions of telepharmacy in community pharmacies. The study protocol obtained approval from the Human Research Ethics Committee at the University of Phayao (No. UP-HEC 1.2/003/65).

Participants

The samples consisted of individuals who were either licensees or pharmacists employed in modern pharmacies^[3]. The samples were obtained using random sampling. The participants eligible for inclusion were (1) licensed practitioners, such as pharmacists, (2) capable of accessing an online questionnaire, and (3) willing to provide written consent autonomously. The exclusion criterion was in giving incomplete questionnaire.

Research Instrument

The questionair was made into an online questionnaire using the Google Form system. The questionnaire was assessed in content validity by 3 experts: 2 were community pharmacists and 1 was an instructor in Faculty of Pharmacy^[4].Then, the reliability was tested in 30 pharmacy

practitioners. The Cronbach's alpha coefficient was 0.861. The questionnaire consisted of 2 parts as follows: (i) demographic characteristic of the respondents (7 items); and (ii) observances of the COVID-19 disease control and prevention measures according to guidelines for community pharmacies in compliance with public health approach for COVID-19 pandemic management of Ministry of Public Health^[2]. This part consisted of 18 items in the form of yes/no questions (practice or not practice).

Data Collection

The researcher obtained the data by utilizing an online survey platform, allowing the respondents to autonomously complete the questionnaire. An invitation to participate in the study was issued by the researcher via the Line application or Facebook pages of each community pharmacy. The duration of the data capture was between February 25 and March 5, 2022.

Data Analysis

The researcher meticulously assessed the completeness of each questionnaire and extracted the data from the Google Form system by transferring it to Microsoft Excel. The data was analyzed using statistical analysis software. The quantitative data were analyzed into descriptive statistics i.e., frequency distribution, percentage, mean, and standard deviation. The Wilcoxon Signed-Rank Test was used to compare observances of the COVID-19 disease control and prevention measures and contact channels between community pharmacies and service users before and after the situation of the COVID-19 pandemic.

3. Results

Characteristics of the Respondents

There was a total of 50 responders, representing 50 different community pharmacies; 21 of these were males (42.0%) and 29 were females (58.0%). The majority of the respondents (n=46, 92.0%) had earned a bachelor's degree, and the average age of the respondents was 34.30 ± 7.06 years old. Pharmacists and license holders for contemporary pharmacies made about half of the responses (n=25, 50.0%). The study's fifty community pharmacies were dispersed around Thailand, both within and outside of the municipality boundaries. The community pharmacies were classified according to pharmacy management into 4 types: single pharmacies (n= 36, 72.0%), pharmacy branches (n=9, 18.0%), franchised pharmacies (n=4, 8.0%), and community pharmacy of Faculty of Pharmacy (n=1, 2.0%).

Observances of the COVID-19 Disease Control and Prevention Measures

Observances according to guidelines of Ministry of Public Health about pharmacy management before and after the COVID-19 pandemic were presented in Table 2. In overall, most community pharmacies complied well with the disease control and prevention measures. The observances which the pharmacies mostly performed were in practitioners' always wearing masks when giving service to service users (n = 49, 98.0%), practitioners' washing hands with alcohol gel before and

after giving service to each service user ($n = 49$, 98.0%), pharmacies' regularly cleaning equipment and places with exposure to service users ($n = 48$, 96.0%) respectively. The observances which the pharmacies rarely performed were in arrangement of a sink for service users' hand washing at the entrance and exit area of the pharmacies ($n = 6$, 12.0%), fixing signs to warn service users not to touch medical supplies or products in the pharmacies ($n = 14$, 28.0%), requesting service users to sign names or scan QR code before receiving services in the pharmacies ($n = 22$, 44.0%) respectively.

In comparison of pharmacies' observances to the COVID-19 disease control and prevention measures before and after the COVID-19 pandemic, it was found that observances of the COVID-19 control and prevention measures among the community pharmacies significantly increased in all measures, except for arrangement of a sink for service users' hand washing at the entrance and exit area of the pharmacies. Before and after the COVID-19 pandemic, 1 pharmacy (2.0%), and 6 (12.0%) pharmacies arranged a sink for service users' hand washing ($p = 0.59$) respectively.

Table 1. Characteristics of the respondents ($n=50$)

Characteristics	Number	Percentage
1. Gender		
Male	21	42.0
Female	29	58.0
2. Education		
Bachelor	46	92.0
Master or Doctoral	4	8.0
3. Role in Pharmacy		
Licensee or Owner	4	8.0
Pharmacist	21	42.0
Licensee and Pharmacist	25	50.0
4. Geographical distribution of stores by region		
Northern (7 provinces)	23	46.0
Central (9 provinces)	14	28.0
Northeastern (4 provinces)	5	10.
Southern (4 provinces)	4	8.0
Eastern (2 provinces)	3	6.0
Western (1 provinces)	1	2.0
5. Drugstore location's community traits		
municipality	49	98.0
non-municipality	1	2.0
6. Type of Pharmacies		
Standalone	36	72.0
Chain store / Franchise	13	26.0

Community Laboratory under School of Pharmacy	1	2.0
7. Community Pharmacy Accreditation		
Accredited Pharmacy	11	22.0
None-accredited Pharmacy	39	88.0

4. Discussion

This research is the first study in Thailand which studied about observances of the COVID-19 control and prevention measures among community pharmacies according to the public health guidelines for managing the situation of the COVID-19 pandemic according to the Regulations Issued Under Section 9 of the Decree on Public Administration in Emergency Situations B.E. 2548^[2] by Ministry of Public Health. These guidelines emphasize on social distancing among people and control about hygienic conditions, and give advices for practices by caregivers, place owners, practitioners, and services users. This study found that most community pharmacists complied well to the disease control and prevention measures. However, the study of Limwilairatana^[5] found that community pharmacies were affected by such measures such as inconvenience to give services while wearing masks, and reduction of service areas due to social distancing. As the guidelines are legally enforceable, violators will be punished with imprisonment not exceeding 2 years or a fine not exceeding 40,000 baht, or both, according to Section 18 of the Decree on Public Administration in Emergency Situations B.E. 2548 (2005). The result in observances of the measures among the community pharmacies conforms to the study results of other organizations such as Khuanpring Subdistrict Administration Organization in Mueang District, Trang Province^[6], Muangtia Subdistrict Administration Organization in Mae Lan District, Pattani Province^[7], Noen Ngam Subdistrict Administration Organization in Raman District, Yala Province^[8], and Bangkapi District Office in Bangkok^[9]. These previous studies found that the government policies and guidelines for the COVID-19 control, and prevention could be applied for determining policies and issuing notifications or regulations in the responsible areas with suitable compliance to the government regulations.

Table 2. Observances of the COVID-19 control and prevention measures (n=50).

Services of the Community Pharmacies	Number of Pharmacies (Percentage)		<i>p</i> -value ³
	Before the pandemic ¹	After the pandemic ²	
1. Limit the number of service users in the pharmacy.	2 (4.0)	24 (48.0)	<0.001*
2. Arrange the order of service in the pharmacy.	9 (18.0)	30 (60.0)	<0.001*
3. Set a distance between people of at least 1 meter.	1 (2.0)	43 (86.0)	<0.001*

Services of the Community Pharmacies	Number of Pharmacies (Percentage)		<i>p</i> - value ³
	Before the pandemic ¹	After the pandemic ²	
4. Arrange an area or a channel to notify intention to buy or receive medicines or medical supplies outside of the pharmacy.	2 (4.0)	26 (52.0)	<0.001*
5. Request service users to sign names or scan QR code according to the government measure before receiving services.	3 (6.0)	22 (44.0)	0.0001*
6. Check physical temperature of service users before entering the pharmacy.	4 (8.0)	31 (62.0)	<0.001*
7. Provide cleansing products such as alcohol gel for service users at the entrance and exit area.	4 (8.0)	40 (80.0)	<0.001*
8. Provide a sink for service users' hand washing at the entrance and exit area.	1 (2.0)	6 (12.0)	0.059
9. Provide cleansing products such as alcohol gel for service users at the payment area.	5 (10.0)	42 (84.0)	<0.001*
10. Provide cleansing products such as alcohol gel for the employees at a convenient point separated from the point for service users.	8 (16.0)	44 (88.0)	<0.001*
11. Fix a sign for requesting service users' collaboration in wearing masks before entering the drugstore.	4 (8.0)	44 (88.0)	<0.001*
12. Fix a sign for requesting service users' collaboration in not touching all medical supplies or products in the pharmacy.	1 (2.0)	14 (28.0)	0.001*
13. Fix a partition between service users and a pharmacist.	1 (2.0)	43 (86.0)	<0.001*
14. All pharmacists and employees in the pharmacy always wear masks while selling products or giving advices to service users.	4 (8.0)	49 (98.0)	<0.001*
15. All pharmacists and employees in the pharmacy wash hands with alcohol gel before and after giving service to each service user.	4 (8.0)	49 (98.0)	<0.001*
16. Use cleansers or disinfectants to regularly clean materials, equipment, and places which are touched by service users.	9 (18.0)	48 (96.0)	<0.001*

Services of the Community Pharmacies	Number of Pharmacies (Percentage)		<i>p</i> - value ³
	Before the pandemic ¹	After the pandemic ²	
17. Regularly clean the air-conditioning system.	12 (24.0)	44 (88.0)	<0.001*
18. Provide public relations media to provide knowledge about prevention and reduction of risk in the COVID-19 infection at different points of the pharmacy.	3 (6.0)	35 (70.0)	<0.001*

Note: ¹Before the pandemic refers to implementation before the COVID-19 pandemic in Thailand; ²After the pandemic refers to implementation after the COVID-19 pandemic; ³Wilcoxon Signed-Rank Test; *Statistical significance ($p < 0.05$)

5. Conclusion

The results of this study showed that the community pharmacies collaborated well in observances of the COVID-19 control and prevention measures according to the public health guidelines for managing the COVID-19 pandemic as prescribed by Ministry of Public Health in Regulations Issued Under Section 9 of the Decree on Public Administration in Emergency Situations B.E. 2548 (2005). However, most community pharmacies did not provide a sink for hand washing at the entrance and exit area, and they did not fix warning signs to reduce touching products in the pharmacies.

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