

# Privileges of Pharmacist in Saudi Arabia: Administration and Management

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Received: 11-10-2019;

Accepted: 12-12-2019

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[www.ptbreports.org](http://www.ptbreports.org)

DOI:  
10.5530/PTB.2020.6.2

## ABSTRACT

**Objectives:** To explore the privileges of pharmacists through the pharmacy administration and management in Saudi Arabia. **Methods:** This is a 4-month cross-sectional survey regarding the privileges of pharmacists in Saudi Arabia. The study consisted of two parts: the first part collected demographic information and the second part comprised a questionnaire with 28 questions divided into 4 domains. The questions were derived from previous literature and from the regulatory standards of the American Society of Health-System Pharmacists (ASHP). The four domains were as follows: privilege management and resources, pharmacist prescribing and therapeutic interchange, clinical and administration privilege and drug monitoring and healthcare education. The responses were obtained using a 5-point Likert response scale system with close- and open-ended questions. The survey questionnaire was distributed in an electronic format to the hospital's director of pharmacy of each hospital in Saudi Arabia. In this study, we analyzed pharmacist's privilege in Saudi Arabia with regard to the pharmacy administration and management. All data were obtained through the Survey Monkey system. **Results:** The survey was distributed to 36 hospitals. The administration-related elements of pharmacist privilege with maximum score were policies and procedures of pharmacist's privilege (3.88 (77.6%)) followed by the vision of pharmacist privilege (3.57 (71.4%)) and pharmacist privilege in the job description (3.56 (71.2%)). The average score of pharmacist privilege in the hospital committees was 3.47 (69.40%). Most of the committees having pharmacist privilege was the patient or medication safety committee (4.09 (81.8%)) followed by the pharmacy and therapeutic committee (4.06 (81.2%)) and quality management committee (4.06 (81.2%)). The average score of pharmacist privilege in the teams was 3.44 (68.85%). The majority of the teams having pharmacist privilege was antibiotics team (4.25 (85%)) followed by anticoagulation team (3.86 (77.2%)) and IV therapy team (3.81 (76.2%)). **Conclusion:** The privileges of a pharmacist is inadequate in the Kingdom of Saudi Arabia. Future programs should target to improve the healthcare system and expand pharmacists' role in the hospital practice. This might improve the pharmaceutical care services and patient outcomes and prevent drug-related problems and unnecessary economic expenditure on the healthcare practice in Saudi Arabia.

**Key words:** Privileges, Pharmacist, Administration, Management, Saudi Arabia.

## INTRODUCTION

Privilege is the permission or facility granted by a hospital or any healthcare institution to a healthcare professional (e.g., pharmacist, physician and nurse practitioner) to render specific therapeutic, diagnostic, or procedural services. Some of the privileges include clinical privileges (which gives the healthcare professional the right to treat) and admitting privileges (which gives the healthcare professional rights to admit patients). Another example of privileges is granted to the pharmacists, which includes pharmacokinetic dosing in hospitals, adjusting and monitoring anticoagulants, as well as ordering laboratory tests. Privileging is the process in which the healthcare organization assesses the individual healthcare professional's performance and credentials and if they find him/her to be satisfactory, then they authorize him/her to perform a definite scope of patient care services in the organization.<sup>1-3</sup> The personnel are granted authorization on establishing that the he/she is qualified to provide the aforementioned services and the organization can support their delivery. Clinical privileges are the specific privileges that are provided to a specific individual. The privileging process also involves the review of the performance and cre-

entials of the healthcare professional.<sup>1-3</sup> There is an increasing number of nonphysician healthcare providers such as pharmacists who perform indirect patient care roles within the healthcare system. The pharmacists can offer relief to the strained healthcare system by providing patient care services at lower costs than that of the physician and therefore decrease the spending on the healthcare system. It is important to establish patient healthcare strategies that improves survival and quality of life of patients by using new technology, treatment and drugs.<sup>4</sup> Recently, the responsibilities of pharmacists in the healthcare system have been changed from traditional duties of medication dispensing and compounding to more patient care duties in order to achieve definite outcomes that improve patient's quality of life. ASHP described six components of the medication use system: Transcribing, prescribing, administration, dispensing, monitoring and patient education. ASHP conducted a survey of pharmacy practice in the United States on the transcribing and prescribing duties. Their results showed that the response rate increased from 28.9% in 2013 to 29.8% in 2016,<sup>5,6</sup> whereas found in the other country might reach up to 93% of

pharmacist prescribing.<sup>7</sup> Many pharmacy departments have not previously established a formal peer-review process because it did not require for pharmacy quality management accreditations. However, nowadays, formal professional practice evaluation should be established within each organization by considering the requirement of the Joint Commission. Implementation of professional practice review will necessitate oversight and administrative infrastructure, which is similar to the privileging and credentialing process. The development of the internal documentation process needs to be easy to understand and the follow-up is the primary success key performance indicators in the management.<sup>3</sup>

## METHODS

This is a 4-month cross-sectional survey regarding the privileges of pharmacists in Saudi Arabia. The study consisted of two parts: the first part collects demographic information and the second part comprises a questionnaire with 28 questions that are divided into 4 domains. These domains are derived from previous literature and from the guidelines and regulations stated by the American Society of Health-System Pharmacists (ASHP).<sup>1-3,7,8</sup> The four sections were as follows: Privilege management and resources, pharmacist prescribing and therapeutic interchange, clinical and administration privilege and drug monitoring and healthcare education. The responses were obtained via a 5-point Likert response scale system with close and open-ended questions. The survey was distributed in an electronic format to the director of pharmacy, deputy director of pharmacy, pharmacy quality management or clinical pharmacy coordinators, or to any pharmacist assigned on behalf of director of pharmacy. The follow-up was done via email and telephone after every 1-2 weeks. All primary healthcare centers and regional pharmacy administrations at MOH were excluded from the study. In this study, we analyzed pharmacy administration and management privileges of pharmacists in Saudi Arabia. All data were obtained through the Survey Monkey system and analyzed using Statistical Package of Social Sciences (SPSS) version 20. The data were validated via three different methods: more three authors reviewed the survey independently and a pilot study was conducted. Then, the survey was updated accordingly and the Cronbach's alpha value for internal validity was calculated. The survey is types which exempted from international guidelines of institutional review boards (IRB).<sup>9</sup>

## RESULTS

The survey was distributed to 36 hospitals. Of them, 19.44% of the hospitals had 100–199 beds and less than 50 beds, while 13.89% had 50–99 beds, 300399 beds and more than 600 beds. Of the total 36 hospitals, 18 (50.00%) hospitals were accredited by the CBAHI, 17 (47.22%) were accredited by the Saudi Commission of Health Specialties and 13 (36.11%) were accredited by the Joint Commission, whereas 5 (13.89%) hospitals had no accreditation from any of the organization and 13 (36.11%) hospitals were covered by 50–74% of the patient medical cost by health insurance. Majority of the responders were in the age group of 41–65 years (17 (47.22%)). Majority of the responders were Saudi nationals (32 (88.89%)); 4 (11.11%) responders were non-Saudi nationals. Most of the responders had Diploma in Pharmacy degree (14 (38.89%)) and Bachelor of Science in Pharmacy degree (12 (33.33%)). Most of the responders had <1 year experience in pharmacy (46.67%), whereas 30.77% of the responders had 4–6 years of experience in clinical pharmacy and 43.75% had >6 years of experience in pharmacy administration (Tables 1 and 2). The average score of pharmacist privilege regarding administration elements was 3.44 (68.82%). Most of the scores were obtained for administration-related elements of pharmacist privilege such as policies and procedures of pharmacist privilege (3.88 (77.6%)) followed by vision of pharmacist privilege (3.57 (71.4%)) and pharmacist privilege in the

job description (3.56 (71.2%)) (Table 3). The average score of pharmacist privilege in the hospital committee was 3.47 (69.40%). Most of the hospital committees had pharmacist privilege for patient or medication safety committee (4.09 (81.8%)) followed by for pharmacy and therapeutic committee (4.06 (81.2%)) and quality management committee (4.06 (81.2%)) (Table 4). The average score of pharmacist privilege in the teams was 3.44 (68.85%). Most of the teams having pharmacist privilege were antibiotics team (4.25 (85%)) followed by anticoagulation team (3.86 (77.2%)) and IV therapy team (3.81 (76.2%)) (Table 5). The average score for pharmacist privilege in the pharmacy department was 3.31 (66.26%). Most of pharmacy units having pharmacist privilege were inpatient pharmacy (3.69 (73.80%)), outpatient pharmacy (3.69 (73.80%)) and pharmacy store (3.58 (71.6%)) (Table 6). The Cronbach's alpha value was 0.983.

## DISCUSSION

The pharmacy services are expanding over the past few years.<sup>10,11</sup> Various healthcare organizations offer pharmacy services, including hospitals, primary healthcare centers, dental clinic care and specialized medical centers. All these institutions or centers are required to be accredited by the Saudi Center of Healthcare Accreditation (CBAHI).<sup>12</sup> The accreditation standards requires the policies and procedures for pharmacist and healthcare provider's privilege. Each healthcare administrator should adopt a system of pharmacist privilege. The privilege system should consist of policies and procedural privileges, clinical activities privilege, administration activities privileges and credentials of privilege.<sup>1-3</sup> This study revealed the administration elements of the privilege system at Saudi hospitals. The survey showed high internal validity distributed among the responders of the most equal-sized hospitals. The half of the responders had accreditation by the CBAHI, whereas one-third of the responders had accreditation from the Saudi commission and Joint Commission Accreditation form the United States. Thus, the answers of privilege would not be completed at the optimum level. Moreover, half of the responders were young with less experience in the clinical pharmacy services and had a bachelor's degree. As results, the privilege negative answers would reflect the reality of practice. Our analysis shows that two-thirds of the privilege administration elements were implemented and one-third were not. This might be due to the implementation of new privilege system that is related to pharmacy practice. Despite some elements founded two-third of implementation still some elements below the target level. Fore instances; the pharmacist job satisfaction with regard to pharmacy privilege, patient satisfaction with regard to pharmacist privilege and competency with regard to pharmacist privilege. All administration elements of pharmacist privilege should be reviewed and corrected accordingly. Most of the committees had implemented pharmacist privilege related to pharmacy practice.

According to the results of this study, pharmacist privileges have participated in the principal committee that addresses problems with drug shortages and addresses the quality of prescribing, such as the pharmacy and therapeutic committee, infection control committee and quality management committee similar to the previous study.<sup>13</sup> Moreover, the pharmacist is involved in the drug utilization activities at the hospitals through revision of drug-use procedures, policies and involved into medical staff credentialing considerations. In addition, our results agree with those of national ASHP studies, which have concluded that the drug policies developed by the pharmacy and therapeutic committee continue to be an essential strategy for improving prescribing. However, in this study, the role of the pharmacist in drug development policies is less compared to that of ASHP.<sup>6</sup> Most of the pharmacy departments had pharmacist privilege with active units during workflow with daily activities, including inpatient and outpatient pharmacy and pharmacy store, which required that the pharmacists do their activities at appropriate and

**Table 1: Demographic information regarding responders' qualifications.**

Nationality	Response Count	Response Percent	No. of hospital Licensed Beds	Response Count	Response Percent
Saudi	32	88.89%	< 50	7	19.44%
Non-Saudi	4	11.11%	50-99	5	13.89%
Answered question	36		100-199	7	19.44%
Skipped question	0		200-299	1	2.78%
Age	Response Count	Response Percent	300-399	5	13.89%
20-30 years	2	5.56%	400-499	3	8.33%
31 - 40 years	16	44.44%	= or > 600	5	13.89%
41 - 65 years	17	47.22%	Medical City	3	8.33%
more than 65 years	1	2.78%	Answered question	36	
Answered question	36		Skipped question	0	
Skipped question	0		The hospital accreditation	Response Count	Response Percent
Academic qualifications	Response Count	Response Percent	CIBAHI	18	50.00%
Diploma Pharmacy	3	8.33%	Joint Commotion USA	13	36.11%
Bsc. Pharm	12	33.33%	Canada	0	0.00%
M.S	2	5.56%	Saudi Council	17	47.22%
Msc. Clinical Pharmacy	6	16.67%	None	5	13.89%
Pharm.D.	14	38.89%	Answered question	36	
Ph.D	1	2.78%	Skipped question	0	
MBA	6	16.67%	Total number of patients covered by health insurance	Response Count	Response Percent
Pharmacy Residency Two years (R1)	2	5.56%	Non	6	16.67%
Pharmacy Residency one year (R2)	0	0.00%	< 25%	8	22.22%
Fellowship	1	2.78%	25-49%	6	16.67%
Other (please specify)	2	5.56%	50-74%	13	36.11%
Answered question	36		75-100% of our patients.	3	8.33%
Skipped question	0		Answered question	36	
			Skipped question	0	

**Table 2: Responders' experiences of pharmacy practice.**

Years of experience	Pharmacy Practice	Percent	Clinical Pharmacy	Percent	Pharmacy Administration	Percent	Response Count
0	4	30.77%	4	30.77%	5	38.46%	13
< 1 year	7	46.67%	4	26.67%	4	26.67%	15
1-3	9	39.13%	6	26.09%	8	34.78%	23
4-6	7	26.92%	8	30.77%	11	42.31%	26
> 6 years	14	43.75%	4	12.50%	14	43.75%	32
Answered question							36
Skipped question							0

**Table 3: Pharmacy administration of pharmacist privilege elements.**

Answer Options	75-100 % completed	50-74%	25-49%	1-24%	We do not have it	Rating Average	Percent Average	Response Count
Vision of Pharmacist Privilege	12	10	5	2	6	3.57	71.40	35
Mission of the Pharmacist Privilege	10	9	3	3	6	3.45	69.00	31
Strategic Plan of Pharmacist Privilege	5	16	2	3	6	3.34	66.80	32
Annual Plan of Pharmacist Privilege	6	17	2	4	5	3.44	68.80	34
Policy and Procedure of Pharmacist Privilege	15	8	3	2	4	3.88	77.60	32
Job description of Pharmacist Privilege	11	11	3	4	5	3.56	71.20	34
Job Satisfaction of Pharmacist Privilege	4	14	9	2	6	3.23	64.60	35
Competency of Pharmacist Privilege	6	11	10	3	5	3.29	65.80	35
Patient satisfaction of Pharmacist Privilege	6	11	7	4	6	3.21	64.20	34
Average						3.44	68.82	
answered question								28
skipped question								0

**Table 4: The committees had privilege for the pharmacist.**

Answer Options	Always	Often	Sometimes	Rarely	Never	Rating Average	Percent Average	Response Count
Pharmacy and Therapeutic Committee	20	1	10	1	2	4.06	81.20	34
Antibiotics Committee	19	4	6	3	3	3.94	78.80	35
DUE Committee	9	6	11	1	7	3.26	65.20	34
Infection Control Committee	18	3	8	2	4	3.83	76.60	35
CPR Committee	15	1	10	3	6	3.46	69.20	35
Morbidity and Mortality Committee	9	2	11	6	6	3.06	61.20	34
Patient or Medication Safety Committee	21	4	6	0	4	4.09	81.80	35
Pharmacy and Nursing Committee	12	3	10	1	8	3.29	65.80	34
Quality Management Committee	18	6	8	1	2	4.06	81.20	35
Pain Management Committee	8	7	9	2	9	3.09	61.80	35
Home health care committee	6	0	14	2	12	2.59	51.80	34
Hospital Privilege committee	7	5	10	2	10	2.91	58.20	34
Average						3.47	69.40	
answered question								36
skipped question								0

at optimum levels. Several teams had pharmacist privilege, including antibiotics team, anticoagulant team and IV therapy team because these teams had already implemented programs. Most of the teams that had pharmacist privilege was antibiotics team followed by anticoagulation team and IV therapy team, which was similar to previous study.<sup>14</sup> Our results showed higher implementation of the same activities as that of antibiotics team as reported by Alomi *et al.*<sup>15</sup> Similarly, all clinical activities had higher implementation than what has been reported in Alomi *et al.* Study, which showed that some improvement in clinical pharmacy services at MOH hospitals and increases numbers of graduated Pharm. D. students. Finally, previous have not compared the results with either local or international studies. However, this study can be considered one

of the preliminary studies in Saudi Arabia, Gulf and/or the Middle Eastern countries. This study provides a summary of pharmacist privileges that have not been fully implemented at healthcare organizations in the KSA. The pharmacist privilege should be reviewed further in more detail and followed up with the process of implementation in KSA.

## CONCLUSION

The pharmacist privilege is inadequate in the Kingdom of Saudi Arabia. Future studies should target to improve the healthcare system and expand pharmacist's roles and privileges in the hospital practice by increasing the pharmaceutical care services, improve patient outcomes, prevent drug-related problems and reduce unnecessary additional economic

**Table 5: The teams having privilege for the pharmacist.**

Answer Options	Always	Often	Sometimes	Rarely	Never	Rating Average	Percent Average	Response Count
Antibiotics Team	24	3	6	0	3	4.25	85.00	36
Pain Management Team	9	5	10	2	10	3.03	60.60	36
Anticoagulation Team	19	3	9	0	5	3.86	77.20	36
IV Therapy Team	17	8	4	1	6	3.81	76.20	36
Adults Nutrition Support Team	12	3	9	1	10	3.17	63.40	35
Pediatrics Nutrition Support Team	13	4	9	0	9	3.34	66.80	35
IV Chemotherapy Team	16	3	5	0	12	3.31	66.20	36
Home healthcare Team	7	3	12	1	12	2.77	55.40	35
Average						3.44	68.85	
answered question								37
skipped question								0

**Table 6: The departments having privilege for the pharmacist.**

Answer Options	5	4	3	2	1	Rating Average	Percent Average	Response Count
Inpatient pharmacy	13	10	6	3	4	3.69	73.80	36
IV admixture Pharmacy	9	12	5	3	7	3.36	67.20	36
Outpatient pharmacy	13	9	7	4	3	3.69	73.80	36
Satellite pharmacy	7	7	7	1	14	2.78	55.60	36
Emergency pharmacy	9	5	15	2	5	3.31	66.20	36
Drug information	8	10	9	5	4	3.36	67.20	36
Clinical Pharmacy	10	9	8	2	7	3.36	67.20	36
Prepackaging section	12	5	9	5	5	3.39	67.80	36
Pharmacy Store	13	3	15	2	3	3.58	71.60	36
Pharmacy home care	7	2	11	2	14	2.61	52.20	36
Average						3.31	66.26	
answered question								36
skipped question								0

1-No activity to implement 2-Discussed for possible implementation in the pharmacy but is not implemented at this time

3-Partially implemented for some or all patients, prescriptions, drugs, or hospital department

4-Fully implemented for some patients, prescriptions, drugs, or hospital departments

5-Fully implemented for ALL patients, prescriptions, drugs, or hospital departments

burden on the healthcare practice in Saudi Arabia.

## ACKNOWLEDGEMENT

None.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## ABBREVIATIONS

**MOH:** Ministry of Health; **KSA:** Kingdom of Saudi Arabia; **CBAHI:** Saudi Central Board for Healthcare Accreditation; **ASHP:** American Society of Health-System Pharmacists; **SPSS:** Statistical Package of Social Sciences.

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