Cost Analysis of Separate Location of Emergency and Ambulatory Care Pharmacy Services in the Kingdom of Saudi Arabia

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ABSTRACT

Objectives: In this study, we aimed to explore the cost of separated locations of emergency and outpatient pharmacy services in the Kingdom of Saudi Arabia. **Methods:** It is a descriptive, cross-sectional, and questionnaire-based study. We used an electronic survey with a judgment sampling system to obtain responses. The structured questionnaire consisted of two parts written in English and Arabic languages. The first part collected demographic information of the respondents based on multiple-choice questions. The second part contains questions for measuring the personal cost, the salary of outpatient supervisor, the clinical pharmacist working at outpatient, pharmacist and pharmacy technician, secretary and Porter per hour, in addition to the cost calculation preparation time of each medication, the total prices of the overhead cost for the place, and cost of all equipment used for the emergency services. Furthermore, the cost of purchased materials and supplies plus non-salary cost. Face and content validation had been done through an expert reviewer. In addition, a pilot study was conducted by sending the questionnaire to some hospitals to confirm the validity of the questionnaire and the absence of incomprehensible or misleading questions. Data were collected through the Survey Monkey system and analyzed using Microsoft Excel software version 2020. **Results:** The total of judgment responders was 14 directors of pharmacy. Most pharmacy directors experienced emergency pharmacy, outpatient pharmacy, and pharmacy administrators six years and above. OPD pharmacy services' total cost was (3509.64 USD) while the emergence pharmacy services were (1068.02 USD). The majority of the cost came from personal cost from OPD pharmacy 2542.63 USD (72.45%) vs. emergency pharmacy 826.4 USD (77.36%), and overhead cost 656.01 USD (18.69%) at OPD pharmacy while 144.93 USD (13.57%%) emergency pharmacy. **Conclusion:** The cost analysis of nonintegrated outpatient pharmacies and emergency services was high. Therefore, we highly recommend implementing new clinical pharmacy activities or switching to the Saudi managed care pharmacy model in the Kingdom of Saudi Arabia.

Key words: Cost, Separated, Emergency, Ambulatory care, Pharmacy, Kingdom of Saudi Arabia.

INTRODUCTION

Pharmaceutical care services, including inpatient, outpatient, and emergency pharmacy services, are an essential part of healthcare services in each hospital.[1] The trained and qualified staff at the pharmacy facilitate the effective, safe, economic, and efficient use of drugs to optimize patient care.[2] Outpatient pharmacy is a part of the hospital pharmacy that takes care of various activities and services, including medication-related services to outpatients and healthcare professionals working inside hospitals, generating payment invoices according to the agreed system of payment, and distributing homecare medications and medication reconciliation. Other activities done by pharmacists include educating patients and their families about their medicine, patient counseling, offering the retail sale of health-related materials, managing and handling old or excess patient medications, reviewing home medication, and daily pharmacy practice documentations.[2] Furthermore, the outpatient pharmacy of a hospital provides a series of services to ambulatory and home care patients and hospital staff, in addition to emergency patients based on an organization's level of care.[2] A recent study conducted in Korea reported that the annual cost of outpatient pharmacy in the general hospital was more significant than any other pharmaceutical care service type.[3] Another study reported that in outpatient pharmacies, the computerized system is not cost-effective compared with the traditional dispensing system.[4] Moreover, a cost analysis study in the outpatient pharmacy of a tertiary referral hospital in Singapore reported that technology-assisted medication picking systems consumed high costs. Still, at the same time, it reduced medication errors.[5]

Many hospitals own emergency pharmacies that are wholly separated; however, some hospitals have emergency pharmacies combined with inpatient or outpatient pharmacies.[6] A previous study reported that a 24-hr comprehensive emergency pharmacy successfully reduced costs and enhanced the efficiency of patient care.[5] Pharmacists are interdisciplinary emergency care teams who provide care to patients through direct clinical activities and indirect patient care to confirm effective and safe medication therapy management.[6] Pharmacists' duties in emergency departments include ensuring sufficient medication stock for emergency crash carts, preparing stat medications, serving as a medication resource person (supplying the right drug, the correct route, right dose, rapid calculations, and addressing infusion rates and compatibility), and directing and coordinating

the flow of medications.[7–11] The development of pharmaceutical and technological services leads to increased healthcare costs.[12] As a result, the budget will always be under tremendous pressure.[12] According to the Ministry of Health (MOH), in the Kingdom of Saudi Arabia (KSA), the healthcare sector is considered the third-largest budget expenditure in 2019.[13] Furthermore, the healthcare sector's budget expenditure was increased by 8% in 2019, reaching 172 billion SR compared to 159 SR billion in 2018.[13]

Health economics is a field of study concerned with evaluating individuals' behavior, markets, and firms in the healthcare sector. It mainly focuses on the costs and consequences of healthcare interventions, such as the use of medications, procedures, devices, programs, and services.[14] Measurement of profit or expenses is a significant part of economic evaluation in health care services.[12] The cost is the value of resources used to provide services and goods.[15] The term "resource" generally refers to the space needed, the personnel required to deliver utilities, interventions provided, overhead costs incurred, and necessary supplies and equipment used. The resources can be measured by using fixed costs versus variable costs.[15]

Fixed costs are constant even if the activity level varies. In contrast, the variable costs are different depending on the activity level, which means that the number of used resources will increase when the activity level increases.[15] The link between costs and decision-making is a substantial part of strategic analysis and central understanding of long-run cost position and competitiveness.[16] There are three categories of costs: direct, indirect, and overhead.[17] The direct costs are related to the delivery of patient care directly and involve capital costs, staff costs, costs of administering medications, and costs of adverse drug reactions.[15,18,19] However, indirect costs are indirectly related to patient care.[17,18] Overhead costs support service costs that contribute to national healthcare service providers.[17] Cost analysis is considered an essential tool to develop a pharmacy strategic plan implementation based on the new vision 2030 of KSA.[20,21]

Previous studies have focused on cost analyses of some pharmacy services at MOH hospitals. For example, Alomi *et al.* (2019) estimated the cost of total parenteral nutrition services for adults, neonates, and pediatrics, which was around 691.3 USD, 863.74 USD, and 618.16 USD per day, respectively.[22] Another study conducted in Maternity and Pediatrics Hospital in Riyadh showed that the daily costs of medication distribution services for a single bed were the highest for discharge medications services, followed by unit dose services and floor stock therapy.[23] Furthermore, a study conducted at DIC at the MOH hospitals showed that the highest costs of activities were related to central drug information activities followed by drug information activities and patient-specific drug information activities.[24] The average monthly and daily cost for drug information services were 16,122.3 USD and 537.41 USD, respectively. The costs that contributed the most were for personal costs, followed by material and supply costs and non-salary costs.[25] The total estimated annual cost for drug information services in a Mental Hospital in Riyadh city was around 26,080.56 USD. The majority of costs were derived from personal expenses (81.80%), followed by direct costs (5.24%), overhead costs (5.15%), and non-salary costs (4.99%).[26] To the best of our knowledge, there are no studies conducted with respect to the cost of emergency pharmacy services in KSA. Therefore, in this study, we aimed to analyze the cost of emergency pharmacy services in the KSA.

METHODS

It is a descriptive, cross-sectional, and questionnaire-based study. We used an electronic survey to collect data from October 2020 to February 2021 with a judgment sampling system. The structured questionnaire consisted of two parts written in English and Arabic. The first part collected demographic information of the respondents based on multiple-choice questions. The second part collected information regarding personal costs, including the salary costs of the head of the outpatient pharmacy, the outpatient clinical pharmacist, pharmacists, pharmacy technicians, and secretary and Porter per hour. Information regarding the cost for the calculation of preparation time of each medication. and the total prices of the overhead cost for the place and all equipment used for the emergency services was collected. Furthermore, information regarding the cost of the purchased materials and supplies, plus non-salary costs, were collected.[22,26-30] Some multiple-choice questions, whereas some were editorial questions. The questionnaire was filled by heads of pharmaceutical care services or someone they assigned. All the governmental and private hospitals with outpatient and emergency pharmacies at separate locations were included in the study.

In contrast, hospitals with less than 50 beds capacity, hospitals with emergency pharmacy combined with inpatient or outpatient pharmacy, or hospitals with only outpatient or emergency pharmacy were excluded from the study. Expert Reviewers conducted face and content validation. A pilot study was then conducted by sending the questionnaire to hospitals to confirm the validity of the questionnaire and the absence of incomprehensible or misleading questions. Data were collected by judgment sample from different cities in KSA by using an internet-based questionnaire. All costs used are presented in US dollar currency. All depreciation costs were done with all equipment with five years of life expectancy and additional three years of annual depreciation cost. The depreciation costs were not considered for the prices of the consumable material. One-way sensitivity analysis was conducted to list discount prices and a variety of wage costs with 10–20%.[22,26-30] The data were collected through the Survey Monkey system and analysed using Microsoft Excel version 2020. Only separate outpatient and emergency pharmacy services sites are presented in this study. The research ethics committee approved this study at Taif University.

RESULTS

The total number of responders was 14. Most of the responders were male (76.92%), and the majority of the responders were in the age group of 31–40 years (42.86%) and 41–50 years (35.71%). The academic qualifications of the director of the pharmacy were B.Sc. in Pharmacy (61.54%) and M.Sc. in Clinical Pharmacy (23.08%) (Table 1). Most pharmacy directors had work experience in an emergency pharmacy, outpatient pharmacy, and pharmacy administrators for more than six years (Table 2). Most of the responders were located in the central area (35.71%) and western regions (28.57%). Most hospitals were from MOH (71.43%), military hospitals (14.29%), and private hospitals (14.29%). The total number of occupational beds was 300–399 (35.71%). The majority of the hospitals were accredited by CBAHI (100%) and Saudi Council (50.00%). Most hospitals provided care for adults (100%), geriatrics (92.86%%), and adolescents (85.71%) (Table 3). The total cost incurred by OPD pharmacy services was 3509.64 USD with discount prices of 10–20% (1265.56–1423.75 USD), whereas the cost incurred by the emergency pharmacy services was 1068.02 USD, with discount prices of 10–20% (854.41–961.21 USD). The majority of the cost came from personal costs from OPD pharmacy (2542.63 USD, 72.45%), followed by the emergency pharmacy (826.4 USD, 77.36%), the overhead cost of OPD pharmacy was (656.01 USD, 18.69%). In comparison, the emergency pharmacy was 144.93 USD (13.57%) (Tables 4 and 5). The average waiting time for the preparation and dispensing of one medication at OPD pharmacy was 10.3 minutes, whereas, at the emergency pharmacy, it was 4.95 minutes. The cost of preparation and dispensing at OPD pharmacy was 2.43 USD per minute and 25.03 USD per medication. The preparation and dispensing cost at the emergency pharmacy was 0.74 USD per minute and 3.66 USD per medication (Table 6).

Table 1: Responders Demographic Information.

	OPD Pharmacy	
Gender	**Response Count**	**Response Percent**
Male	10	76.92%
Female	3	23.08%
Answered question	**13**	
Skipped question	**6**	
Age	**Response Count**	**Response Percent**
22-30 years	3	21.43%
31-40	6	42.86%
41-50	5	35.71%
51-60	0	0.00%
> 60	0	0.00%
Answered question	**14**	
Skipped question	**5**	
Academic Qualification*	**Response Count**	**Response Percent**
Diploma Pharmacy	0	0.00%
Bsc. Pharm	8	61.54%
M.S	2	15.38%
Msc. Clinical Pharmacy	3	23.08%
Pharm.D.	2	15.38%
Ph.D	1	7.69%
MBA	1	7.69%
PGY1	0	0.00%
PGY2	0	0.00%
PGY3	0	0.00%
Fellowship	0	0.00%
Answered question	**13**	
Skipped question	**6**	

*Many options might be selected.

DISCUSSION

There are various designs of hospital pharmacies. The most common design that's the outpatient pharmacy and emergency services located at separated different places. The current design might exist at a large hospital with many beds. Moreover, if the hospital has an excellent budget to maintain its pharmacy, the hospital administration will have separate outpatient and emergency pharmacy services. Therefore, in this study, we explored the cost of outpatient and emergency pharmacies at a single hospital. The study results showed 14 hospital pharmacies with expert pharmacists with various pharmacy practice experiences, including emergency and OPD sections. The majority of the responders had good academic qualifications, with some holding a bachelor's degree and some holding a master's degree. The majority of separated outpatient and emergency pharmacy designs were from MOH hospitals, military organizations, and private hospitals. The majority of the hospitals had beds between 300 and 400 with full accreditation from CBAHI, which reflected the essential pharmacy services delivered to the patients. Moreover, half of the hospitals had certification from the Saudi commission, which might be the accredited center pharmacy practice residency program. The cost of outpatient pharmacy or emergency pharmacy services was higher than that of outpatient pharmacy or emergency pharmacy because of more personal workforces and increased workload. In this study, most types of the cost came from personal cost, which agrees with the results of previous studies.[22,29,30] In contrast, the second-highest cost came from overhead pharmacy due to extensive equipment used for patient care.[22,29,30] The average preparation and dispensing time at OPD pharmacy was shorter than emergency pharmacy because they have more medications for dispensing. In this study, the average preparation and dispensing time of OPD pharmacy was faster than reported in a previous study. Assuming that the average number of medications is one.[31] As a result of the increase of dispensed medication, the high cost of outpatient pharmacy or emergency pharmacy services will be increased. To justify the high daily cost of separate OPD and emergency pharmacies. We suggest providing various activities to the patients, each costing around (2.11 USD) per minute, and calculating the appropriate amount and consumed time per each activity, including reimbursement cost through health insurance coverage as addressed in(Table 7).[25] We suggest switching all OPD and emergency pharmacy services and replacing them with Saudi Managed Care Pharmacy (Wasfaty).[32,33]

Table 2: Responders Years of experience.

	Emergency Pharmacy Responders								
Years of experience in the following sections	**Emergency pharmacy**		**Outpatient pharmacy**		**IV admixture**		**Pharmacy administration**		**Total**
0	100.00%	2	50.00%	1	50.00%	1	50.00%	1	2
< 1 year	16.67%	1	0.00%	0	66.67%	4	16.67%	1	6
1-3	62.50%	5	50.00%	4	37.50%	3	50.00%	4	8
4-6	20.00%	1	60.00%	3	20.00%	1	80.00%	4	5
> 6 years	70.00%	7	80.00%	8	20.00%	2	40.00%	4	10
Answered question		14		**5**					
Skipped question		5		**1**					

Table 3: Hospital Demographic Information.

Nationality	Response Count	Response Percent
Central area	5	35.71%
North area	1	7.14%
South area	1	7.14%
East area	3	21.43%
West area	4	28.57%
Answered question	**14**	
Skipped question	**5**	
Site of Work	**Response Count**	**Response Percent**
MOH Hospitals	10	71.43%
Military hospitals	2	14.29%
National Guard Hospital	0	0.00%
Security forces hospitals	0	0.00%
University hospital	0	0.00%
Private hospitals	2	14.29%
Community pharmacy	0	0.00%
Answered question	**14**	
Skipped question	**5**	
No. of Licensed Beds	**Response Count**	**Response Percent**
< 50	0	0.00%
50-99	1	7.14%
100-199	2	14.29%
200-299	2	14.29%
300-399	5	35.71%
400-499	1	7.14%
500 and above	2	14.29%
Medical City	1	7.14%
Answered question	**14**	
Skipped question	**5**	
Hospital Accreditation*	**Response Count**	**Response Percent**
CBAHI	14	100.00%
Joint Commotion USA	5	35.71%
Canada	0	0.00%
Saudi Council	7	50.00%
Other (please specify)	0	0.00%
Answered question	**14**	
Skipped question	**5**	
The Hospital Services	**Response Count**	**Response Percent**
Neonates	8	57.14%
Pediatric	9	64.29%
Adolescent	12	85.71%
Adults.	14	100.00%
Geriatrics	13	92.86%
Answered question	1	
Skipped question	**14**	

*Many options might be selected.

Table 4: Cost Analysis of Outpatient Pharmacy or Emergency Pharmacy Services.

	OPD pharmacy		EMR pharmacy	
Personal Cost	**Cost/24 hrs**	**Cost/ hr**	**Cost/24 hrs**	**Cost/ hr**
Head of outpatient pharmacy	606.67	25.28	168.89	7.04
Clinical pharmacist	49.38	2.06	28	1.17
Pharmacist	1,068.89	44.54	418.84	17.45
Pharmacy technician	748.8	31.20	195.56	8.15
Secretary	31.11	1.30	0.00	0.00
Porter	37.78	1.57	15.11	0.63
Total	2542.63	105.94	826.4	34.43
Overhead Cost				
Place	497.6	20.73	65.09	2.71
Computer	13.41	0.56	4.11	0.17
Laptop	0.00	0.00	0.00	0.00
iPad	0.00	0.00	0.00	0.00
Offices	4.11	0.17	2.16	0.09
Landline telephone	0.94	0.04	1.31	0.05
Mobile	0.25	0.01	0.00	0.00
Software of inquiries documentations	0.76	0.03	0.43	0.02
Printer and fax	2.78	0.12	1.16	0.05
Copy machines	8.2	0.34	1.82	0.08
Answering machine	0.22	0.01	0.11	0.00
Small refrigerator for medications	3.24	0.14	3.24	0.14
Medium refrigerator for medications	6.49	0.27	0.00	0.00
Big refrigerator for medications	51.51	2.15	45.02	1.88
Umber cabinet for medications	0.17	0.01	0.37	0.02
Medications counter	11.16	0.47	2.29	0.10
Manager office	2.21	0.09	0.22	0.01
Chairs	4.66	0.19	0.64	0.03
Controlled medications cabinet	1.19	0.05	0.76	0.03
Medications shelves	4.63	0.19	4.76	0.20
Table for dispensing (Pinch)	6.06	0.25	3.46	0.14
Bar-code printer	2.64	0.11	1.34	0.06
Pharmacy information system	17.52	0.73	0.87	0.04
The metal partition between medications	0.02	0.00	1.52	0.06
Manual or electronic board	0.79	0.03	0.14	0.01
Boxes for losing tablets or capsules	0.52	0.02	1.19	0.05
Stapler	2.2	0.09	0.08	0.00
Staff personal cabinet	0.54	0.02	0.00	0.00
Temperature measurements machines	5.87	0.24	1.22	0.05
Humidity measurements machines	5.84	0.24	1.19	0.05

Continued...

Table 4: Cont'd.

	OPD pharmacy		EMR pharmacy	
Personal Cost	**Cost/24 hrs**	**Cost/ hr**	**Cost/24 hrs**	**Cost/ hr**
Hand washing dish	0.48	0.02	0.43	0.02
Total	656.01	27.33	144.93	6.04
Material and Supply	**Cost/24 hrs**	**Cost/ hr**	**Cost/24 hrs**	**Cost/ hr**
Regular files	4.46	0.19	0.38	0.02
Medications plastic bags	37.34	1.56	22.22	0.93
Pens	2.14	0.09	1.07	0.04
Masks	16.89	0.70	6.05	0.25
Gloves	14.76	0.62	5.51	0.23
Gowns	18.31	0.76	0.36	0.02
Shoes	2.31	0.10	0.00	0.00
Small size syringe	28.45	1.19	9.78	0.41
Medium size syringe	27.03	1.13	0.9	0.04
Big side syringe	27.02	1.13	15.11	0.63
Small size Ziploc plastic bag	28.44	1.19	9.24	0.39
Medium size Ziploc plastic bag	25.42	1.06	0.36	0.02
Big size Ziploc plastic bag	24.89	1.04	18.13	0.76
Total	257.46	10.73	89.11	3.71
Non-salary Cost	**Cost/24 hrs**	**Cost/ hr**	**Cost/24 hrs**	**Cost/ hr**
Head of the outpatient pharmacy	14.29	0.60	1.48	0.06
Clinical Pharmacist	0.78	0.03	0.23	0.01
Pharmacist	11.71	0.49	3.44	0.14
Pharmacy technician	8.21	0.34	2.14	0.09
Secretary	0.09	0.00	0	0.00
Porter	0	0.00	0	0.00
Internet	2.24	0.09	0.29	0.01
Library	16.22	0.68	0	0.00
Total	53.54	2.23	7.58	0.32

Limitations

This study had some limitations. First, we included a small sample size in our analysis, and second, some information about cost analysis was missing. However, we still believe that the results are informative about outpatient and emergency pharmacy services in KSA.

CONCLUSION

In conclusion, the daily cost of outpatient pharmacy or emergency pharmacy services is high in the KSA. We highly recommend utilizing the resources and implementing the Saudi Managed Care Pharmacy (Wasfaty).[33] This implementation might help reduce the economic burden on the pharmacy system in KSA.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

Table 5: Type of Cost Derived at Separated at One Location Outpatient Pharmacy and Emergency Pharmacy Sections.

Type of Cost	Content of Items	Outpatient Pharmacy Per Day Cost (USD)	Percent	EMR Pharmacy Per Day Cost (USD)	Percent
Personal Cost	Salaries of Head of the outpatient pharmacy, Clinical Pharmacist, pharmacist, pharmacy technician, secretary, and porter	2542.63	72.45%	826.4	77.36%
Overhead Cost	Equipment: Place, Computer, Laptop, iPad, Offices, Landline telephone, Mobile, Software of inquiries documentations, Printer, and fax, Copy machines, Answering machine, Small Refrigerator for medications, Medium Refrigerator for medications, Big Refrigerator for medications, Umber Cabinet for medications, Medications counter, Manager office, Chairs, Controlled medications cabinet, Medications shelves, Table for dispensing (Pinch), Bar-code printer, Pharmacy information system, the Metal partition between medications, Manual or electronic board, Boxes for losing tablets or capsules, Stapler, Staff personal cabinet, Temperature measurements machines, Humidity measurements machines, and Handwashing dish	656.01	18.69%	144.93	13.57%
Material and Supply Cost	The average cost of Regular files, Medications plastic bags, Pens, Masks, Gloves, Gowns, Shoes, Small size syringe, Medium size syringe, Big side syringe, Small size Ziploc plastic bag, Medium size Ziploc plastic bag, and big size Ziploc plastic bag	257.46	7.34%	89.11	8.34%
Non Salary Cost	Education and Training	53.54	1.53%	7.58	0.71%
	Inpatient pharmacy resources				
Total USD		3,509.64		1,068.02	
Total Cost After Discount 10%		3,158.67		961.21	
Total Cost After Discount 20%		2,807.71		854.41	

Table 6: Cost (USD) Analysis of Preparation and Dispensing at Sepertaed at One Location Outpatient-Emergency Pharmacy Services.

Outpatient pharmacy Care Services				
Medications	No of medications /day	Preparation and dispensing time per one medication	Cost (USD) of Preparation and dispensing per one medication	Total Cost (USD) of Preparation and dispensing per day
Fast-moving item	42.5	9.1	22.11	939.80
Regular medications	46	9.1	22.11	1,017.20
Narcotics medications	18.5	11.5	27.95	516.98
Controlled medications	19.5	11.5	27.95	544.93
Average		10.3	25.03	754.73
Emergency Pharmacy Care Services				
Medications	No of medications /day	Preparation and dispensing time per one medication	Cost (USD) of Preparation and dispensing per one medication	Total Cost (USD) of Preparation and dispensing per day
Fast-moving item	30.5	3.6	2.66	81.25
Regular medications	20.5	4.2	3.11	63.71
Narcotics medications	6.5	6	4.44	28.86
Controlled medications	6.5	6	4.44	28.86
Average		4.95	3.66	50.67

Table 7: Cost Analysis of Some OPD and Emergency Pharmacy Activities.

	Time per one activity (Mint)	Cost per one activity (USD)	Cost/min (USD)
Drug Utilization Evaluation (DUE)	82.2	173.53	2.11
Deliver seminar and Presentation or Lecture	42.6	89.64	2.10
Pharm D student training	118.2	249.35	2.11
Residency Training	129.6	274.46	2.12
Respond to Drug Information Questions	253.8	536.24	2.11
Perform clinical research, publishing articles	61.8	130.81	2.12
ADR (Identification and Reporting)	37.2	78.17	2.10
Medications Errors preventing and monitoring	98.4	207.73	2.11
Patient Counselling	205.8	434.59	2.11
Ambulatory care clinic participation	50.4	106.94	2.12
Policies and Procedure design	139.8	295.64	2.11
Setting and evaluating therapeutic guidelines	100.8	212.56	2.11
CPR team participation	25.2	53.17	2.11
Pharmacokinetic consultation	45.6	97.00	2.13
Average	99.39	209.99	2.11

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Consent for Publications
Informed consent was obtained from all the participants

Ethical Approval
The research ethics committee approved this study at Taif University.

ABBREVIATIONS
MOH: Ministry of Health; **KSA:** Kingdom of Saudi Arabia; **USD:** United State Dollar; **OPD:** Outpatient Department Pharmacy; **ER:** Emergency; **USD:** United State Dollars; **CBAHI:** Saudi Central Board for Accreditation of Healthcare Institutions.

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