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Healthcare Professional's Knowledge about Cost Related Medication Information in Saudi Arabia

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Abstract

Purpose: To explore the Healthcare Professionals and Knowledge of Medications cost in Saudi Arabia.

Methods: It is a 4-months cross-sectional survey of healthcare professionals and knowledge of medicines. The survey consisted of two-part, demographic information and second part forty-nine questions divided into four domains. It included domain one: Primary or essential information about healthcare providers medication, domain two: healthcare professionals information about the drug-related problem, domain three: healthcare professionals information about drug-related cost and domain four: Healthcare providers perception of medications. All type of healthcare professionals included in the study. Medline Plus health information and DailyMed-INH elements information from National Institute of Health United State of America were used. The 5-point Likert response scale system was used. The questions were open and closed-ended. The survey was distributed through social media by using what's App to more than one thousand healthcare professionals overall Kingdom of Saudi Arabia. The survey was made in an electronic format and it analyzed domain three: healthcare professional's information about drug-related cost through survey monkey system.

Results: The total responders were (188) Healthcare professionals. Of those 177 (95.16%) were Saudi and 9 (4.84%) were non-Saudi. The gender distribution 120 (63.83%) were females and 68 (36.17%) were males. The most of Healthcare professionals were pharmacist 93 (71.54%), followed by nurses 18 (13.85%) and physicians 15 (11.54%). The most type of medications used was anti-hypertension medicines, anti-diabetic medicines, Skin medications and drugs for Respiratory Diseases. Also, the most number of medications taken either one 29 (15.85%) or two 17 (9.29%). The healthcare professionals showed good knowledge with both complete and incomplete information about drug storage at room temperature 148 (81.3%) or refrigerator 143 (77.7%), protect medication from light exposures 133 (72.3%) and how to behave with an expired medication 127 (70.5%). The healthcare professionals had not adequate information with both complete and incomplete information about prescription prices 110 (59.78%) and imperfect knowledge about Health insurance coverage of medications 69 (37.9%). The healthcare professional's knowledge about missing of medications, led patient visit doctor clinic 35 (18.72%), visit the pharmacy 50 (27.47%), visit hospital emergency 17 (9.24%) hospital admission 20 (10.87%) or intensive care admission 8 (4.79%).

Conclusion: Healthcare professional missed medication-related cost knowledge. Healthcare professionals may implicate in drug-related problems with burden cost. Healthcare providers demanded of Drug-related prices and drug cost awareness program in Saudi Arabia.

Keyword: Healthcare professional, Knowledge, Cost, Medications, Ministry of Health, Saudi Arabia.

INTRODUCTION

The East patient visited or admitted to hospital had a different particular therapy plan. The plan consisted of a process of non-drug therapy and drug therapy. Starting from patient assessment with diagnosis, laboratory investigation and drug therapy with related supportive management. All the process had a total cost and individual cost for each step including medications cost.[1] The medication costs considerations is a significant part of the treatment plan. The high costs of the drugs may prevent the patient from treatment or continue treatment and avoid going to the hospital or take medical advice. The lack of vital importance of treatment costs may increase the incidence of diseases very significantly, especially in developing countries or low economic layer. Accordingly, the healthcare professionals must strive to provide proper care at the appropriate cost that helps the patient and provides him with comfort and acceptance about his medications used. This analysis supports the extent to which professional health care is aware of the costs of the drug and the importance of this in the treatment plan. The

systemic review and other studies showed that most physicians are not aware of drug therapy cost.[2-4] Another study discussed the cost of medications related to pharmacists and nurses.[5-6] It seldom to find investigation consisted of healthcare professionals with the cost of medication knowledge in worldwide or Saudi Arabia and Gulf or Middle East counties. The objective of the study was to explore the healthcare professional's knowledge about the cost of medications in Kingdom of Saudi Arabia.

METHODS

It is a 4-months cross-sectional survey of healthcare professionals and knowledge of medicines. The survey consisted of two-part, demographic information and second part forty-nine questions divided into four domains.[7] It included domain one: Primary or essential information about healthcare providers medication, domain two: healthcare professionals information about the drug-related problem, domain three: healthcare professionals information about drug-related cost and domain four: Healthcare providers perception of medications.[8] All type of healthcare professionals included in the study.[9] Medline Plus health information and DailyMed-INH elements information from National Institute of Health United State of America were used.[10-11] The 5-point Likert response scale system was used. The questions were open and closed-ended. The survey was distributed through social media by using what's App to more than one thousand healthcare professionals overall Kingdom of Saudi Arabia. A message reminder was sent to healthcare professionals after two weeks and additional message reminder was sent to healthcare professionals after four weeks. The survey was made in an electronic format and it analyzed domain three: healthcare professional's information about drug-related cost through survey monkey system.

RESULTS

The total responders were (188) Healthcare professionals. Of those 177 (95.16%) were Saudi and 9 (4.84%) were non-Saudi. The gender distribution 120 (63.83%) were females and 68 (36.17%) were males. The majority of them in age (18-44) 86.7% and located at Asir region 89 (47.34%) and Riyadh region 46 (24.5%). The most of Healthcare professionals were pharmacist 93 (71.54%), followed by nurses 18 (13.85%) and physicians 15 (11.54%). The most responders had the Bachelor Degree 126 (67.02%) followed by Diploma 33 (17.55%) and Master degree 22 (11.70%) The most type of medications used was anti-hypertension medicines, anti-diabetic medicines, Skin medications and drugs for Respiratory Diseases. Also, the most number of medication taken either one 29 (15.85%) or two 17 (9.29%) as explored in Table 1. The healthcare professionals showed good knowledge with both complete and incomplete information about drug storage at room temperature 148 (81.3%) or refrigerator 143 (77.7%), protect medication from light exposures 133 (72.3%) and how to behave with an expired medication 127 (70.5%). The healthcare professionals had not adequate information with both complete and incomplete information about prescription prices 110 (59.78%) and imperfect knowledge about Health insurance coverage of medications 69 (37.9%) as explored in Table 2. The healthcare professional's knowledge about missing of medications, led patient visit doctor clinic 35 (18.72%), visit the pharmacy 50 (27.47%), visit hospital emergency 17 (9.24%) hospital admission 20 (10.87%) or intensive care admission 8 (4.79%). as explored in Table 3.

DISCUSSION

The pharmacy strategic plan started with several pharmacy practices and clinical pharmacy programs.[12-13] There were programs focused on cost-related issues, for instance, Pharmacoeconomics programs, a cost avoidance of prevention medication errors, a cost avoidance of drug information centers, a cost avoidance of pharmacist intervention and cost additionally

Table 1: Demographic responder qualifications information.

Characteristics	Response N	Response %
Sex		
Female	120	63.83%
Male	68	36.17%
Nationality		
Saudi	177	95.16%
Non-Saudi	9	4.84%
Answered question: 186 and Skipped question: 2		
Age		
<18	5	2.66%
18 - 29	112	59.57%
30 - 44	51	27.13%
45 - 59	19	10.11%
60+	1	0.53%
Healthcare professional		
Doctor	15	11.54%
Dentist	4	3.08%
Pharmacist	93	71.54%
Nurse	18	13.85%
Others	33	25.38%
Answered question:130 and skipped questions: 58		
Total Experiences		
Doctorate degree	7	3.72%
Master degree	22	11.70%
Bachelor Degree	126	67.02%
Diploma	33	17.55%
High school	7	3.72%
Intermediate School	0	0.00%
Primary School	0	0.00%
Not educated	0	0.00%
The current medications		
Diabetic Medication	26	13.83%
Antihypertensive Medication	28	14.89%
Cardiac Medication	7	3.72%
Asthma Medication	16	8.51%
Derma Medication	18	9.57%
Anti-Rheumatic	13	6.91%
Do not take anything now	125	66.49%
Others	27	14.36%
Number of current medication taken		
Nothing	121	66.12%
1	29	15.85%
2	17	9.29%
3	7	3.83%
4	2	1.09%
5	2	1.09%
6	2	1.09%
7	3	1.64%
8	0	0.00%
9	0	0.00%
10	0	0.00%
more than 10	0	0.00%
Answered question: 183 and skipped question: 5		

Table 2: The Healthcare professional's knowledge of Medication storage information.								
No.	**Answer Options**	**Complete information**	**Incomplete information**	**Weak information**	**do not have this information**	**Does not need this information**	**Rating Average**	**Response N**
1	Storage of medication at room temperature	110	38	16	9	9	4.27	182
2	Storage of medication in Refrigerator	104	39	13	16	12	4.13	184
3	Protect medication from light exposures	95	38	17	23	11	3.99	184
4	How to deal with expired medications	98	29	12	27	14	3.94	180
Healthcare professionals Knowledge of Medication prices information								
No.	**Answer Options**	**Complete information**	**Incomplete information**	**Weak information**	**do not have this information**	**does not need this information**	**Rating Average**	**Response Count**
1	General medication prices	49	61	38	21	15	3.59	184
2	Health insurance coverage of medications	36	33	29	47	37	2.91	182
answered question: 184 and skipped question: 4								

Table 3: The patient's outcome of drug-related problems.					
Answer Options	**Yes**	**Response %**	**No**	**Response %**	**Total Response N**
Ambulatory clinic visit	35	18.72%	152	81.28%	187
Pharmacy visit	50	27.47%	132	72.53%	182
Emergency visit	17	9.24%	167	90.76%	184
Hospital admission	20	10.87%	164	89.13%	184
Critical Care admission	8	4.79%	159	95.21%	167
Answered question: 188 and skipped question:0					

avoidable of pharmacist running total parental nutrition.[14-16] Another program established for the cost of medications awareness for healthcare professionals, for instance, national drug information center through Ministry of Health hotline call Center 937, MOH corporate pharmacy and therapeutics committee and MOH formulary management.[17] Also, the measurements of actual knowledge of medications cost done through this investigation. The finding of the study showed two third of healthcare professionals had adequate medications knowledge of cost-related issues including how to store the medications, medication protection from light and how to deal with expired medications. This is excepted because they are healthcare professionals and they should know all those elements during college education. Still, one of them missed that information and had a risk with distribution of information to the patients. The healthcare professionals had imperfect knowledge of medications prices or health care insurance coverage because all healthcare services provided to the Saudi patient as free of charge. Also, the diagnostic related group implemented in Saudi Arabia. The results resemble what reported by Cogdill, B *et al*. and by Allan, MG *et al*. and better than what reported by Reichert, S *et al*. with physicians and better than what reported by Emily-Jane W *et al*. with the pharmacists.[2-4,18] The finding of the study showed that there are discrepancies in the information among health practitioners about the knowledge of drug costs, but they still need more to spread the culture of the medical economy and have a significant impact on health, economy and the need to cover health insurance for the treatment of patients. The Information about drug storage and drug protection is satisfactory to many. Social characteristics of the patient and the cost of medication can determine the relationship between the patient and the health provider and thus influence equity of health issue. When drug therapy was chosen, cost of medication becomes an important determinant as to whether patients will buy the prescribed drugs or not.[19] The missing of medications knowledge may lead the healthcare professionals to visit the pharmacy or ambulatory care clinic. The visiting is not clear before or after misusage of medications. Some healthcare professionals, unfortunately, may misuse of medications due absent knowledge of medications lead to hospitals admission or visit emergency development or critical care admission. Those sequences raised the economic burden in the healthcare system with straightforward information with from unexpected populations. It is hard to find study discussed healthcare worker admitted to the hospital or emergency visits due to medications use to compare with our results. If our subject considered as patients, the comparisons showed the result of ambulatory care visit is high than what reported by Hammerman, H. *et al*. That has related straightforward access to the healthcare professional visit clinic without any charges. Also, the lower prices of privates ambulatory care clinics.[20] The results of hospital admission resemble what reported by Nivya, K *et al*. While the results of emergency visit resemble what reported by Al-Arifi, M *et al*. almost what reported by Alghamdy, MS *et al*. and Rashed A.N. *et al*.[21-24] The results of drug-related problems caused critical admission almost resemble what reported by Abdelaziz, K *et al*. and Hammerman, H. *et al*.[20,25] Most of the healthcare provider's perspective results resemble what reported within entire patients and has concluded that there is no difference in the attitude or economic burden on health care system between healthcare workers and regular patients. To minimize the possibility drug-related complications, when the healthcare professionals had several medications the medications used should also be minimized.[26] Especially in Older participants more likely susceptible to side effects, many sensitive to medications and they had pre-existing conditions that may increase both the qunatities and qualities of adverse effects.[27]

CONCLUSION

The healthcare Professionals lacks much information related to the cost of medicine, its effect on treatment and any damages that lead to increased

costs and losses in health care as well as drug problems. They still need more education and information about the cost of the medicine and the resulting burden and importance the health care provider's request for the drug awareness program and the cost of medicines program in Saudi Arabia.

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None

CONFLICT OF INTEREST

None

ABBREVIATIONS

KSA: Kingdom of Saudi Arabia; MOH: Ministry of Health; CBAHI: Saudi Center for Accreditation of Healthcare Institutions.

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