

# Physicians' Perceptions and Expectations of Pharmacists' Professional Duties in Government Hospitals in Kuwait

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## Key Words

Physician-pharmacist relationships · Physicians' expectations of pharmacists · Clinical pharmacy services in Kuwait

## Abstract

**Objective:** The objectives of this study were to evaluate the perceptions, expectations and experience of physicians with hospital-based pharmacists in Kuwait. **Materials and Methods:** A piloted self-administered questionnaire was hand delivered to 200 physicians practicing in four government hospitals in Kuwait. Main sections of the questionnaire comprised a series of statements pertaining to physicians' perceptions, expectations and experiences with pharmacists. **Results:** One hundred and twenty (60%) questionnaires were returned. At least 57% of physicians in Kuwait appear comfortable with pharmacists carrying out patient-directed roles. In addition, they appeared to have high expectations of pharmacists, with 79% of them regarding pharmacists as knowledgeable drug therapy experts. Less than 60% considered pharmacists as applying their drug knowledge in practice and only 29% agreed that pharmacists routinely counselled their patients. There was no correlation between physician variables such as number of years since graduation

from medical school, age, area of practice and their perceptions of pharmacists. **Conclusion:** Physicians in Kuwait appear comfortable with pharmacists providing a broad range of services but appear somewhat less comfortable with pharmacists' provision of direct patient care. Physicians considered pharmacists knowledgeable drug therapy experts, but regarded them as not routinely providing a broad range of higher-level pharmacy services.

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## Introduction

Physician-pharmacist relationships have been described in a number of studies [1–7] depicting as being complex [6, 7]. Historically, physicians diagnosed and prescribed medications while pharmacists compounded and dispensed them. In the USA and most developed countries the role of pharmacists has changed to one that plays a direct role in patient care [8, 9]. However in Kuwait, the old model still serves as the basis of what physicians and a large segment of the general population perceive of pharmacists.

Increased interaction between physicians and pharmacists in the developed world has produced drug therapy that is safer, more effective, and less costly [10, 11]. In

addition, there is increasing evidence that clinical pharmacy services play a pivotal role in the appropriate usage of medications [12–14]. Given that direct patient care, which involves interaction with, and observation of the patient, is still exclusively in the hands of physicians in Kuwait, pharmacists' input in managing drug therapy ultimately depends on physicians' willingness to accept this role. It is therefore important, that physicians understand and appreciate how pharmacists can contribute directly to the overall provision of patient care.

In a number of studies, physicians were reported to be receptive to several clinical services provided by pharmacists if these services were provided in a consultative or supportive role [15–18]. Physicians' acceptance of pharmacists' services also depends on the value physicians attached to the service and the physicians' perception of the pharmacist's competence [19, 20].

Prior to this study, the authors perceived physicians in Kuwait as having little awareness and receptivity to pharmacists' involvement in direct patient care. This perception emanated from the fact that pharmacists in Kuwait had limited expertise, training and exposure to clinical pharmacy. Clinical pharmacy is the provision of pharmaceutical services that involves interaction with, and observation of the patient [21]. In addition, the professional duties of pharmacists in the Kuwait health care system are not comprehensively covered by legislation. Hence the purpose of this study was to assess the perceptions, expectations and current experience of Kuwait physicians with hospital pharmacists' responsibilities and capabilities.

## Subjects and Methods

### *Subjects*

The study was conducted from May through July 2004. The questionnaire was hand delivered by ward secretaries to a random sample of 200 physicians in two government general hospitals: Mubarak Al-Kabeer and Adan hospitals, and two specialised hospitals: Ibn Sina and Psychiatry hospitals. Eighty questionnaires were distributed to each of the general hospitals, each with a total of approximately 200 physicians, while 20 questionnaires were distributed to each of the specialised hospitals, each with an approximate number of 50 physicians. Physicians were stratified by area of practice and selected randomly from hospital lists. To limit bias, the pharmacists participating in the study did not actively participate in the distribution and collection of the questionnaires.

### *Setting*

Kuwait is a small country in the Middle East, bordering the Arabian Gulf, between Iraq and Saudi Arabia. In 2004, Kuwait had a population of slightly over 2.25 million people. Public healthcare

facilities in Kuwait are divided into general hospitals, specialized hospitals and clinics. There are six general hospitals and at least 21 specialized hospitals and centres and approximately 80 primary healthcare centres serving the Kuwait community. Over 3,500 physicians serve in these facilities giving a physician/patient ratio of 1:700, which compares well with that in most developed countries such as USA, with an equivalent ratio of 1:625 [22]. The number of pharmacists in the government sector in Kuwait is small but has been increasing over the past few years, mainly due to the establishment of a School of Pharmacy, Kuwait University, in 1996. Currently, there are limited clinical pharmacy services in Kuwait with the current duties of hospital pharmacists mainly restricted to administrative roles such as drug orders, stock control and personnel management.

### *Design*

The questionnaire had four sections on personal information, physician's perception, expectations and experience with pharmacists. The questionnaire was adapted from one used and validated for content in California [23]. Each part included a set of statements for which respondents were asked to indicate their level of agreement.

### *Data Analysis*

The data were computed and analysed using the Statistical Package for Social Sciences for Windows, version 12. Various frequency values and cross tabulation between different variables were calculated. The  $\chi^2$  test was used to determine the significance of association between categorical variables.

## Results

One hundred and twenty questionnaires (60%) were returned. Details of the physicians' personal information are given in table 1. The average age was 41 years, 79% were male. The majority of physicians (59%) were non-Kuwaitis. There were no associations between physician variables such as age, gender, nationality, year of graduation and their perception of pharmacists.

Two thirds of the physicians said they interacted with pharmacists at least once a week (table 2). The main reasons for the interaction were queries on drug availability (79%), alternatives (54%), side effects (25%) and drug interactions (18%).

The comfort level of physician with pharmacists carrying out specific duties is shown in table 3. The majority (93%) of the physicians were comfortable with pharmacists detecting and preventing prescription errors, while 83% were comfortable with them providing patient education; 43% were uncomfortable with pharmacists suggesting use of prescription medications to patients and 42% were uncomfortable with treating minor illnesses.

**Table 1.** Physicians' personal information (n = 120)

Variable	n (%)
<b>Age<sup>1</sup></b>	
≤ 35 years	41 (34.2)
≤ 36–46 years	42 (35.0)
≥ 47 years	37 (30.8)
<b>Gender</b>	
Male	95 (79.2)
Female	25 (20.8)
<b>Nationality</b>	
Kuwaiti	49 (40.8)
Non-Kuwaiti	71 (59.2)
<b>Country where medical qualification was obtained</b>	
USA and Europe	20 (16.7)
Kuwait	26 (21.7)
Egypt	52 (43.3)
India and Pakistan	17 (14.2)
Other	5 (4.2)
<b>Place of work</b>	
General hospital	89 (74.2)
Specialized hospital	31 (25.8)
<b>Current position</b>	
Assistant registrar	19 (15.8)
Registrar	52 (43.3)
Senior registrar	27 (22.5)
Consultant	22 (18.3)
<b>Current area of practice</b>	
Medicine	34 (28.3)
Surgery	32 (26.7)
Pediatrics	18 (15.0)
Psychiatry	18 (15.0)
Other	18 (15.0)

<sup>1</sup> Mean = 40.83 ± 10.27 (SD) years, range = 25–74 years.

**Table 2.** Current physician interaction with pharmacists (n = 120)

Variable	n (%)
<b>Frequency of interactions</b>	
Never/rarely	40 (33.3)
Once a week	63 (52.5)
Once a day/more	17 (14.2)
<b>Reasons for interactions</b>	
Drug availability queries	93 (78.8)
Drug alternatives queries	64 (54.2)
Drug dosage queries	36 (30.5)
Side effects queries	29 (24.6)
Drug interactions queries	21 (17.8)
Other	15 (12.7)

**Table 3.** Level of physician comfort with pharmacists carrying out specific duties

Pharmacist's duty	Physicians comfortable, %	Physicians uncomfortable, %
Providing patient education	83.1	16.9
Suggesting use of non-prescription medications, e.g. paracetamol	71.4	28.6
Suggesting use of prescription medications to patients, e.g. antibiotics	56.9	43.1
Suggesting use of prescription medications to physicians	74.1	25.9
Treating minor illnesses, e.g. headaches	58.3	41.7
Designing and monitoring pharmacotherapeutic regimes	73.1	26.9
Monitoring outcomes of pharmacotherapeutic regimens	72.0	28.0
Detecting and preventing prescription errors	92.5	7.5

The physicians' expectations of pharmacists are listed in table 4. Eighty percent (80%) expected pharmacists to be knowledgeable drug therapy experts and 77% to educate patients about the safe and appropriate use of medications. The physicians' current experiences with pharmacist are given in table 5. While 75% of physicians concurred that pharmacists are a reliable source of drug information, only 29% agreed that pharmacists were routinely providing such information.

## Discussion

Physicians in Kuwait appeared generally comfortable with pharmacists carrying out patient-directed roles, although, 42% were uncomfortable with pharmacists carrying out routine duties such as treating minor illnesses. In the USA, for example, such level of physician discomfort with pharmacists carrying out patient-directed roles, reported more than a decade ago, was attributed to lack of physician exposure to pharmacists participating in these activities [19, 20, 24, 25]. Thus, there is a need for Kuwait pharmacists to work more closely with physicians, thereby providing the physician with an opportunity to observe pharmacists performing clinical responsibility leading to building the physicians' awareness and confidence in the pharmacists.

A large number of physicians appeared uncomfortable with pharmacists prescribing, even for a minor ailment.

**Table 4.** Physicians' expectation of pharmacists

Physician expectations	% of physicians who		
	agree	are neutral	dis-agree
I expect pharmacists to take personal responsibility for resolving any drug-related problems they discover involving patients	42.5	23.3	34.2
I expect pharmacists to be knowledgeable drug therapy experts	79.8	16.0	4.2
I expect pharmacists to assist me in designing drug therapy treatment plans for my patients	49.2	24.6	26.3
I expect pharmacists to educate my patients about the safe and appropriate use of their medication	77.1	12.7	10.2
I expect pharmacists to monitor my patients' response to drug therapy and let me know if a patient encounters any drug-related problem	36.6	28.3	35.0
I expect pharmacists to know the specific indication of each drug I prescribe, even when drugs have more than one approved or recognized indication	70.6	18.5	10.9
I expect pharmacists to be available to me for consultation when I see patients (e.g. during rounds)	48.7	25.2	26.0
I expect pharmacists to assist my patients in selecting appropriate non-prescription medications	43.7	26.1	30.2

This finding supports a number of previous studies that showed that physicians are reluctant to accept pharmacist roles which include any aspects of prescribing [25, 26].

Contrary to the apparent belief in Kuwait that physicians do not regard pharmacists highly and do not expect them to play a role in direct patient care, our study shows that physicians appear to have high expectations of pharmacists as knowledgeable drug therapy experts and expect them to educate patients about the safe and appropriate use of medications. However, physician experiences with pharmacists were less than optimal as 60% of the physicians considered pharmacists as adequately applying their knowledge in practice. The probable explanation could include the pharmacist lack of confidence in his/her self. Factors contributing to the lack of confidence include insufficiency in pharmacist's clinical training and

**Table 5.** Physicians' experience with pharmacists

Physician experiences	% of physicians who		
	agree	are neutral	dis-agree
In my experience, pharmacists are a reliable source of general drug information (e.g., specific facts about drugs which can be found in standard references)	74.6	16.1	9.3
In my experience, pharmacists are a reliable source of clinical drug information (e.g., information regarding the clinical use of drugs in specific situations)	56.8	23.7	19.5
Pharmacists routinely counsel my patients regarding the safe and appropriate use of their medications	29.3	32.8	37.9
Pharmacists routinely inform me if they discover clinical problems with my prescriptions'	57.8	14.7	27.6
Pharmacists routinely inform me about more cost-effective alternatives to the drugs I prescribe	37.1	25.0	37.9
Pharmacists frequently ask me to clarify for them the drug therapy objectives I have in mind for my patients	40.9	24.3	34.8
Pharmacists frequently let me know that my patients have experienced some problem with their medication	33.9	24.6	41.5
In my experience, pharmacists appear willing to take personal responsibility for resolving any drug-related problems they discover	29.7	26.3	44.1

the fact that most of the pharmacists at the time of the survey were foreigners, or foreign trained, with minimal exposure to the Kuwait healthcare system. With the establishment of the Faculty of Pharmacy at Kuwait University, it is expected that the student pharmacist training will include direct patient care during clinical rotations with physicians.

The main limitation of this study was sampling from only four government hospitals, which did not include private sector physicians.

## Conclusion

Physicians in Kuwait appeared comfortable with pharmacists providing a broad range of services, including direct patient care. Physicians considered pharmacists to be knowledgeable about drug therapy, but regarded them as not routinely providing quality range of clinically focused pharmacy services.

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## References

- 1 Morley A, Jepson MH, Edwards C, Stillman P: What do doctors think of pharmacists treating minor ailments? *Pharm J* 1983;231:387-388.
- 2 Grussing PG, Goff DA, Kraus DM, Mueller CE: Development and validation of an instrument to measure physicians' attitudes toward the clinical pharmacist's role. *Drug Intell Clin Pharm* 1984;18:635-640.
- 3 Griffin JF: More physician-pharmacist cooperation needed. *N Engl J Med* 1986;56:115-118.
- 4 Nesbit F, Chaplain DC, Edwards JA Jr, Fleming GR, Harker MN, Work DR, Neelon FA: Counselling of patients by pharmacists. Blessing or curse? *NC Med J* 1995;56:115-118.
- 5 Bradshaw SJ, Doucette WR: Community pharmacists as patient advocates: physician attitudes. *J Am Pharm Assoc* 1998;38:598-602.
- 6 Ranelli PL, June Biss J: Physicians' perceptions of communication with and responsibilities of pharmacists. *Am Pharm Assoc* 2000;40:625-630.
- 7 Cowen DL: Changing relationship between pharmacists and physicians. *Am J Hosp Pharm* 1992;49:2715-2721.
- 8 Jones EJ, Mackinnon NJ, Tsuyuki RT: Pharmaceutical care in community pharmacies: practice and research in Canada. *Ann Pharmacother* 2005;39:1527-1533.
- 9 Volume CI, Farris KB, Kassam R, Cox CE, Cave A: Pharmaceutical care research and education project: patient outcomes. *J Am Pharm Assoc* 2001;41:411-420.
- 10 Martin S: In the physician's office: an interview with W. Ray Burns. *Am Pharm* 1989;NS29:17-19.
- 11 Mitchell JL: Building cooperation with physicians: an interview with Charles Fortner. *Am Pharm* 1990;NS30:24-26.
- 12 Bond CA, Raehl CL, Pitterle ME, Franke T: Health care professional staffing, hospital characteristics, and hospital mortality rates. *Pharmacotherapy* 1999;19:130-138.
- 13 Leape LL, Cullen DJ, Clapp MD, Burdick E, Demonaco HJ, Erickson JI, Bates DW: Pharmacist participation on physician rounds and adverse drug events in the intensive care unit. *JAMA* 1999;282:267-270.
- 14 Bero LA, Mays NB, Barjesteh K, Bond C: Expanding the roles of outpatient pharmacists: effects on health services utilisation, costs, and patient outcomes. *Cochrane Database Syst Rev* 2000;2:CD000336.
- 15 Maxby DG, Weart CW, Goodman BW Jr: Family practice physicians' perceptions of the usefulness of drug therapy recommendations from clinical pharmacists. *Am J Hosp Pharm* 1988;45:824-827.
- 16 Kirking DM, Bickley SK, Wasserman ML: Physician opinion of pharmacist initiated change from injectable to oral administration of histamine H2 receptor antagonists. *Am J Hosp Pharm* 1991;48:1722-1727.
- 17 Sulick JA, Pathak DS: The perceived influence of clinical pharmacy services of physician prescribing behaviour; a matched pair comparison of pharmacists and physicians. *Pharmacotherapy* 1996;16:1133-1141.
- 18 Ables AZ, Baughman OL: The clinical pharmacist as a preceptor in a family practice residency training program. *Fam Med* 2002;34:658-662.
- 19 Thomas P: Professional relationships between general practitioners and pharmacists in health centers. *Br J Gen Pract* 1991;41:84-85.
- 20 Lobas NH, Lepinski PW, Woller TW: Satisfaction of physicians and nurses with clinical pharmacy services. *Am J Hosp Pharm* 1991;48:1189-1190.
- 21 The ACCP report: ACCP defines clinical pharmacy. *American College of Clinical Pharmacy* 2005:24. Available at: <http://www.accp.com/report/rpt0805/art01.php>.
- 22 Weiner JP: Prepaid Group Practice Staffing and U.S. Physician Supply: Lessons for Workforce Policy. *Health Affairs*. 4 February 2004. Available at: <http://content.healthaffairs.org/cgi/content/full/hlthaff.w4.43v1/DC1>.
- 23 Smith WE, Ray MD, Shannon DM: Physicians' expectations of pharmacists. *Am J Health Syst Pharm* 2002;59:50-57.
- 24 Bailie GR, Romeo B: New York State primary care physicians' attitudes to community pharmacists' clinical services. *Arch Intern Med* 1996;156:1437-1441.
- 25 Spencer JA, Edwards C: Pharmacy beyond the dispensary: general practitioners' views. *BMJ* 1992;304:1670-1672.
- 26 Ritchey FJ, Raney MR: Effect of exposure on physicians' attitudes toward clinical pharmacists. *Am J Hosp Pharm* 1981;38:1459-1463.