

## The Present and Future of Pharmaceutical Care in Palestine: A Survey among Pharmacists

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### ABSTRACT

The aims of this study were to evaluate community pharmacists' views about their current role, main barriers to pharmaceutical care practice and their attitudes towards continuing education and providing some services. The study was a questionnaire based cross-sectional study that was conducted among community pharmacists in the West Bank between July 2013 and March 2014. Key findings: The questionnaire was completed by 295 out of the 300 pharmacists approached giving a response rate of (98.3%). The majority of pharmacists (205; 69.5%) stated that the community pharmacists do not practice the pharmaceutical care as it should be. All of the pharmacists said that they dispense medications and write instructions of use, 224 (76.0%) claimed that they ask about allergies, 218 (74.0%) confirmed that they review the appropriateness of the doses, 200 (68.0%) said that they take medical and disease history. The majority of the pharmacists 275 (93.2%) were willing to participate in pharmaceutical care practice. The main reported barriers to practice pharmaceutical care were the poor cooperation from the patients (215; 73%), and physicians (180; 61%), having no enough time (177; 60%), and low salaries (153; 52%). The majority 92.5% (273 pharmacists) were willing to participate in continuing education activities. The majority of community pharmacists believe that they do not do their role in Palestine as it should be. Dispensing of prescriptions is the primary focus of community pharmacists. The community pharmacists have positive attitude towards pharmaceutical care and continuing education. Efforts are needed to overcome barriers.

**Keywords:** Pharmaceutical Care, Barriers, Continuing Education, Palestine.

### INTRODUCTION

For a long time, the pharmacists used to compound and dispense medications, over the past four decades, the pharmacist's task has expanded to ensure that a patient's drug therapy is appropriately indicated, the most effective available and the safest possible. This approach has been called pharmaceutical care which was defined as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life" (1). In 1993, the World Health Organization (WHO) defined pharmaceutical care as "a compendium of attitudes, behaviors, commitments, concerns, ethics, functions, knowledge, responsibilities and skills of the pharmacist on the provision of drug therapy with the goal of achieving defined therapeutic outcomes toward patient health and quality of life" (2). An updated definition describes pharmaceutical care as "a

patient-centered practice in which the practitioner assumes responsibility for a patient's drug-related needs and is held accountable for this commitment (3).

Pharmaceutical care involves three major functions; Identifying potential and actual drug-related problems, resolving actual drug-related problems; and preventing drug-related problems (4). Pharmaceutical care services were a revolution in pharmacy practice. Only the uptake and application of this concept in practice will ensure job satisfaction for pharmacists and eliminating drug related problems (5). Unfortunately, pharmaceutical care concept is not widely practiced in Palestine. Identifying barriers to pharmaceutical care progression should be of prime concern, to find solutions and help the expansion of pharmaceutical care services.

In our country, according to the Ministry of Health (MOH) annual report in 2013, the

total number of registered pharmacists in the West Bank was 3485, among them 181 were working in the MOH. The majority of the rest work in community pharmacies, the number of community pharmacies in the West Bank in 2013 was 942 (6). To the best of the author's knowledge, the extent of pharmaceutical care practice, attitudes and barriers to this practice have not been examined previously in Palestine. The importance of this study is in evaluating the current situation and the barriers to pharmaceutical care in Palestine, so suitable strategies and recommendations can be developed to improve the practice of pharmaceutical care in the future. The aim of this study was to evaluate community pharmacists' views about their current role, main barriers to pharmaceutical care practice and their attitudes towards providing some services.

## MATERIALS AND METHODS

The study was a questionnaire based cross-sectional study that was conducted in the West Bank of Palestine between July 2013 and March 2014. According to the Ministry of Health (MOH) annual report for 2013, the number of licensed pharmacies in the West Bank was 942 (6). The minimum sample size for the study was calculated to be 274 pharmacies depending on Raosoft sample size calculator. A convenience sample of 300 pharmacies from different cities, villages and camps in the West Bank was chosen. The list of pharmacies was obtained from the Palestinian Pharmaceutical Association. The West Bank according to their records is divided into eight regions, so the 300 pharmacies were chosen from the list to cover all these regions and to include around one-third of the pharmacies in every region. The questionnaire was administered by five well trained fifth year pharmacy students. The 300 pharmacies were visited, one pharmacist from each was asked to participate in the study (preferably the responsible pharmacist). A verbal consent was obtained from participants.

### Data collection

Data collection tool was a face to face Arabic questionnaire designed after reviewing related literature (7-9). and it was tested

by a pilot study on 10 pharmacists. The questionnaire included 14 questions; the first part included sociodemographic data ; 1) gender 2) years of experience 3) place of work and 4) scientific degree). The second part included questions to ask pharmacists about 1) their opinion in the current role of community pharmacists in the health care team 2) if they practice their role in Palestine as it should be 3) duties of community pharmacists in their opinion 4) the current practiced services 5) the time they spend in dispensing and counseling 6) if they were willing to participate in pharmaceutical care practice 7) the main barriers that face the implementation of pharmaceutical care in our country 8) their attitudes towards continuing education 9) if the doctors consult them sometimes and 10) their attitudes towards providing some simple services to patients in their pharmacies. The questions were close ended, several choices were given for every question and the pharmacists were asked to choose from them or add other choices. The study protocol was approved by An-Najah National University Institutional Review Boards (IRB) before the initiation of data collection.

### Statistical analysis

Statistical analysis was performed using Statistical Package for Social Science (SPSS version 16); frequencies and percentages were calculated for categorical variables. Mean  $\pm$  standard deviation were computed for continuous data. A p-value of less than 0.05 was considered to be statistically significant for all analyses.

## RESULTS

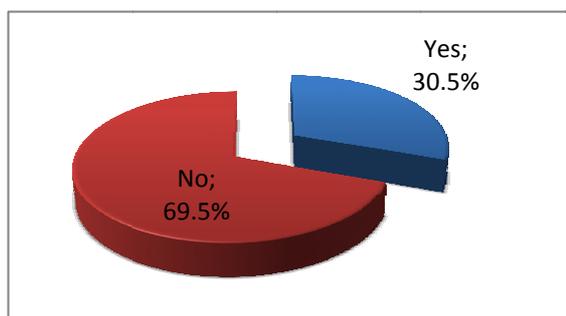
### Sample characteristics

The questionnaire was completed by 295 out of the 300 community pharmacists approached giving a response rate of (98.3%). The majority were females; 163 (55.3%), the mean years of experience ( $\pm$  SD) was (8.3 $\pm$  8.1) ranging from 1 to 45 years. The majority of the respondents were working in the cities 222 (75.3%), 67 (22.7%) in the villages and 6 (2%) in the camps, 268 (90.8%) of them had a bachelor degree, 25 (8.5%) had a master degree, and 2 (0.7%) had a PhD degree.

### The opinion of community pharmacists about their current role in healthcare team

When the pharmacists were asked about the percentage they give to their role in the health care team compared to how it should be, 69 (23.4%) said that their role is 25% and less, while the majority of them 140 (47.5%) said it is between 25-50%, and 86 (29.2%) of them answered with 50% and more.

The majority of pharmacists (205; 69.5%) stated that the community pharmacists do not practice their role in Palestine as it should be, while 90 pharmacists (30.5%) said yes they do.



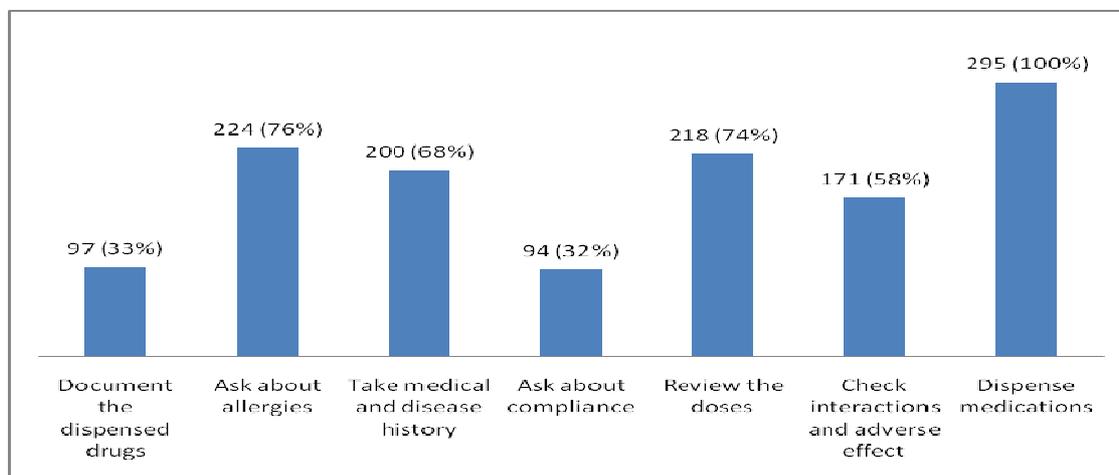
**Figure (1):** Do the community pharmacists perform their role in Palestine as it should be?

### Duties of community pharmacists

We asked the pharmacists about the duties that the community pharmacists should do according to their opinion; the results showed that nearly all of them 274 (93%) said dispensing medications; writing instructions and explaining them to the patients, 224 (76%) of them said dispensing over the counter (OTC) drugs for simple cases, 189 (63%) of them thought that they should prepare and compound some medicines, and 65 (22%) said monitoring the patient and the effectiveness of the dispensed drugs.

### Duties that the community pharmacists actually do in Palestine

We asked the pharmacist about the practices that they do themselves in their daily practice, the answers were as the following: dispensing drugs in addition to writing instruction and explaining them to the patient (295; 100%), checking interactions and adverse effect (171; 58%), reviewing the appropriateness of the doses (218; 74%), asking about compliance (94; 32%), taking medical and disease history (200; 68%), asking about allergies (224; 76%), and documenting the dispensed drugs (97; 33%) (Figure 2).



**Figure (2):** Duties that the community pharmacists do.

### The time spent by the community pharmacists with the patient

The pharmacists were asked about the time they spend with every patient in general (for dispensing and counseling), the answers ranged from 1 minute to 23 minutes with a mean time of  $6.38 \pm 3.99$  minutes.

### Are community pharmacists willing to participate in pharmaceutical care practice?

The majority of the pharmacist 275 (93.2%) were willing to participate in pharmaceutical care practice; few of them 20 (6.8%) did not like that. There was no statistically significant association with gender,

education, place of living and years of experience.

### **Barriers that hinder the development of pharmaceutical care**

The pharmacists were asked about the barriers that prevent the development of pharmaceutical care in our country, the answers were: poor cooperation from the patients (215; 73%), lack of cooperation from the physicians when they discover drug related problems (180; 61%), no enough time (177; 60%), low salaries (153; 52%), and the need for continuous training and education (112; 38%).

### **Participation in continuing education and workshops**

The pharmacists were asked about their willingness to participate in continuing education, conferences and workshops to develop their skills and knowledge to offer pharmaceutical care, the majority 92.5% (273 pharmacists) were ready for that. The females were more likely to be willing to participate in these activities compared to males (95.7% versus 88.6%) (p- value = 0.022).

### **Do the doctors consult pharmacists sometimes?**

Around half of the pharmacists 132 (44.7%) said that the doctors consult them sometimes, the rest 163 (55.3%) said that they do not.

### **Providing some services to the patients**

Among respondents, 266 (90.2%) of the pharmacists stated that they are ready to measure weight of customers, 218 (74%) of them were ready to measure blood glucose level, and 248 (84%) were ready to measure the blood pressure level.

## **DISCUSSION**

Community pharmacies are the most popular form of pharmacy profession in our country, with around 1000 registered pharmacies distributed across the West Bank (6). The majority of pharmacists (69.5%) admitted that the community pharmacists do not do their role in Palestine as it should be and 47.5% evaluated the percentage of their role in the healthcare team to be between 25-50% (compared to how it should be). In authors' opinion, the role of the pharmacists needs to

be developed all over the world not only in our country. However, the situation in the Western countries is much better than us. In a recent review to evaluate pharmaceutical care in the world, they found that there is available data for 24 European countries, Australia, Canada and the USA. In 16 of the countries examined, there are legally regulated services (regulated by law) directly communicating with the concept "Pharmaceutical care". In 7 of the countries the patient is not charged for "Pharmaceutical care" and in 3 of the countries – the patient pays part of the cost. The pharmacist, providing the service is paid in 8 of the countries. The universities of 18 of countries included "Pharmaceutical care" in the curriculum of pharmacy programs (5).

The percentage of community pharmacists who thinks that pharmacists should do some compounding is high, in a previous study related to compounding in our country, 72.2% of respondent pharmacists reported that they provide compounding services. In that study, 73.2% of the compounders reported that their goal of providing full pharmaceutical care to their patients was the most important motivator (10). It is good to encourage this and train the pharmacists to do it in the proper way. The percentage of pharmacists who think that they should monitor patients for side effects and efficacy is low; this might reflect poor understanding of pharmaceutical care concept, because a complete pharmaceutical care plan requires monitoring to ensure reaching the desired outcomes.

All of the community pharmacists stated that they dispense medications, write instruction and explain them to the patients, 171 (58%) of them examined if there is any interaction between the drugs or if there is any adverse effect, 218 (74%) ensured the appropriateness of the dose to the patient, 94 (32%) checked compliance, 200 (68%) said that they take medical and disease history, 224 (76%) claimed that they ask about allergies, and the pharmacists who documented the drugs that they dispense were 97 (33%) of the total. Even in a study from the US, they found that dispensing of drugs remains the primary focus as in this study, yet the incidence of patients being counseled on medica-

tions appears to be increasing. More than 25% of independent community pharmacy owners reported providing some patient clinical care services, such as medication counseling and chronic disease management (11). In another study from the UK, where trained observers visited pharmacies to record the activities of the responsible pharmacist, the pharmacists spent the majority of their time assembling and labeling products (median 25.2%) and monitoring prescriptions for clinical appropriateness (10.6%). The next most prevalent activity code was rest, waiting and breaks (8.6%). They spent more time offering non-prescription medicines advice (6.6%) than prescription medicines counseling (3.8%). The provision of pharmaceutical services accounted for 3.2% of pharmacists' time. Overall, 46.2 % of their time was spent on activities deemed to be 'Professional'. So the authors concluded that despite repeated attempts during the last decade to shift pharmacists' roles towards patient-care activities, community pharmacists continue to spend the majority of their time on technical dispensing similar to this study also (12).

In this study, the majority of the pharmacists 275 (93.2%) were willing to participate in pharmaceutical care practice, and this is good and promising because pharmaceutical care will become a standard of performance only when the policymakers, health care providers and primarily pharmacists accept their social responsibility regarding the safe and effective drug therapy of each patient (5). In a study from Jordan, similar to this study, more than 90% of respondents fully supported the concept of pharmaceutical care (7). The main barriers to pharmaceutical care practice according to community pharmacists in this study were the poor cooperation from the patients (73%), and physicians (61%), having no enough time (60%), low salary (52%), and the need for higher level of education (38%). Lack of time and lack of money were major barriers for the implementation of pharmaceutical care in a group of European countries also (13). In a study from Kuwait in hospital pharmacies, the main barriers perceived by the participants were lack of time (78%) and lack of staff (71.2%) (8). In Jordan, the need for pharmaceutical care training was found to be the top barrier to the

provision of pharmaceutical care as indicated by more than 80% of pharmacists (7). Many of the barriers could be overcome through increasing effective communication with patients and collaboration with other health care providers, increasing the number of staff and participation in effective continuing educational programs.

The majority of community pharmacists approached (92.5%) were willing to participate in continuing education activities. This reflects a positive attitude that can help in the development of pharmaceutical care practice in our country. Continuing pharmacy education is important. However, according to our current regulations, pharmacists are not required to obtain a specific number of credits to be relicensed<sup>(14)</sup>. It is highly recommended to implement this to keep the pharmacists updated with new information and improve their skills in providing pharmaceutical care.

The universities are recommended to have an active role in preparing pharmacy students for patient-oriented services. It is hoped that the new patient care-oriented doctor of pharmacy (Pharm D) program in the country will produce graduates who are capable of providing better pharmaceutical and clinical care to patients and improving the image of the pharmacy profession<sup>(14)</sup>. In the West Bank the first Pharm D program has started in 2007 at An-Najah National University and the first group of students have graduated in 2013. Another program at Birzeit University was approved in 2009. These programs include several pharmaceutical care, patient counseling and pharmacotherapy courses which could be of a great help in developing students' skills.

Private pharmacies in the West Bank seldom use technology for patient care and manually dispense most drugs. It is recommended to have electronic files and electronic data bases to help in the development of pharmaceutical care services.

Among respondents, 266 (90.2%) of the pharmacists stated that they are ready to provide weighting service, 218 (74%) were ready to measure blood glucose level, and 248 (84%) were ready to measure blood pressure level. In a previous study from the West Bank, the majority of patients said that they

would be happy to receive different extended services in the community pharmacy. Most of the proposed extended services appear to be in high demand with 72.9% requested weight, height and temperature measurement, 87.5% blood glucose monitoring, 66.8% blood pressure monitoring and 59.1% cholesterol level monitoring (15). An attempt to include these services in pharmaceutical care practice in community pharmacies in Palestine is highly recommended.

One limitation of the study is that the answers of the pharmacists cannot be validated. The section on activities of pharmacists is based on self-reporting and makes no attempt to measure the relative time spent on the activities. Another limitation was in the sample, it was a convenience sample, so it might not be representative to all community pharmacists in the West Bank.

### CONCLUSIONS

The majority of community pharmacists believe that they do not do their role in Palestine as it should be. Dispensing of prescriptions is the primary focus of community pharmacists. The community pharmacists have positive attitude towards pharmaceutical care and continuing education. They expressed a willingness to implement pharmaceutical care practice but have identified a number of barriers to successful implementation. The main barriers were the poor cooperation from the patients and prescribers.

### CONFLICT OF INTERESTS

The authors report no conflicts of interest in this manuscript.

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