

## Community pharmacists' perception of and practice with drug package inserts in UAE

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### ABSTRACT

**Background:** Written information in drug package inserts (DPIs) is important source of information for doctors and pharmacists. Objectives: The present study was undertaken to evaluate the knowledge, perception and practice of community pharmacists with information in the DPIs, and their views on their usefulness.

**Methods:** Seventy five pre-piloted questionnaires were distributed to community pharmacists in the United Arab Emirates. The questionnaire included questions covering demographics of pharmacists and whether they read and rely on DPI as a source of information. Pharmacists were also asked to evaluate and categorize DPI information with respect to the ease for patient use. The data were analyzed and are expressed as frequency and percentage.

**Results:** The response rate was 90.7%. The majority (52, 76.5%) of pharmacists were in the age range of 20-39 years, with bachelor of pharmacy degree (50, 73.5%) and having 1-10 years of practice experience (48, 70.6%). Two thirds of the respondents obtained their degree outside the UAE. The majority (60, 88.2%) of pharmacists read the DPIs of prescription and OTC drugs, for all the information and think it is useful (67, 98.5%). Most participants think DPI is useful to patients and advise them to read it. The majority (49, 72.1%) of pharmacists believe that DPI are clear to read but their content should be shorter (46, 67.6%) and limited to the most important information (51, 75%). More pharmacists with a degree from outside UAE do not read the DPIs ( $p < 0.003$ ), and find DPIs easily understood ( $P < 0.008$ ). More pharmacists with 1-5 years' experience advise their patients to read the DPIs ( $P < 0.033$ ).

**Conclusions:** Our findings suggest that there is a need for improving the content of drug package inserts to provide the necessary information required not only for health care professionals but also patients to further enhance their acceptance of and compliance with their medications.

**Keywords:** Community pharmacists, Drug package inserts, Knowledge, Perception, Practice

### INTRODUCTION

Drug package inserts or drug leaflets included in the package of prescription and over-the counter (OTC) drugs are the most frequently and readily available drug information used by patients, physicians and pharmacists.<sup>1-3</sup> Many studies have demonstrated that reading the package insert plays a role in increasing patient compliance, satisfaction, and ability to follow instructions.<sup>4,6</sup> Verbal information alone may not improve

patient's health literacy of his condition and medication. This is due to the fact that verbal information may not be well understood, misunderstood or not easily recalled after leaving the hospital, clinic or pharmacy. It has been stressed that a combination of both verbal and written information markedly increases knowledge and compliance.<sup>7-9</sup> Drug package inserts provide useful, clear, and comprehensive information on the medication to both pharmacists and patients.<sup>10,11</sup> Thus pharmacists being front line health care professionals should use the inserts

as source of information and advise their patients to read the inserts. Package inserts help pharmacists to counsel the patients about their medications by supporting and reinforcing the verbal information. It helps them to get updated information about new drugs and to keep as their on-going references.<sup>12</sup> The aim of the present study is to assess the attitude and practice of community pharmacists towards drug package inserts.

## METHODS

A questionnaire- based cross sectional study was conducted between September and November 2016. The questionnaire was developed to evaluate the knowledge, attitude and practice of community pharmacists toward drug package inserts (DPIs) and the most important information for patients and characteristics of understandable and legible DPI. The questionnaire was distributed to practicing community pharmacists. Questions were mainly evaluating DPI content, usefulness and whether DPI are understood by patients ability to the patient from professional point of view. The questionnaire included questions covering demographic characteristics of the pharmacists. These include age, gender, type of pharmacy degree and place where it was obtained (UAE or outside UAE), years of practice and average number of prescriptions dispensed per day. Pharmacists were also asked if they read and rely on DPI information and what other sources they use to obtain information. The pharmacists were also asked to evaluate and categorize DPI information and content with respect to the ease for patient use.

### Statistical analysis

The participants' responses were encoded, and the data were analysed using Statistical Package for the Social Sciences (SPSS version 20, Chicago, IL, USA). The questions were in different distinct formats. Chi-squared test was used to identify any significant difference among the participants' responses regarding certain statements in the questionnaire with a significance level of  $P < 0.05$ .

## RESULTS

We distributed 75 questionnaires and received completed 68 surveys producing a response rate of 90.7%. Demographic characteristics of community pharmacists are shown in Table 1. The majority (52,76.5%) of pharmacists were in the age range of 20-39 years, with traditional pharmacy degree (B. Pharm., 50,73.5%) and having 1-10 years of practicing experience (48,70.6%). Only small number of pharmacists had a Pharm. D. degree. About two thirds of the respondents obtained their degree outside the UAE. Average number of prescriptions dispensed per day is shown in Table 2 and was reported to be less than 10 (11, 16.2%), 10-14 (17, 25%), 15-19 (10, 14.7%), 20-29 (12, 17.6%) and 30 and more (18, 26.5%). The average number of consultation without prescription ranged from as low as 1-4 to as high

as more than 15. The majority (44, 64.7%) reported having daily 10 to more than 15 consultations.

**Table 1: Demographic characteristics of community pharmacists.**

Criteria	Frequency (%), n= 68
Age	
20- 29	32 (47.1 %)
30- 39	20 (29.4 %)
40- 49	10 (14.7 %)
50- 59	5 (7.4 %)
More than 60	1 (1.5 %)
Gender	
Male	37 (54.4 %)
Female	31 (45.6 %)
Degree	
B. pharm	50 (73.5 %)
Pharm D	15 (22.1 %)
Master	3 (4.4%)
Ph.D.	0
Obtained in :	
UAE	23 (33.8 %)
Outside UAE	45 (66.2 %)
Years of practicing pharmacy	
1-5	27 (39.7 %)
6-10	21 (30.9 %)
11-15	10 (14.7 %)
16-20	5 (7.4 %)
20 and more	5 (7.4 %)

**Table 2: Daily average number of encounters/day and patients' consultations and enquires received by community pharmacists.**

Daily prescription/consultations	Frequency (%), n= 68
Average number of prescriptions/day	
<10	11 (16.2 %)
10-14	17 (25.0 %)
15-19	10 (14.7 %)
20-29	12 (17.6 %)
30 and more	18 (26.5 %)
Average number of consultation without prescription	
1-4	12 (17.6 %)
5-9	12 (17.6 %)
10-15	17 (25.0 %)
More than 15	27 (39.7 %)
Do you receive any enquiries about information in package insert?	
Yes	52 (76.5 %)
No	16 (23.5 %)
What the most common enquiries are about?	
All information	37 (54.4 %)
Drug dosage form and compositions	17 (25.0 %)
Mechanism of action and adverse effects	14 (20.6 %)

Again, 52 (76.5%) pharmacists stated that they receive daily enquiries about information in the package inserts of patient's medication (Table 2). Enquiries focus on all information (37, 54.4%), drug dosage and composition (17, 25%) and mechanism of action and adverse effects (14, 20.6%). Table 3 shows that the majority (60, 88.2%) of pharmacists read the package inserts of both (40, 58.8%) prescription and OTC drugs, for all (59, 86.8%) the written information and think it is useful (67, 98.5%).

**Table 3: Attitude of community pharmacists towards drug package inserts.**

Pharmacist's response	Frequency (%) , n= 68
Do you read package insert?	
Yes	60 (88.2 %)
No	8 (11.8 %)
Do you think package inserts are useful to you as a pharmacist?	
Yes	67 (98.5 %)
No	1 (1.5 %)
Which section of package insert do you consider useful to you?	
All information	59 (86.8 %)
Active ingredients	1 (1.5 %)
Dosage regimen	5 (7.4 %)
Mechanism of action	0
Toxicity	0
Precautions and contraindications	1 (1.5 %)
Adverse effects	0
Drug interactions	1(1.5%)
Expiry date	0
Storage	0
No response	1 (1.5 %)
What package inserts do you usually read?	
Prescription drug	16 (23.5 %)
OTC drugs	4 (5.9 %)
Both	40 (58.8 %)
No response	8 (11.8 %)
When reading package insert I focus on	
All information	37 (54.4 %)
Drug dosage form and composition	18 (26.5 %)
Mechanism of action and adverse effect	5 (7.4 %)
No response	8 (11.8)
I do not read package insert because	
I know the information	5 (7.4 %)
I rely on medical representative	4 (5.9 %)
Package insert is not easy to read	0
Small print	0
Difficult technical terms	0
I am drug expert	0
No response	59 (86.8 %)
What are your sources of information since you do not read package inserts?	
Internet	0
Text books	0
BNF	1 (1.5%)
Own knowledge	0
Others	0
No response	67 (98.5 %)

Most participants (57, 83.8%) think that the package insert is useful to patients and more than half (39, 57.4%) of the participants advise their patients to read it (Table 4). However, the majority (56, 82.4%) of pharmacists agreed that patients may decline to use the medicine if they read the side effects part. On the other hand, Table 5 show that when asked about their views of the usual drug package inserts, the majority (49, 72.1%) of pharmacists believe that although they are clear for easy reading and beneficial to patients (51, 75%) but they could be confusing to patients, their content should be shorter (46, 67.6%), limited to the most important information (51, 75%) and written in English and Arabic (41, 60.3%).

**Table 4: Views of community pharmacists regarding their advice to patients on drug package inserts.**

Question	Frequency (%) , n= 68
Do you think package inserts are useful to patients?	
Yes	57 (83.8 %)
No	11 (16.2 %)
Do you advise your patients to-	
Read the package insert?	39 (57.4 %)
Not to read the package insert?	29 (42.6 %)
What section do you advise your patients to read?	
All information	17 (25%)
Drug dosage form and composition	20 (29.4 %)
Mechanism of action and adverse effects	2 (2.9 %)
No response	29 (42.6 %)
Do you think patients may decline to use the medicine if they read the side effects part?	
Yes	56 (82.4 %)
No	12 (17.6 %)

There was no association between the average number of prescriptions dispensed per day or the type of pharmacy degree and any of the pharmacists' demographics. However, the number of pharmacists with a degree obtained outside UAE was significantly higher than those with a UAE degree in not reading the DPIs ( $p < 0.003$ ), what they advise their patients to read in the DPI ( $P < 0.024$ ) and the DPIs are easily understood ( $P < 0.008$ ). We have also observed that more pharmacists with a practicing experience of 1-5 years tend to advise their patients to read the DPIs ( $P, 0.033$ ).

## DISCUSSION

Drug package inserts or drug leaflets included in the package of prescription and over-the counter (OTC) drugs provide the prescribing physician, the dispensing pharmacist and the patient with the most important information about the medication. Verbal information given by the doctor is limited by the pressure of time to dose and side effects. On the other hand, information given by the community pharmacist is concentrated mainly on dose and frequency of administration.

**Table 5: General views of community pharmacists on drug package inserts.**

Pharmacist's response	Frequency (%), n= 68
In what language do you prefer package insert to be written?	
English	25 (36.8 %)
Arabic	2 (2.9 %)
Both languages	41 (60.3 %)
Do you think package insert give relevant information?	
Yes	62 (91.2%)
No	5 (7.4%)
No response	1 (1.5 %)
How do you categorize legibility of package inserts	
Legible (clear)	49 (72.1 %)
Illegible (not clear)	18 (26.5 %)
No response	1 (1.5 %)
How do you categorize understandability of package inserts for patients?	
Easy	30 (44.1 %)
Difficult	38 (55.9 %)
Do you think that package inserts are confusing to the patient?	
Yes	49 (72.1 %)
No	18 (26.5 %)
No response	1 (1.5 %)
How do you categorize usefulness of package insert for patients?	
Beneficial	51 (75 %)
Not beneficial	17 (25 %)
Do you think the content of package insert should be shorter?	
Yes	46 (67.6 %)
No	22 (32.4 %)
Do you think content should be limited to the most important information?	
Yes	51 (75 %)
No	17 (25 %)

Such verbal information although minimal but at risk of being misunderstood, or forgotten particularly when multi drugs are prescribed to the patient. Therefore, it is important if such information is supplemented with written ones. It has been shown that a combination of both verbal and written information significantly improves patients' knowledge and compliance.<sup>7-10</sup> In the present study, most community pharmacists read DPIs and think of them as a useful primary source of information not only for prescription drugs but also for OTC drugs. Surprisingly and with the exception of one pharmacist who uses in addition the BNF as a source of information, the rest of participants rely only on DPIs for information. Various studies showed that community pharmacists use also other sources of information beside DPIs.<sup>13,14</sup> Only very few pharmacists do not read DPIs because they rely on the information provided by the medical representatives or they know the information.

Such excuses may not be valid since the pharmacist would be missing up-dated information and also because, in most cases, medical representatives provide biased information in order to promote their products. Our results demonstrated that more than half the community pharmacists advise their patients to read DPIs. However, the majority think that patients may not use the medication if they read the section on side effects. This again stresses on the role of the pharmacist to clarify such a drawback by elaborating on the side effects that the patient is most likely to experience and how to deal with it. DPIs, in addition to their impact on increasing patient's knowledge, compliance and satisfaction provide easily accessible information to patients about their medications.<sup>7,13,15</sup> Our results indicated that the majority of community pharmacists believe that although DPIs are useful to patients but they may confuse patients and suggest that DPIs should be shorter in length than usual and limited to the most important information needed by patients. This is in harmony with the suggested report on how improving DPI typography will improve legibility for easy comprehension and understanding by lay patients.<sup>13</sup>

## CONCLUSION

Our findings suggest that there is a need for improving the content of drug package inserts to provide the necessary information required not only by health care professionals but also by patients to further enhance their acceptance of and compliance with their medications. Community pharmacists are encouraged to become familiar with the structure and contents of the DPI and they should practice more informative counselling through revising DPI with their patients.

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