

## A pilot study – drug information sources for patients

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**Objective:** The aim of this pilot study was to identify which information sources are utilized, which information is needed and whether the information is useful for Japanese patients.

**Method:** An interview survey was carried out on 100 consecutive patients (> age 20 years) attending Kanemata Pharmacy in Chiba, Japan.

**Result:** Of the 100 respondents, 33% had searched for drug information and the most commonly used source was the internet. Requested information by respondents was general information, safety, other peoples' opinions, efficacy, alternative drugs and drug-drug interactions. The respondents' evaluations on the requested information were diverse due to the limitations and variety of information accessible on the internet.

**Conclusion:** The pilot study indicated that there are unmet needs regarding drug information for patients and the most commonly utilized source of drug information was the internet. There are new issues accompanying internet use and the reliability of the information on the internet. Further study is necessary to explore appropriate drug information provision to provide for patients' needs and to assist patients in the appropriate use their medicine.

**Key Words:** Drug information, patient perspective, Internet, drug information source

### Introduction

Prescription-drug information provision for patients by medical professionals has been enhanced since the revision of the Pharmacist Law in 1997. Also, other sources on prescription-drug information other than those available from medical professionals have become important for patients, such as internet, books, etc. The website of Pharmaceutical and Medical Device Agency Japan (hereinafter "the PMDA") offers drug information for patients and consumers. Books like "Find your Prescribed Medication" have been a million-sellers in recent years. These trends reflect patients' needs for prescription drug information from sources other than

their medical professional.

It is important to thoroughly inform patients of their medicines in order to assure appropriate drug use. However, it has been shown that patients feel they are inadequately informed about their medicines by medical professionals and patients have unmet drug information needs<sup>1)</sup>. The PMDA annual report showed which type of information (indication, adverse effects, etc.) was needed by patients based on their telephone consultation service by pharmacists<sup>2)</sup>. However, very few studies focused on which sources, except for from medical professionals, are utilized as drug information sources, and which type of information is requested by patients.

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## Aim of the study

The aim of the study was to identify prescription drug information sources utilized by patients. Since, at this point, no studies have focused on drug information sources utilized by patients, this is a pilot study to explore which information sources are utilized, which types of information are needed and how useful that information is for patients.

## Method

### Design and Sample

An interview survey was created and 100 consecutive patients (age > 20 years) visiting Kanemata Pharmacy for dispensing of prescription drugs in June 2008 were personally interviewed. Two interviewers with good communication skills and considerable experience in interviewing conducted the interviews. They explained the aim of the study, voluntary participation and anonymity accompanying the survey. After obtaining agreement to participate in this study, the patient was interviewed on a face-to-face basis.

### Assessment Tools

The interview contained the following 5 questions: 1) Do you search for prescription-drug information other than that from medical professionals and if "No", then why not? 2) Which sources do you utilize as drug information sources? 3) Which type of information do you need? 4) How useful do you think the drug information is from such sources? "Usefulness" is judged as "useful", "just for information", "not useful", "couldn't find". All of the answers and gender/age of participants were recorded by interviewers.

## Results

A total of 100 patients [27 (27.0%) males and 73 (73%) females] agreed to participate. The age distribution is shown in Table 1. Of the 100 participants, 33(33.0%) had searched for prescription drug information. There were 2 main reasons that the remainder 67(67.0%) had never searched for prescription drug information. One is that they had no need to search for information. This includes they are not very interested in the prescribed medication. The other reason is that they are satisfied with information provided by their physician and/or pharmacist.

Of the 33 respondents who had searched for drug information, 28 (84.8%) used internet, 5 (15.2%) used

books, and 3 (9.2%) used friends/relatives. The internet was an important source of prescription drug information. Of 28 respondents using internet, 5 were over 60 years old.

	all respondents n=100		the respondents having ever searched for drug information n=33	
	n	%	n	%
Estimated age (yr)				
20-40	53	53.0%	19	57.6%
41-60	20	20.0%	7	21.2%
>60	26	26.0%	7	21.2%
unknown	1	1.0%	-	-
Gender				
male	27	27.0%	7	21.2%
female	73	73.0%	26	78.8%

Table1 Characteristics of respondents

The most requested type of information was general information of the prescription drug, covering indication, adverse effect, formulation, active substances, and administration (Table 2); 60.6% of the respondents searched for this kind of information. They added reasons that they did not have a specific aim to know, but they just wanted to see drug information prescribed for themselves or their family members out of curiosity. The next most requested information was regarding safety; 33.3% of the respondents have searched such information. They added reasons that they or their family members had ever experienced drug adverse effects.

Furthermore other types of information included: others opinion 24.2%, efficacy 18.2%, alternative drugs and drug-drug interaction 15.2%, and also drug-supplement interaction, administration and expiration date were also requested. The reason for requesting others opinion was to know whether the medicine was really effective and safe for people having taken the medicine. The reason for the request of efficacy is to know that the medicine prescribed for a particular symptom is also effective for another symptom.

The usefulness of the requested information is shown in Table 2. Respondents requesting general information were relatively satisfied. Most of them evaluated the information as "useful" or "just for information". However, the usefulness of other information was different. The respondents requesting safety evaluated the information "not useful" because the information was not specific; it was merely a general explanation, such as

"careful use for the elderly". The evaluation on the information on others' opinions was varied, "useful" (62.5%) and "not useful" (37.5%). Whereas the reason for "not useful" was that other's negative opinions gave them anxiety, the reason for "useful" was that they became relieved by others' positive opinions, like "the medicine was effective". Respondents requesting

information on efficacy were relatively satisfied. The evaluation on the information on alternative drugs and drug-drug interactions were varied, "useful" and "couldn't find". The evaluation on the information on administration, supplement-drug interaction and expiration date was "couldn't find".

type of information	patients requesting information		Patient's evaluation of the requested information							
			useful		just for information		not useful		could not find	
	n	%	n	%	n	%	n	%	n	%
general information	20	60.6%	8	40.0%	11	55.0%	1	5.0%		
safety	11	33.3%	2	18.2%	6	54.5%	3	27.3%		
people's opinion	8	24.2%	5	62.5%			3	37.5%		
efficacy	6	18.2%	5	83.3%	1	16.7%				
alternative drugs	5	15.2%	2	40.0%	1	20.0%			2	40.0%
drug-drug interaction	5	15.2%	1	20.0%	1	20.0%			3	60.0%
administratoin	2	6.1%	1	50.0%					1	50.0%
drug-supplement interaction	1	3.0%							1	100.0%
expiration date	1	3.0%							1	100.0%

Table2 Type of information requested by patients and their evaluations

Discussion

This is a pilot study to explore which sources are utilized by patients as prescription drug information sources. Though it was a small sample size of 100 patients, almost one-third of the participants had searched for prescription drug information and the most utilized source was the internet. Various surveys among patients in the USA, UK, Australia and Germany on the percentage of patients searching for medical related information by the internet reported almost 30%, 2 other surveys in the USA and the Netherland reported 53.5% and 50%, respectively<sup>3)</sup>. The percentage of patients searching from drug information by the internet in the present study was comparable with these findings. The internet has become one of the major information sources and 69.0% of the public can access to the internet<sup>4)</sup>. Though the proportion of the patients searching for drug information by the internet in our sample is smaller than the proportion of the internet users in the whole Japanese population, the difference can be explained by the higher age distribution in our patient sample and the limited topic "drug information".

The topics searched by our sample varied. In the telephone consultation service for consumers regarding drugs in 2007 offered by the PMDA, the consumer inquiries were most commonly related to safety (48.7%), followed by indication(10.0%), administration and

dosage (7.1%) and interaction (5.9%)<sup>2)</sup>. In our sample, the most commonly requested information was safety, followed by indication, interaction, and administration excluding general information. Though other's opinion was also requested by our sample, it is because the most commonly utilized source was the internet. Previous studies on the drug information requested by consumers in Canada and Sweden showed that the most commonly requested information was safety, interaction, indication and dosage<sup>5), 6)</sup>. There was no particular difference between these studies and our study.

The evaluation on requested information by our sample was diverse. This can be explained by the fact that the most commonly utilized source in our sample was the internet. Although the internet is a powerful tool for disseminating drug information and enhancing communication and exchange of the information between users, there is the weakness that much of the information on the internet does not pass through an editorial review process. Since previous studies indicated similar problems accompanying the internet use for drug information, those using the internet may be unaware of these limitations in the information offered by the internet<sup>7), 8)</sup>. Reliable drug information provision satisfying patients is now needed since the information on the internet has such limitations.

The sample in the present study indicated that they

searched for but could not find the information of alternative drugs, drug-drug interaction, administration, drug-supplement interaction and expiration date. Regarding the information on drug-drug interaction and drug-supplement interaction, the difficulty was because the participants could not find the information that the particular combination use of 2 or more drugs/supplements is "safe", even though the information that use of a particular combination is "prohibited" is available. Also, since supplements are new emerging markets and consumers have easy access to such supplements, appropriate information on supplement-drug interaction information is now needed for the appropriate use of prescription drugs. The results indicate that the information evaluated as "could not find" is inaccessible information for patients and there are unmet needs for drug information.

There is a limitation to our study conducted in a pharmacy in a region with a small sample size. We will conduct a further survey focusing on the internet use for patients to obtain drug information with a large sample size to clarify the pilot result.

### Conclusion

The pilot study indicated that there are unmet needs for drug information for patients and the most commonly utilized drug information source was the internet. There are new issues accompanying internet use and the reliability of the information on the internet. Further study is necessary to explore appropriate drug information provision to satisfy patients' needs and to helping patients to appropriately use their medication. We will conduct another survey focusing on internet use by patients to obtain drug information with a large sample size in order to clarify the result of this pilot study and to examine the reliability of information on the internet.

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