

## A survey on medicines safety and usage in community pharmacy

Medicines are important agent in curing the several diseases of the patient by lowering the signs and symptoms through different mechanism. If the medicines, are over used, under used and misused leads to therapeutically ineffectiveness and adverse drug reactions.<sup>[1]</sup> In the developing countries, there is huge demand for creating the awareness regarding irrational use of medicines, which can prevent the unwanted effects of the medicine also self-medication is another issue which has become more common especially for over-the-counter medications and also factors such as socio-economic status, satisfaction of the patient, gender etc., which has led to several interactions and adverse drug reaction due to the lack of knowledge on drugs.<sup>[2]</sup> Drugs like antibiotic proven to be of higher resistance due to improper prescribing and usage are being self-medicated without the exact knowledge leading to morbidity and mortality.<sup>[3]</sup>

A survey was conducted evaluating the patient perception and knowledge regarding the medicine safety and usage in the community. It was conducted in southern region of Karnataka over a period of 6 months from August 2012 to January 2013. A structured questionnaire was developed and validated by experts in the field of community pharmacy for the collection of data on the knowledge and practice of medicine usage in the community. Questionnaire was translated into the local language and administered to the patients. The questionnaire incorporated two sections: (a) Patients knowledge about the medications currently used. (b) Patients practice of medicines usage. Under section (a) questions regarding awareness of the medicine being used, duration of therapy, dosage schedules and side-effects were covered. Section (b) included missed dose, compliance, storage conditions and date of expiry of the medicines being used. The study population included patients who visited the drug store for filling their prescription. Patients below the age of 18 years and above 80 years were excluded from the study. The questionnaire consisted of demographic details such as age, gender, educational qualification and health insurance coverage. Patients were interviewed with the questionnaire designed and all the responses were filled in the questionnaire immediately.

A total of 400 responses were collected from the patients in a community set up. Out of the total responses, the below 40 years age group was comparatively more (55.5%) than above 40 years age group. Gender wise distribution showed male respondents were more predominant with (57.5%) compared with female. Education wise non-graduates (62%) outnumbered the graduates (38%) and (29.2%) were covered under health insurance while (70.7%) paid out of pocket. Details are represented in Table 1. The percentage of positive responses given by the respondents was analyzed to assess the knowledge and practice of medicine usage is represented in Table 2. It was found that 70.80% of the respondents were aware about the indication of their medication being used. Among the respondents, 58.30% acquainted the duration of therapy, 55.30% were familiar at what time of the day the medicine has to be taken and 23% had the knowledge about the possible side effects of the drugs used. Considering the practice of medication usage, 18.30% of the respondents were conscious about the missed doses and 31% reported compliance to the therapy. Research conducted in a gulf region indicated 50% of the patients were not adherent

**Table 1: Demographic details of the respondents**

Characteristics	Number of respondents n=400 (%)
Age	
< 40	222 (55.5)
> 40	178 (44.5)
Gender	
Male	230 (57.5)
Female	170 (42.5)
Education	
Graduates	152 (38)
Non-graduates	248 (62)
Health insurance	
Yes	117 (29.2)
No	283 (70.7)

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**Table 2: Percentage of positive responses**

Question	Positive response % (n)
Knowledge	
Awareness	70.80 (283)
Duration	58.3 (233)
Dosage schedule	55.3 (221)
Side-effects	23 (92)
Practice	
Missed dose	18.3 (73)
Compliance	31 (124)
Storage	60 (240)
Expiry date	42.5 (170)

with their dosage regimen.<sup>[4]</sup> Considering the storage of medicines it was seen that 60% of patients were well-known with the storage conditions of the medicines used. A pilot study conducted in a health care facility said majority of the respondents stored their medications in refrigerator.<sup>[5]</sup> Among the respondents, 42.50% of the population had the practice of checking the expiry dates of the medicines before using them. Checking of expiry dates before using the medication is an important parameter. A study reported 37% of Saudi patients did not check expiry dates prior to their medication usage.<sup>[4]</sup>

There is a gap in the knowledge regarding medicine safety, usage and storage, which is having profound impact on outcomes of therapy. Therefore, the proper handling and usage of medicines is important to achieve the required effectiveness of the medicines which mainly depends on the knowledge, attitude and practice among the public on medicines, which can be enhanced by implementing the information regarding usage and safety of medicines by health care professionals. There is a need to establish facility of patient education for helping the patients to use medicines in safe and effective manner.

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