ASSESSMENT OF DRUG INFORMATION SERVICES IN A SOUTH INDIAN TERTIARY CARE HOSPITAL IN KANCHIPURAM DISTRICT

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ABSTRACT

Drug information service refers to activities carried out by pharmacists in providing any drug related information to healthcare professionals for provision of better patient care. The study was aimed to assess the drug information services provided by a drug information centre in a south Indian teaching hospital in Kanchipuram district. A total of 192 queries were received which were retrospectively evaluated for a period of eight months, from July 2010 to February 2011. Majority of the enquirers were interns (44.7%) and physicians (21.3%) from the general medicine department (52.6%). Most of the questions were asked by direct access (80.7%). Answers to queries were most often needed immediately (49.4%) and in most cases was answered verbally (57.8%). Most frequently asked questions were about adverse drug reactions (35.9%) followed by dosage and indication (25.5%) and the purpose of the queries were for better patient care (48.4%) and to update knowledge (40.6%). On the basis of the feedback questionnaire provided, the quality of the drug information services rendered was evaluated from the receivers' perspective. Assessment of the feedback questionnaire indicated that majority of the enquirers (77.4%) found the quality of the service provided by the centre to be very good. In conclusion, the services provided by the centre cater to the need of healthcare professionals towards better patient care.

Key words: Drug information service, Drug information centre, Pharmacist, Healthcare professionals.

INTRODUCTION

Drug information service is the service that involves the activities of pharmacists to provide accurate, factual, unbiased information on any query received from healthcare professionals related to drugs and drug therapy[1]. The provision of drug information is a fundamental and unique responsibility of clinical pharmacists in healthcare system. As per the definition of Society of Hospital Pharmacists of Australia (SHPA), drug information is the provision of written and/or verbal information or advice about drugs and drug therapy in response to a request from other healthcare providers, organisations, committees, patients or members of the public. This may relate to specific patient or consist of general information promoting the safe and effective use of medication[2].

In 1962, at the University of Kentucky Medical Centre, the first drug information centre was started which was intended to be utilized as a source of accurate, unbiased, selected, comprehensive drug information to cater to the needs of the healthcare team[3]. In Australia and the United Kingdom, the first drug information centres were established in 1968 at the Royal Melbourne hospital, Victoria and in 1969 at the London hospital respectively[4]. In India, Rosemary Sharp, a missionary from UK, started the first drug information centre at Christian Medical College, Vellore in the early 1970s. This centre provides information on drugs to doctors, pharmacists, nurses and other personnel of various departments[5]. Several other drug information centres were established in other places thereafter.

Till the recent past, the drugs available were few in number and hence, the need for drug information was minimal. But now, the present situation has changed with new modes of treatment, tremendous information explosion and great number of drug products being available each year. Therefore, it is very important to procure accurate unbiased information. In India, irrational use of drugs is common and this has led to antibiotic resistance, adverse drug reactions, drug interactions and other drug related problems. Among the many factors that make clinicians unable to update their knowledge about drugs, lack of unbiased drug information, availability of more than 60,000 formulations and lack of time are few notable reasons which ultimately lead to an increasing demand for independent, specific and unbiased drug information for better patient care[6]. To maintain consistency in the service provided and for better functioning of the centre, it is important to evaluate the functioning and quality of the services provided by the centre at constant intervals[7]. Improper functioning of the drug information centre may contribute to poor patient outcomes in terms of health and economics due to provision of biased and limited drug information[8]. The present study was aimed at assessing drug information services in a South Indian tertiary care hospital in Kanchipuram district for a period of eight months.

MATERIALS AND METHODS

The study was conducted in SRM Medical College Hospital and Research Centre, which is a 750 bedded tertiary care hospital in Kanchipuram district, Tamil Nadu. The drug information centre is a part of the department of Pharmacy Practice in SRM College of Pharmacy, which was established in 2009 in the hospital. The centre is efficiently equipped with trained pharmacists and a library stocked with textbooks, national and international journals and other resources. It is also facilitated with computer and internet access along with electronic databases. The centre is managed by the faculty members and postgraduate students of the Pharmacy Practice department. A query box is placed outside the centre and other speciality departments of the hospital which can be availed at all times.

The drug information centre caters to the need of doctors, pharmacists, nurses and other healthcare professionals working in various departments of the hospital. The services of the drug information centre can be accessed by direct access, telephone, email and during ward rounds. Evaluation of drug information queries received is undertaken and answers are formulated and provided according to the modified systematic approach. The drug information request and documentation forms prepared by the department are utilized to document the drug information requests and answers, which are then filed and maintained by the department. The first step in the evaluation of drug information services involved assessment of drug information request and documentation forms retrospectively for a period of eight months, from July 2010 to February 2011, for various parameters such as status of the enquirer, speciality of practice, mode of receipt of query, category of question, purpose of enquiry, timeframe to reply, performance of the drug information centre and references used.

The next step involved assessment of quality of services provided from the receivers' perspective on the basis of the feedback questionnaire circulated, which comprised of questions pertaining to awareness, utilization, ease of contact and quality of service

provided by the centre. Suggestions from the requestors on the drug information centre were also solicited. The filled questionnaires were collected on the same day from individual respondents.

RESULTS

The drug information centre received a total of 192 drug information queries during the study period. More number of queries was from the general medicine department (52.6%). Queries were also obtained from various other departments such as gynaecology (9.3%), paediatrics (4.1%), ophthalmology (0.5%), nephrology (3.1%), dermatology (2.08%), cardiology (4.6%), respiratory medicine (6.2%), hospital pharmacy (10.9%) and others (6.2%) as shown in Figure 1.

Majority of the questions were asked by the interns (44.7%) and physicians (21.3%). Pharmacists (13.5%), postgraduate students (8.8%), nurses (8.3%), residents (0.5%) and others (2.54%) also availed this service as indicated in Figure 2.
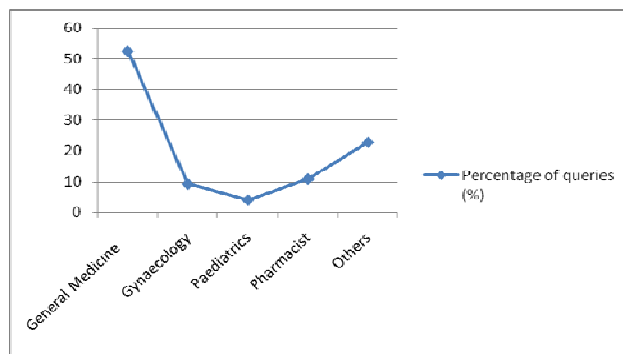

Fig. 1: Categorization of drug information queries based on speciality
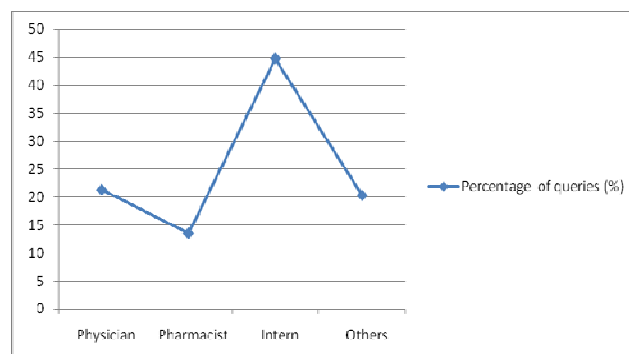

Fig. 2: Categorization of drug information queries based on status of the enquirer

Most of the queries were received by direct access (80.7%). Queries were also received through telephone (10.4%), email (3.1%) and during ward rounds (5.7%). Answers to the queries were most often needed immediately (49.4%) and in most cases was answered verbally (57.8%). In other cases, answers were required either on the same day (11.9%), next day (25.5%) or within the week (13.02%). In such cases, the answers were provided in a printed format (42.1%). Reply was also provided via email on the request of the enquirer. Categories of questions most frequently asked were about adverse drug reactions (35.9%) followed by dosage and indication (25.5%). Queries were also asked about drug therapy, interactions, generic name, administration, availability, pharmacodynamics, pharmacokinetics, drug profile and others as shown in Figure 3.
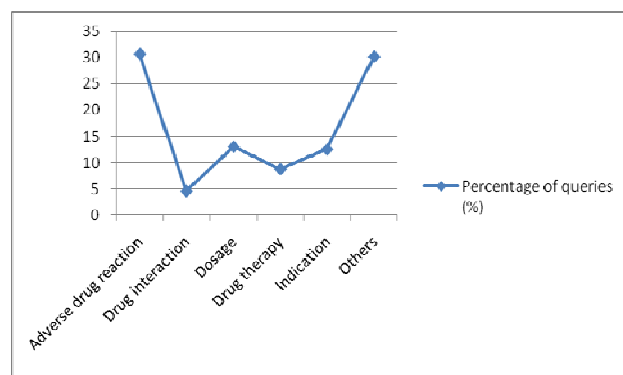

Fig. 3: Categorization of drug information queries based on type of query

Questions were mostly asked for the purpose of providing better patient care (48.4%) and to update knowledge (40.6%). Questions for educational purpose (10.9%) were asked to a lesser extent. Textbooks (37.5%), websites (35.4) and electronic databases (16.1%) were the most commonly used resources in answering queries. Medline (7.8%) and other resources (3.1%) were used to answer queries to a lesser extent as shown in Table 1. A total of 173 questionnaires (Annexure1) were distributed to the enquirers of various departments of the hospital for their feedback, out of which, all 173 (100%) responded. When asked about the performance of

the drug information centre, around 10.4% rated as excellent, 77.4% as very good, 10.9% as good and 1.04% as satisfactory. For a question on the awareness about the drug information centre, 68% of them responded positively and 61% utilized the services of the centre at least few times. Among the respondents who utilized the services 95.1% received the appropriate answer within the stipulated time. Some of the suggestions put forward by the enquirers to improve the performance of the drug information centre were 24 hour drug information service and need for awareness program in hospital.

Table 1: Categorization of the drug information queries

Categorization of queries	Number of queries	Percentage of queries (%)
Speciality		
General Medicine	101	52.6
Gynaecology	18	9.3
Paediatrics	08	4.1
Hospital Pharmacy	21	10.9
Others	44	22.9
Status of the enquirer		
Physician	41	21.3
Pharmacist	26	13.5
Intern	86	44.7
Others	39	20.3
Mode of request		
Direct access	155	80.7
During ward rounds	11	5.7
Telephone	20	10.4
Email	06	3.1
Purpose of query		
Better patient care	78	40.6
To update knowledge	93	48.4
Educational purpose	21	10.9
Time frame to reply		
Immediately	95	49.4
Same day	23	11.9
Next day	49	25.5
When time permits	25	13.02
Mode of reply		
Verbal	111	57.8
Printed	81	42.1
Type of query		
Adverse drug reaction	59	30.7
Drug interaction	09	4.6
Dosage	25	13.02
Drug therapy	17	8.8
Indication	24	12.5
Others	58	30.2
Performance of drug information centre		
Excellent	18	10.4
Very good	134	77.4
Good	19	10.9
Satisfactory	2	1.1
Poor	0	0
References		
Textbooks	72	37.5
Websites	68	35.4
Electronic database	31	16.1
Medline	15	7.8
Others	06	3.1

DISCUSSION

Among the 192 queries received by the drug information centre during the study period, a great percentage of the queries were from the general medicine department.

This could be due to the utilization of vast number of drugs in the department that necessitates the need for specific unbiased and timely information. The service was utilised by interns and physicians to a greater extent compared to pharmacists, postgraduates, nurses and other healthcare professionals. Majority

of the queries were asked for better patient care and hence required an immediate answer, leading to a great number of queries being answered verbally, which was similar to the results of a study reported by Beena G *et al*[9]. Most of the queries were received by direct access, which could be accounted by the easy accessibility of the centre and its service. Results of a study by Venkatraghavan S *et al* showed that the drug information queries most commonly asked were related to adverse drug reactions and dosage/administration and drug therapy[10]. The present study also indicated similar results. For providing answers to the queries received, most commonly used

resources were tertiary resources such as textbooks and websites followed by electronic databases. This might be because of ease of retrieval of information from textbooks and ease of use of computers and internet and availability of recent and relevant information from them. Pharmaceutical and medical areas are well represented on the internet with an enormous wealth of information[11]. In the survey conducted among the healthcare professionals, a great percent of the respondents were aware of the drug information service and about seventy percent of them used it several times.

Almost all of the enquirers received the appropriate answer within an acceptable time. A few suggestions put forward to improve the performance of the centre were provision of a 24 hour service and increasing the interaction between clinical pharmacists and other healthcare professionals. The overall performance of the drug information centre was found to be good and this shows that the centre is maintaining its quality of service.

CONCLUSION

Upon evaluation of the feedback questionnaires, it was found that the quality of the services provided by the centre was appreciated by majority of its users. However there is a need for greater awareness about the service in the hospital and encouragement to healthcare professionals to utilise the services for better patient care. On the whole, the study showed that drug information services provided by the department of Pharmacy Practice caters to the need of health care professionals towards rendering better patient care and in future more studies should be conducted to assess the improvement in the performance.

ACKNOWLEDGEMENT

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