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A study on assessment and evaluation of the drug information services (queries) in a tertiary care corporate hospital

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ABSTRACT

Methods

A retrospective study was carried out at the Pharmacy Practice department of the Holy Mary Institute of Technology and Science College of Pharmacy tie up with Sunshine Hospital and Research Centre Secunderabad, Telangana, India. It is a 750-bed tertiary care corporate hospital with 15 medical departments.

Results

The DIC received a total of 227 drug information queries during the study period. A great number of queries were from the department of General ward (79;34.80%), the majority of drug information were given to Physician (96;42.90%), the high number queries of drug information were given to Update knowledge (120;52.86%), high mode of requests were received from Direct face to face (120;52.86%), the high number of enquirers are from Male (148;65.19%), the more number of drug information queries category wise were given to Indications (55;24.22%), the majority of references were chosen from Websites are Drugs.com (61;26.87%).

Conclusion

The drug information services essential to create awareness of the services provided by the DIC among physicians, pharmacists, nurses and consumers, so that they should come forward to utilise these services.

INTRODUCTION

THE PROVISION OF accurate and timely drug information to health professionals in the course of providing patient care has been recognized as one of the mechanisms to promote effective drug therapy. [2] The purpose of the study was to determine the current drug information sources and perceived needs of physicians and pharmacists as a step in planning the drug information service. [3]

The main function of Drug Information Centres (DIC) is to provide written and / or verbal information or advice about any information related to drugs or its therapy to healthcare providers, organizations, committees, patients and to public in response to their request. Finally this will help better patient care by all means. WHO supports independent DIC's as a core component of national programmes to promote better healthcare to all. [8]

Information seeking behaviour of physicians is a subject of research in age of information explosion. Physicians seek information regarding various issues in medical care especially drug information. Physicians use colleagues and consultants help, drug compendia, bound journals or computer based resources for their reference. [4]

The drug information centre caters to the needs of all health care professionals working in various departments of the hospital. Drug information services can be accessed by telephone, internet, direct access, and also during ward rounds. Drug information request forms are also available on-line, which are to be duly filled and submitted for further processing of answer. The drug information queries are evaluated and answers are provided according to the modified systematic approach. The drug information requests and answers are documented and maintained in the drug information documentation files of the department. [9]

METHODS

A retrospective study was carried out at the Pharmacy Practice department of the Holy Mary Institute of Technology and Science College of Pharmacy tie up with Sunshine Hospital and Research Centre, Secunderabad, Telangana, India. It is a 750-bed tertiary care corporate hospital with 15 medical departments. Established in the year 2008, the Clinical Pharmacy Department is an integral part of the hospital which caters clinical pharmacy services to health care professionals and provides drug information as a part of its clinical pharmacy activities. The DIC is well equipped with well trained staffs and a library consisting of textbooks, national and international journals, computers and Internet facilities along with electronic databases such as Micromedex® (Thomson Reuters, USA). It provides various services like drug information, adverse drug reaction (ADR) reporting, patient counselling and drug interaction checker. The centre is managed by five well qualified and trained members. The drug information service is provided between 9 am to 5

pm on all days except on Sundays and government holidays.

Drug information service is provided through telephone calls, direct access and during ward round participation. Direct access is where any health care professional came directly to the DIC to ask for the information. In our institution, a DIC member who is also a clinical pharmacist routinely participates in ward rounds with doctors and frequently receives drug enquiries. The drug information queries are evaluated by the DIC staff according to the modified systematic approach. The modified systematic approach is used to handle drug information queries, which include: [1] secure demographics of requestor, [2] obtain background information, [3] determine and categorise ultimate question, [4] develop strategy and conduct search, [5] perform evaluation, analysis and synthesis, [6] formulate and provide response, and [7] conduct follow-up and documentation. The drug information queries provided are documented in a suitably designed drug information documentation form and maintained in a documentation file.

The drug information queries which were received during a period of 8 months i.e. from June 2016 to January 2017, were evaluated retrospectively, screened and analysed. Data were collected for parameters like professional status of the enquirer, specialty of practice, mode of receipt of query, purpose of the enquiry, category of the questions and references used. Finally, data was entered into Microsoft Excel for analysis.

RESULTS AND DISCUSSION

The DIC received a total of 227 drug information queries during the study period. A great number of queries were from the department of General ward (79;34.80%). Drug information queries were also obtained from various other departments such as Cardiology (46;20.26%), Orthopaedics (36;15.85%), Gastroenterology (22;9.69%), Neurology (15;6.60%), Pulmonology (13;5.72%), Nephrology (9;3.96%), Gynaecology (4;1.76%) and ENT (3;1.32%).

Drug information given to different departments

Departments	Number of queries, n (%)
Cardiology	46 (20.26%)
Gastroenterology	22 (9.69%)
Gynaecology	04 (1.76%)
Pulmonology	13 (5.72%)
Neurology	15 (6.60%)
General ward	79 (34.80%)
Nephrology	09 (3.96%)
ENT	03 (1.32%)
Orthopaedics	36 (15.85%)

The majority of drug information were given to Physician (96;42.90%), followed by Nurse (53;23.34%), Interns (15;6.60%), Surgeon (11;4.84%), Pharmacists (10;4.40%), Resident (2;0.88%), PG's (1;0.44%) and Others include Students, Patients, Professors and Patient attenders are (39;17.17%)

Information given to

Information given to	Number of queries, n(%)
Physician	96 (42.29%)
Surgeon	11 (4.84%)
Resident	02 (0.88%)
PG's	01 (0.44%)
Interns	15 (6.60%)
Pharmacists	10 (4.40%)
Nurse	53 (23.34%)
Others:	
Student	29 (12.77%)
Patient	05 (2.20%)
Professor	02 (0.88%)
Patient attender	03 (1.32%)

The high number queries of drug information were given to Update knowledge (120;52.86%), followed by better patient care (49;21.58%) and Both (58;25.55%).

Information given to

Information given for	Number of queries n (%)
Update knowledge	120 (52.86%)
Better patient care	49 (21.58%)
Both	58 (25.55%)

High mode of requests were received from Direct face to face (120;52.86%) and followed by ward round (104;45.81%) and through the Phone (3;1.32%).

Mode of request

Mode of request	Number of queries n (%)
Direct	120 (52.86%)
Ward rounds	104 (45.81%)
Phone	03 (1.32%)

The more number of answers for the drug information queries provided Immediately (137;60.35%) followed by within 2-4 hours (82;36.12%), within 1-2 days (6;2.64%) and others (2;0.88%).

Answer provided	
Answer given	Number of queries, n(%)
Immediately	137 (60.35%)
Within 2-4 hours	82 (36.12%)
Within 1-2 days	06 (2.64%)
Others	02 (0.88%)

The high number of enquirers are from Male (148;65.19%) and followed by Female (79;34.80%).

Gender of enquirer	
Gender	Number of queries n (%)
Male	148 (65.19%)
Female	79 (34.80%)

The more number of drug information queries category wise were given to Indications (55;24.22%) followed by Indications and adverse drug reactions (32;14.09%), Adverse drug reactions (29;12.77%), Drug therapy (26;11.45%), Dosage (20;8.81%), Interactions (19;8.37%), Contraindications (14;6.16%), Cost availability (6;2.64%), Identification (1;0.44%) and Others (25;11%).

Category	
Category	Number of queries
Indications	55 (24.22%)
Drug therapy	26 (11.45%)
Contraindications	14 (6.16%)
Identification	01 (0.44%)
Cost / Availability	06 (2.64%)
Indications & Adverse drug reactions	32 (14.09%)
Adverse drug reactions	29 (12.77%)
Dosage	20 (8.81%)
Interactions	19 (8.37%)
Others:	
Mechanism of action	07 (3.08%)
Complications	05 (2.20%)
Generic name	03 (1.32%)
Efficacy	04 (1.76%)
Pharmacokinetics & Pharmacodynamics	06 (2.64%)

The majority of references were chosen from Websites are Drugs.com (61;26.87%), Medscape.com (34;14.97%), Medclick.com (12;5.28%), Pocket pill (10;4.40%), Mayo clinic.org (5;2.20%), from text books K.D. Tripathi (15;6.60%), Dipiro (5;2.20%), Scotley (5;2.20%), from Micromedex (5;2.20%) and from both text books and websites (75;33.03%).

References

References	Frequency of usage
Micromedex	05 (2.20%)
Text books	
K.D. Tripathi	15 (6.60%)
Dipiro	05 (2.20%)
Scotley	05 (2.20%)
Website:	
Drugs.com	61 (26.87%)
Pocket pill	10 (4.40%)
Medclick.com	12 (5.28%)
Medscape.com	34 (14.97%)
Mayo clinic.org	05 (2.20%)
Both text books & web sites	75 (33.03%)

CONCLUSION

The Pharmacy Practice department of the Holy Mary Institute of Technology and Science College of Pharmacy tie up with Sunshine Hospital and Research Centre caters to the need of health care

professionals by handling drug information queries. It is essential to create awareness of the services provided by the DIC among physicians, pharmacists, nurses and consumers, so that they should come forward to utilise these services.

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