

Assessment of Knowledge about Drug Information Center among Health Professionals

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ABSTRACT

Introduction: Drug Information Centre (DIC) provides information to physicians, pharmacist, nurses and other allied health care professionals. The Concept of DIC started in India by the year of 1997. 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.

Objective: To assess the Knowledge about Drug Information Center among Health Professionals.

Methodology: A cross-sectional study was conducted in Belagavi city. Data was collected from a hospital in Belagavi, involving 400 Health Professionals. Pretested structured questionnaire was used to collect the data. Written informed consent was taken prior to data collection. Data was analyzed using descriptive and inferential statistics.

Results: 36% participants had average knowledge, 39.3% participants had poor knowledge and 24.7% had good knowledge about Drug Information Centre.

Conclusion: It was concluded that over all knowledge of health professional in study area on DIC was poor.

Keywords: Knowledge; DIC: Drug Information Centre

INTRODUCTION

Drug information is the provision of written or verbal information about drugs and drug therapy in response to request from other healthcare providing organizations, healthcare providers, patients and public community. Drug information center provides in-depth, unbiased source of crucial drug information to meet the needs of practicing physicians, clinical pharmacists and other health care professionals [1-4]. According to the International Pharmacist Federation (FIP), basic functions of these centers are drug evaluation, therapeutic counselling, pharmaceutical advice, and education, and training, dissemination of information, research, pharmacovigilance and toxicology. Their information must be accurate, timely and should respond to patient oriented drug problems [1,2,5].

History

University of Kentucky Medical Centre opened first DIC in the year of 1962 [1,6,7]. Later in 1973 the number of DIC's increased to 54 in USA. In the year of 2016-2018 in USA have more than 120 full-fledged pharmacist-operated DICs. The Concept of DIC in India started in JSS Otacamund, Tamilnadu, Thiruvananthapuram

Medical College, Kerala, Karnataka State Pharmacy Council (KSPC) and Maharashtra State Pharmacy Council. In India - World Health Organization in collaboration with KSPC supported establishment of 5 DIC's. These centers were opened in Assam (Dibrugarh), Chattisgarh (Raipur), Goa (Panaji), Haryana (Sirsa), and Rajasthan (Jaipur) [4].

There are over 15 Drug information counters providing clinical pharmacy services in India, and they can be classified as independent. General drug information is mainly gotten from medical journals, medical representatives of drug manufacturers and marketers, reference books and internets, which make information retrieval and processing cumbersome and time consuming forever inquisitive and busy health providers in India. Computerized drug information is not even readily available in tertiary care facilities. The purpose of this study stemmed from the above issues, to assess the knowledge of health professionals towards provision of drug information services [4,6].

Objective

To assess the knowledge of health professionals towards Drug Information Centres.

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RESEARCH METHODOLOGY

Study design

This is a cross sectional study.

Study population and study area

Doctors, PG Medical students, Interns, Nurses, Pharmacists and PG Pharmacy students of a hospital in Belagavi.

Sample Size

A total of 400 subjects in total.

Study period

August 2016 to February 2018.

Inclusion criteria

All Health care professionals (Doctors, PG Medical students, Nurses, Pharmacists and PG Pharmacy student).

Exclusion criteria

- Doctors who were not available on 3 consecutive visits.
- Health care professionals who were not willing to give informed consent.

Ethical clearance

This is obtained from JNMC Institutional Ethical Committee.

Data collection and analysis procedure

Permission was obtained from Medical Director and Chief Executive of Tertiary care hospital in Belagavi City. Ethical Clearance was obtained from the Institution of J.N. Medical College Belagavi, before start of the study. Informed Consent was obtained from 400 Healthcare Professionals and then Pre tested

pre Designed Questionnaire was administered to 400 randomly selected Healthcare Professionals. Responses were either collected on the same day, if it was completed or on the next visit.

Data was analyzed using SPSS Version-20.0 and expressed as percentage. Chi-square test and ANOVA - test was used to find the Association between variables.

RESULTS

This cross sectional study was conducted for a period of 6 months from August to 31st January 2018 among Healthcare professionals (Doctors, PG Medical students, Nurses, Pharmacists and PG Pharmacy student) in a hospital in Belagavi. Pre tested pre Designed Questionnaire was administered to 400 randomly selected Healthcare Professionals.

Socio-demographic profile

Out of 400 health professionals who participated in the study, majority 299 (74.75%) were females and remaining 101 (25.25%) are male participants (Table 1).

Majority 138 (34.5%) of the study participants had completed General Nursing Midwifery (GNM), 70 (17.5%) participants were completed Post-graduation in medicine, 67 (16.75%) participants were completed MBBS, 39 (9.75%) participants were completed BSc Nursing, 72 (18%) participants were doing M. Pharmacy, 11 (2.75%) participants were completed D. Pharmacy and only 3 (0.75%) participants were completed ANM. Majority 175 (43.75%) of the study participants were working as a Nursing staff, 43 (10.75%) were Doctors, 12 (3%) were Pharmacists, 43 (10.75%) Participants were doing Post-graduation in medicine, 51 (12.75%) participants were Medical Interns, 5 (1.25%) participants were Nursing Interns and remaining 71 (17.75%) were pursuing M. Pharmacy.

Knowledge of health professionals towards DIC

In this study, majority 197 (49.3%) of the study participants gave

Table 1: Socio-demographic characteristic of study participants.

Particulars	Characteristics	No. of Participants	Percentage (%)
Gender	Male	101	25.25
	Female	299	74.75
Qualification	PG medical	70	17.5
	MBBS	67	16.75
	BSc. Nursing	39	9.75
	GNM	138	34.5
	ANM	3	0.75
	M Pharmacy	72	18
	D Pharmacy	11	2.75
	Doctor	43	10.75
Designation	Nurse	175	43.75
	Pharmacist	12	3
	PG Medical student	43	10.75
	Medical Interns	51	12.75
	Nursing Interns	5	1.25
	M. Pharmacy Student	71	17.75
	Total	400	100

correct answer about DIC, 111 (27.8%) participants do not know about DIC and remaining study participants did not give correct answers among which, 29 (7.3%) answered that DIC was dispensing of drugs, 36 (9%) participants answered DIC as developer and manufacturer of drugs and 27 (6.8%) participants believed DIC to be ADR report centre.

Table 2 shows that few study participants 153 (38.3%) gave correct answer about function of DIC, 111 (27.8%) participants were not aware about DIC functions and remaining participants had given wrong responses, among which, 28 (7%) answered that function of DIC was bulk drug preparation, 95 (23.8%) participants believed function of DIC to be ADR reporting, 13 (3.3%) were answered that DIC was the place which dispense the medicine.

In the current study, more than half of the health professionals 245 (61.3%) had given right answer that patient specific drug information is a part of DIC activity, rest of the participants had given wrong answers.

In this study, majority 227 (56.8%) of the participants answered that their state have Drug Information Centre, 95 (23.8%) participants reported that there is no DI services in the Karnataka state, remaining participants 78 (19.5%) were not aware about availability of DI services in the state.

In the present study, majority 242 (60.5%) of the study participants reported that their Hospital have Drug Information Centre, 30 (7.5%) participants reported that there is no DI services in the hospital, remaining 128 (32%) participants were not aware that whether their hospital have DIC service or not.

In the current study, nearly half 206 (51.5%) of the study participants gave correct answer that Drug Information Centre provide good quality and unbiased information. Rest of the participants did not give correct answer among which 115 (28.8%) answered that journals and textbooks give unbiased information and 79 (19.7%) participants answered Internet and Web applications were the best resource for unbiased drug information.

Table 3 shows, out of 400, majority 144 (36.0%) of the participants had average knowledge about drug information centre. While 157 (39.3%) of the participants had bad knowledge regarding DIC. Only 99 (24.7%) of the participants had good knowledge about DIC.

DISCUSSION

Out of 400 health professionals who participated in the study, majority 299 (74.75%) were females and remaining 101 (25.25%) are male participants. A study conducted in Enugu state reported that 61.2% of study participants were males [8,9].

Majority 138 (34.5%) of the study participants had completed General Nursing Midwifery (GNM), 70 (17.5%) participants completed Post-graduation in medicine, 67 (16.75%) participants completed MBBS, 39 (9.75%) participants completed BSc Nursing, 72 (18%) participants were doing M. Pharmacy, 11 (2.75%) participants completed D. Pharmacy and only 3 (0.75%) participants completed ANM.

Knowledge of health professionals towards DIC

In this study, majority 197 (49.3%) of the study participants gave correct answer about DIC, 111 (27.8%) participants do not know about DIC and remaining study participants did not give correct answers. No past study has assessed the knowledge of study participants about DIC.

In the present study, few study participants 153 (38.3%) gave correct answer about function of DIC, 111 (27.8%) participants were not aware about DIC functions and remaining participants had given wrong responses.

In the current study, more than half of the health professionals 245 (61.3%) had given right answer that patient specific drug information is a part of DIC activity, rest of the participants had given wrong answers.

Table 2: Distribution of study participants based on knowledge regarding DIC definition.

S. No	Particulars	Characteristics	Study participants (n)	Percentage (%)
1.	What is DIC	Place where medicines are compounded and dispensed	29	7.25
		Where we discover, develop and manufacturing the drugs and medical substances	36	9
		Place which providing clinically relevant information on any aspect of drug	197	49.25
		Place where we are going to report adverse drug reactions.	27	6.75
		Don't know	111	27.75
2.	Function of DIC	Bulk drug preparation	28	7
		Provision of toxicology information	153	38.25
		Adverse drug reporting	95	23.75
		Dispensing of medicine	13	3.25
		Don't know	111	27.75

Table 3: Participants level of knowledge towards Drug Information Centre.

S. No	Overall knowledge	Study participants (n)	Percentage (%)
1.	Good knowledge	99	24.7
2.	Average knowledge	144	36
3.	Bad knowledge	157	39.3
	Total	400	100.0

In this study, majority 227 (56.8%) of the participants answered that their state have Drug Information Centre, 95 (23.8%) participants reported that there is no DI services in the Karnataka state, remaining participants 78 (19.5%) were not aware about availability of DI services in the state.

In the present study, majority 242 (60.5%) of the study participants reported that their Hospital have Drug Information Centre, 30 (7.5%) participants reported that there is no DI services in the hospital, remaining 128 (32%) participants were not aware that whether their hospital have DIC service or not.

CONCLUSION

In the current study, nearly half 206 (51.5%) of the study participants gave correct answer that Drug Information Centre provide good quality and unbiased information. Rest of the participants did not give correct answer among which 115 (28.8%) answered that journals and textbooks give unbiased information and 79 (19.7%) participants answered Internet and Web applications were the best resource for unbiased drug information. This is the only study conducted on knowledge of study participants about Drug Information services available. Overall knowledge on DIC was also reported. Based on the findings of this study, it was concluded that over all knowledge of health professional in study area on Drug information centre was poor.

LIMITATIONS

This study confined to only one hospital under Belagavi city due to limited time and resource available.

RECOMMENDATIONS

- We recommend that awareness about the importance of

Drug information centre should be enhanced among health care professionals.

- In hospitals, Drug information centre shall be established in each and every department.

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