

Drug Information Centre (DIC)-An Indian Scenario

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Abstract

Drug information centre refer to facility specially set aside for, and specializing in the provision of drug information & related issues. The purpose of drug information centre is to provide authentic individualized, accurate, relevant and unbiased drug information to the consumers and healthcare professionals regarding medication related inquiries to the nation for health care & drug safety aspects by answering their call regarding the all critical problems on dug information, their uses and their side effects. Apart from that the centre also provides in-depth, impartial source of crucial drug information to meet the needs of the practicing physicians, pharmacists and other health care professionals to safeguard the health, financial and legal interests of the patient & to broaden the pharmacist role visible in the society & community. Number of drug information centers are being opened with the prospective of safe health care & drug safety which will surely serve the community & enhanced the role of community pharmacist. Information present in the current paper will not only enlighten the role of drug information centre but also focused on the rational use of drug.

Keywords: Drug information, health care

INTRODUCTION

Drug information is the provision of a written and/ or verbal information about drugs and drug therapy in response to a request from other healthcare provider, organizations, committees, patients, public or community.

Drug information service refers the activities undertaken by pharmacists in providing information to optimized drug use. Drug information centre provides in-depth, unbiased source of crucial drug information to meet the needs of the practicing physicians, pharmacists and other health care professionals. In the country like India where the national polices are industry focused rather than health focused, it became crucial to enlighten the role of drug information centre to spread the awareness about drug information services & rational use of drug.

Global scenario

In 1962, the first drug information center was opened at the University of Kentucky Medical Center and was intended to be utilized as a source of selected, comprehensive drug information for staff physicians and dentists to allow them to evaluate and compare drugs besides

catering to the information needs of nursing staff. The staffs of the drug information center were expected to take an active role in the education of health professionals within the institution. In 1973, the first formal survey identified 54 drug information centers in the USA. According to a report published in 1995, there are about 120 full-fledged pharmacist-operated drug information centers in the United States, which accept a broad scope of requests from health care professionals¹.

Indian scenario

Recognizing the need to provide organized drug information to health care professionals as well as consumers, the WHO India Country Office in collaboration with the Karnataka State Pharmacy Council (KSPC) is supporting the establishment of 5 drug information centres. These centers have been established in Haryana (Sirsa), Chhattisgarh (Raipur), Rajasthan (Jaipur), Assam (Dibrugarh), and Goa (Panaji)².

The Karnataka State Pharmacy Council established its Drug Information Centre (DIC) in August 1997 to disseminate unbiased drug information to healthcare professionals. In India, this was the first independent DIC started by Karnataka State Pharmacy Council to

provide unbiased drug information to healthcare professionals. The centre is registered with IRDIS, an International Register of Drug Information Services²
Drug Information Services²

The centre provides in-depth, unbiased source of crucial drug information to meet the needs of the practicing physicians, pharmacists and other health care professionals in following areas:

Adverse Drug Reactions - Suspected adverse drug reactions are assessed. Specific information regarding predisposing factors, relationship to dose or duration of therapy, incidence, clinical manifestations, and management are provided.

Evaluation of Drug Reactions - The significance of a drug-drug, drug-food, drug-disease or drug laboratory test interaction is evaluated. The data of drug-drug, drug-food and drug-disease obtained from the hospitals and medical institutes.

Foreign Drug Identification - The DIC attempts to identify drugs in other countries. When possible the DIC provides product composition and US equivalent. An assessment of the efficacy and potential hazards of the product are also given. Data for foreign can be obtained

from FDA and other agencies.

Drug Information Centre works towards in promotion of safe, effective, rational and economic use of drugs by the health professionals and patients.

Structure of Drug Information Centre

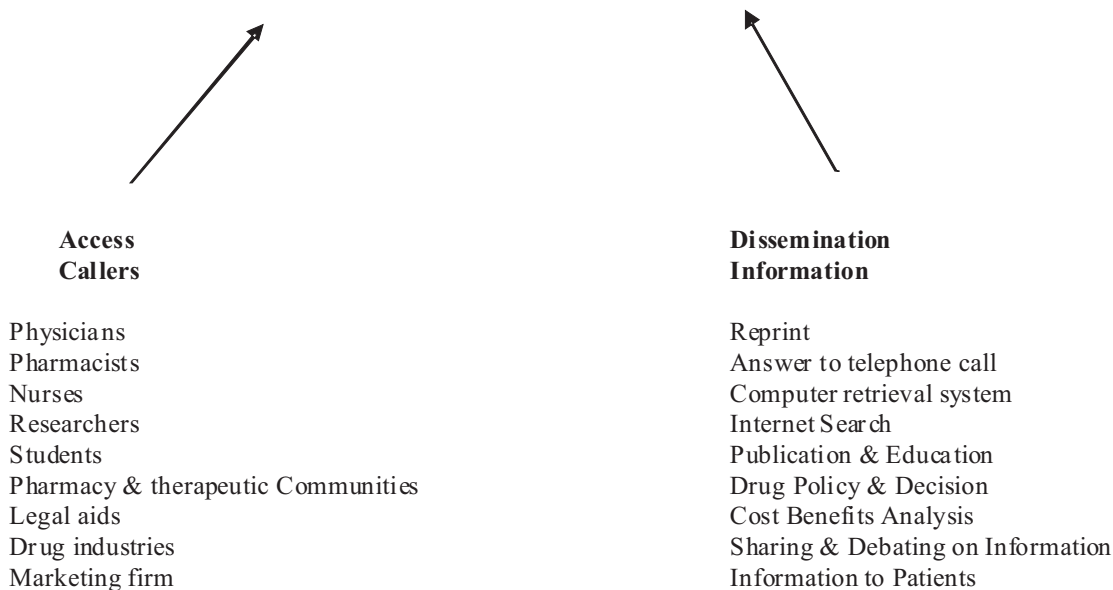
Framework of drug information centre is a crucial task which will determine the efficacy of work & service.

Setup & Equipment³

- The centre should equipped with computer terminals with printer & printed material (current periodical, bound journal volume, references texts) and has access to Medline, the internet and various other online drug and medical references.
- The centre should maintain subscription to nationally recognized journal and text of Pharmacy and Medline.
- Centre should have direct access to computerized on line data searching CD ROM database and access to the world wide web (www) should be available.(Table1)

Table 1 The Framework of Drug Information Centre¹

Books, Journals Formularies	Computer Database	World Wide Web (www)	Poison Centre
Drug Information Service			



Staff, Student & Scheduling

DIC requires one full time director, one full time resident and six pharmacy students.

The state pharmacy council (Department of Pharmacy) provides the secretarial support. This centre also serves as training site for undergraduate & post graduate student of pharmacy.

Evaluation of the performance of DIC^{1,3,6}

The evaluation of the drug centre at university of Kentucky medical center revealed that there was a steady increase number of call from the year of 1994 to 1997. The average and range of calls per month form January 1994 to December 1997 also documented a steady increase form >350 (1994) (mean 421.7, range 351-548) to >400(1995) (mean 467.4, range 416-604) to >520(1996) (mean 608.3, range 523-704) and to >

530(1997) (mean 654.0, range 531-773), respectively.

In august 1997, the Karnataka state pharmacy council established its drug information centre. The centre received 1002 calls for the period from august 1997 to July 2000. the queries from doctors were only 132 (13.2%). rest the all queries were from patients, pharmacists and drug regulatory authorities. after the awareness program the total numbers of queries received fro the period of August 2000 to January 2002 was 1592 and 658 (41.3) were from doctors. Rest 59% of the enquiries was from patient, pharmacist and drug regulatory authorities. The majorities of queries (75%) were received from Bangalore. Response time was recorded and about 80% of enquiries were answered within 30 minutes.

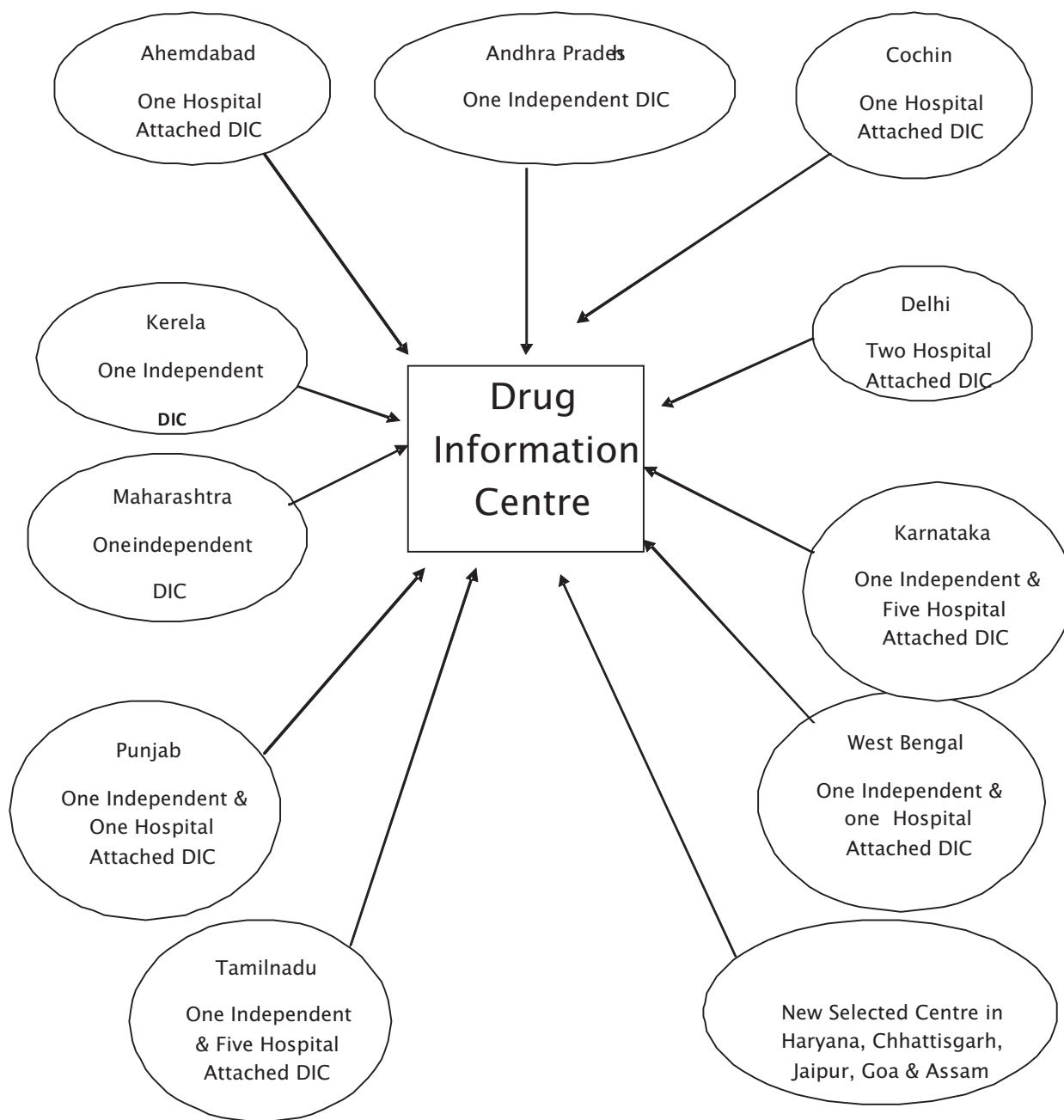
Table 2. List of the Indian Drug Centre & Clinical Pharmacy Department.²

Independent drug information centre	Hospital attached drug information centre with clinical pharmacy service
<ul style="list-style-type: none"> • CDMU Documentation Centre, Calcutta 	<ul style="list-style-type: none"> • Christian Medical College Hospital, Vellore Talimnadu • Drug information centre(KSPC), Bowring & Lady Curzon Hospital, Bangalore, Karnataka
<ul style="list-style-type: none"> • Drug information centre, Maharashtra State Pharmacy council, Maharashtra 	<ul style="list-style-type: none"> • Department of Pharmacy Practice, Chidambaram, Tamilnadu • Department of Pharmacy Practice, National Institute of Pharmaceutical Education & Research (NIPER), Chandigarh • Jawaharlal Nehru Medical Hospital, Belguam, Karnataka
<ul style="list-style-type: none"> • Andra Pradesh State Pharmacy Council, Andra Pradesh 	<ul style="list-style-type: none"> • JSS, Mysore, Karnataka • JSS, Ooty, Tamilnadu • N.R.S Medical Hospital, Calcutta
<ul style="list-style-type: none"> • Karnataka State Pharmacy Council, Karnataka 	<ul style="list-style-type: none"> • Kempagowda Institute Medical Sciences (KIMS), Bangalore Karnataka • Kasturba medical college, Manipal, Kamataka • Poison Information Centre, AIIMS, Delhi
<ul style="list-style-type: none"> • JSS, Ooty 	<ul style="list-style-type: none"> • Poison Information Centre, National Institute of Occupational Health, Ahemdabad • Department of toxicology, Amrita Institute Medical Science & Research, Cochin
<ul style="list-style-type: none"> • Tamilnadu Pharma Information Centre, Chennai 	<ul style="list-style-type: none"> • Toxicology & IMCU Unit, Government General Hospital, Chennai • Sri Ramachandra hospital, Porur, Chennai • Sri Ramachandra Mission Hospital, Coimbotore, Tamilnadu • Trivandrum medical college, Trivandrum, Kerela

Table 3. State-wise List of Contact Address of Drug Information Centres

Name of the State	Contact Address of Drug Information Centre
Andhrapradesh	Andhra Pradesh Pharmacy Council , M J J Road Nampally Hyderabad, Ap 500001, Phone: 91 - 40-3204525 Or 91 - 40-3200125 Email: infoappc@yahoo.com
Assam	Institute of Pharmacy Assam Medical College, Dibrugarh – 786 002, ASSAM, INDIA PH: 0373-2300903; 2301666 Fax: 2300080 E-mail: dicassam@gmail.com, dic_ame@yahoo.com
Chhattisgarh	Institute of Pharmacy, Chattisgarh State Pharmacy Council Quarter No. –77, Sector No. – 3, Geetanjali Nagar, RAIPUR (ChhattisgarhState), Tel: (0771) 2444591 Fax: (0771) 2444591, E-mail: dicraipur@gmail.com
Dehli	Poison Information Centre, AIIMS, Delhi Phone Numbers: 26589391, 26593677 E.mail: npicaiims@hotmail.com
Goa	Hindu Pharmacy Cunha Rivara Road, P.B. No. 149, Panaji, Goa – 403001 PH: 0832-2223176; 2432903 Fax – 22237776 E-mail: dicgoa@gmail.com & dicpanaji@yahoo.com
Gujarat	Poisons Information Centre, National Institute of Occupational Health, Meghani Nagar AHMEDABAD 380 016, e -mail: dewan@ad1.vsnl.net.in Emergency telephone: +91 79 562 1400; Fax: +91 79 286 6630
Haryana,	Lord Shiva College of Pharmacy Near Civil Hospita l, Sirsa-125055, HARYANA, Tel: (01666) 240057 Fax: (01666) 242695 E-mail: dicharyana@gmail.com, diesirsa@yahoo.co.in
Karnataka	Karnataka State Pharmacy Council, Drug Information Centre, 514/E, I Main, II Stage, Vijayanagar Club Road, Bangalore -560 040 TEL: 23383142; 23404000 FAX: 080 -23202345 E-mail: kspedic@blr.vsnl.net.in; kspedic@gmail.com
Kerela	Amrita Institute of Medical Sciences and Research Centre Amrita Lane, Elamakkara Post, Kochi, Kerala 682 026 Phone:0091 (0) 484 280 1234, 280 4321, 400 1234, Fax:0091 (0) 484 280 2020, E-mail: aimsinternational@aims.amrita.edu
Maharashtra	Drug Information Centre, Maharashtra State Pharmacy Council. E.S.I.S. Hospital Compound, L.B.S. Marg, Mulund (W), Mumbai - 400 080., Maha rashtra, Phone : +91 -22-25930607, 91 -2232678098, FAX: +91 -22-25684418, E Mail : diemspc@gmail.com
Punjab	Department of Pharmacy Practice, National Institute of Pharmaceutical Education & Research (NIPER), Chandighar, Sector 67, S.A.S. Nagar, Punjab (INDIA) - 160 062, Phone: +91 -172-2214682-87, Fax: +91 -172-2214692
Rajasthan	Rajasthan Pharmacy Council Govt. Dispensary Campus Sardar Patel Marg, Jaipur – 302006 PH: 0141 -2228600 Fax: 2223041 E-mail: dicrspc@gmail.com
Tamilnadu	Sri Ramachandra Hospital, No.1, Ramachandra Nagar, Porur, Chennai – 600 116, Phone: +91 44 2476 8403, Fax: +91 44 2476 7008
West Bengal	NRS Medical College & Hospital, #138 AJC Bose Road, Sealdah, Entally, Kolkata -700014, Landmark: Opposite Prachi Cinema, Phone: 033 -22274001

Figure 1 Network of Drug Information Centre (DIC) in India

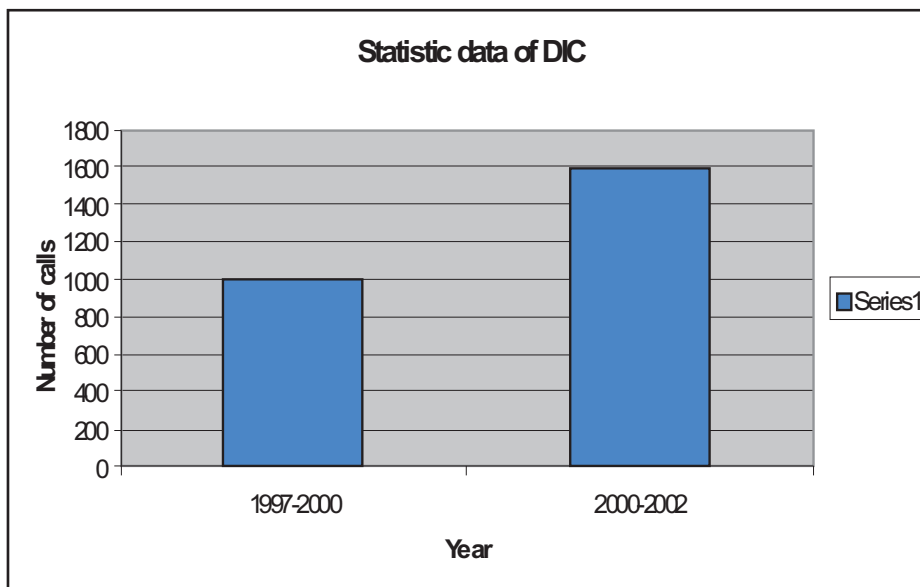


Evaluation of the performance of DIC^{1,3,6}

The evaluation of the drug centre at university of Kentucky medical center revealed that there was a steady increase number of call from the year of 1994 to 1997. The average and range of calls per month form January 1994 to December 1997 also documented a steady increase form >350 (1994) (mean 421.7, range 351-548) to >400(1995) (mean 467.4, range 416-604) to >520(1996) (mean 608.3, range 523-704) and to > 530(1997) (mean 654.0, range 531-773), respectively.

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Figure 2. Statistical Evaluation Data of DIC in Karnataka



enquiries was from patient, pharmacist and drug regulatory authorities. The majorities of queries (75%) were received from Bangalore. Response time was recorded and about 80% of enquiries were answered within 30 minutes.

Competency of Drug Information Centre

Competent evaluation of drug information service and the quality framework provided by DIC is very important. The development of DIC is the beginning of the clinical pharmacy concept to provide adequate information for those who consume, prescribe, dispense & administer drug. Factors like information technology changes, sophistication of drug therapy, changing philosophies of pharmacy practices, the education of pharmacist in the field of drug information and the more knowledgeable patient are very influential in the evolution of pharmacist's role in drug information provider. To maintain the competency in DIC time to time assessment program is mandatory.

Ethical Facet

At present, drug information centres are confronted with questions from public that pose ethical dilemmas. The truthful answer to drug information question may compete with values such as privacy, interference in the patient-physician relationship and social responsibilities⁴.

New drug like sildenafil used in male erectile dysfunction may cause social problem such as abuse by healthy men and indiscriminate prescription by the primary care physicians. For ethical aspect it becomes

very important for drug information centre to frame guidelines on ethical issues.

Quality of information

Providing quality information is one of the crucial task of DIC. In order to maintain the flow of quality information the staff should be well trained & comprehensive about the new trends in drug discoveries. It is also highlighted that information is not knowledge and knowledge comes from the interpretation of information⁷.

Conclusion

Drug Information Centres are regarded as a gateway of drug information. The future of drug information centres in India lies in the quality of service, credibility among users and the evaluation of its progress. The future of clinical pharmacy and drug information centre is very bright so the government, private hospitals and regulatory bodies should come forward to establish more number of DIC in future time so that clinical pharmacist and drug information centre can work to locate the quality in community.

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