

DRUG INFORMATION SERVICES-AN EMERGING PRACTICE IN INDIA— A REVIEW

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Summary

In India the provision of drug information is a new emerging concept, and this article focuses on the development of drug information and clinical pharmacy services since 1992 in various parts of India. At present there are 17 to 18 drug information centers providing clinical pharmacy in India. Few information centers are independent, not attached to hospitals. They provide drug information to many hospitals in their area. When compare to number of hospitals and the population to be served in India, the numbers of information centers are far below what is needed. More hospitals should implement this form of clinical pharmacy practice to promoter outcome among patients. This review article shall focus on overview of Indian drug information centers. The National Human Rights Commission (NHRC) recommended to the Government of India for setting up computerized drug information center in large hospitals for the benefit of all concerned. Core competence and Co- operation among all health care professionals in a health care facility is needed to promote rational drug use

Introduction (Indian scenario)

India is country with significant drug use problems. Irrational and unnecessary prescribing is common and antibiotic resistance is widespread. These problems are as a result of variety of economic, social, political, occupational, medical and regulatory factors. The most important of these includes:

- The lack of awareness about the drug information centre
- The availability of 80,000 plus formulation
- The national drug policy is industry focused rather than health focused
- The lack of awareness of principles of rational drug use of drugs amongst doctors and pharmacists The widespread sale of prescription drug over the counter and
- A high level illiteracy, poverty among patients.

The term 'drug information' developed in the early sixties. In 1962, the first drug information was opened at the University of Kentucky Medical Center, in which an area separated from the pharmacy was dedicated in providing drug information.

NEED FOR DRUG INFORMATION:

In the past, the smaller range of available drugs limited need for drug information but now new drugs and new modalities of the treatment being introduced. There are more than 20,000 biomedical journals available and more than 6,000 journal published every day. It is a Herculean task for health care professional to keep themselves up-to-date with available drug information. In addition, most developing countries like India suffer from lack of adequate drug information due to limited availability of current literature and also poor documentation, poor funding available. The lack of unbiased drug information service in India poses problem and doctors in general get their information from medical representative who obviously are partially biased towards their product. In India, low income levels populations, the multiple health care systems and lack of awareness about the risks and benefits of drug therapy make good clinical pharmacy practice all the more relevant and important. Due to increasing population and limited number of doctors, their practices are loaded and creates too much of stress. As a result, the quality suffers. There is potential of clinical pharmacist to fill this gap.

THE STARTS:-

The Drug Information Center Karnataka State Pharmacy Council initiated an independent drug information center on 1997. This center provides unbiased drug information to more than 30-40 hospitals and general practitioners of Bangalore city and some hospitals in Karnataka. The center also monitors ADRs. In coordination with Delhi society for promotion of rational use of drugs (DSPRUD which is supported by WHO India) the Karnataka center produced standard treatment guideline and an essential drug list for Karnataka.

LIST OF INDIAN DRUG INFORMATION CENTER AND CLINICAL PHARMACY DEPARTMENT

Independent drug information	Hospital attached drug information center with clinical pharmacy
<ul style="list-style-type: none"> •CDMU Documentation Center, Calcutta • Drug Information Center, Maharashtra State Pharmacy Council, Maharashtra • Andhra Pradesh State Pharmacy Council, Andhra Pradesh • Karnataka State Pharmacy Council (KSPC), Bangalore, Karnataka • JSS, Ooty, • Pharma Information Center, Tamilnadu, Chennai 	<ul style="list-style-type: none"> •Christian Medical College Hospital Vellore, Tamilnadu • Drug Information Center, (KSPC), Victoria Hospital, Bangalore, Karnataka • Drug Information Center, (KSPC), Bowring & Lady Curzon Hospital, Bangalore, Karnataka • Department of pharmacy practice, Chidambaram, Tamilnadu • Department of Pharmacy Practice, National institute of Pharmaceutical Education and Research (NIPER), Chandigarh • Jawaharlal Nehru Medical College Hospital (JNMC), Belgaum, Karnataka • JSS, Mysore, Karnataka • JSS, Ooty, Tamilnadu • N.R.S. Medical College & Hospital, Calcutta • Kempagowda Institute of Medical Sciences (KIMS), Bangalore, Karnataka • Kasturba Medical College (KMC), Manipal, Karnataka • Poison Information Center, All India Institute

	<p>of Medical Sciences (AIIMS), Delhi</p> <ul style="list-style-type: none">• Poisons Information Centre, National Institute of Occupational Health, Ahmedabad• Dept of Toxicology, (Incl. Poison Information & Laboratory Services) Amrita Institute of Medical Sciences & Research, Cochin• Toxicology & IMCU Unit, Government General Hospital, Chennai• Sri Ramachandra Hospital, Porur, Chennai• Sri Ramakrishna Mission Hospital, Coimbatore, TamilNadu• Trivandrum Medical College, Trivandrum, Kerala
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- The Poison information center at All India Institute of Medical Sciences (AIIMS) provides poison information round the clock to hospitals of Delhi and other parts of India. The Institute monitors adverse drugs reaction and reports to Uppsala monitoring center in Swden. Although it is dedicated Poison information center for the country, other drug information center also provide some amount of Poison information to their hospitals.
- India joined the WHO ADR monitoring in 1998. More of the centers mentioned in this article monitor ADR in their hospital. Centers at J.S.S. and AIIMS sent their reports to Uppsala. Few other centers such as NAZANS at Hyderabad center are or the center at KSPC, Bangalore retains their reports with them.

MODUS OPRANDI AND RESOURCES

Most of centers operated by pharmacists use IDIS (Iowa Drug Information Services), Medline and Drugdex and from Micro-medex. In independent centres micromedex was found to be very useful in provision of information.

The resources available are

1. Primary resources:

Primary resources consists of research studies or clinical experience which has not been previously published, they include the results of clinical events such as adverse drug reactions or unexpected clinical outcomes. Examples of journals that publish primary

- Literatures include Annals of internal medicine, clinical pharmacology and therapeutics etc. (controlled clinical trials, letters to the editor)

2. Secondary resources:

Secondary resources provide an overview of previously published work include indexing and abstracting services of the primary literature such as IOWA drug information service (IDIS), Medline, International Pharmaceutical Abstracts (IPA), Clinalert and online resources include Pubmed from the National Library of Medicine etc

3. Tertiary sources:

These consist of general literature including textbooks and references like American Hospital Formulary Services drug information (AHFS), Martindale the Complete Drug reference, Meyler's side effects of drugs Remington's Pharmaceutical Sciences and United States Pharmacopoeia Drug information (USPDI). Tertiary source represents composite, condensed and compact information. While evaluating tertiary literature we should consider expertise and experience of author, correctness of literature, appropriateness of the citations used, clarity, conciseness and ease of use of the literature.

Electronic bulletin boards:

Electronic bulletin boards are local bulletin boards, which are posted through a server and can be accessed using a computer and a modem.

Examples are Clinnet, Pharmline and pharmnet. They expand the ability to monitor therapies recently published or discussed in the media and prevent duplication of drug information searches.

Other drug information resources:

When queries cannot be answered using the above- mentioned resources,

1. Alternate sources of drug information can be used. They include internet, list serves, local and national, professionals and government organization and pharmaceutical manufacturers. The ability to assess the quality of information obtained from the web is increasingly important for pharmacists not just for their own information but also for the benefit of patients. In order to ensure the quality of information obtained through the web, pharmacy professionals need to be aware of the criteria to evaluate the web as they are for other traditional sources.

Some useful Internet Web resources:

1 World Health Organization Library site:

<http://www.who.int/hlt/virtuallibrary/english/subject.htm>

2. Australian Prescriber:

<http://www.australianprescriber.com>

3. British Medical Journal:

<http://www.bmj.com/>

4. The Free Medical Journal Site:

<http://www.freemedicaljournals.com>

The searching for answering the drug information queries should be in the following order: Tertiary source -> Secondary source -> Primary literature

Conclusion

Clinical pharmacy and Drug information services are well established in most developed countries. There is not the case of developing countries like India where lack of funds, lack trained pharmacists, irrational prescribing and poor economics are barriers in establishing well equipped drug information center (DIC). The practice of Drug information is currently being developed in India, as can be seen from the table. Successfully DIC implementation is the result of better participation from trained pharmacists and the support of medical professionals.

The responsibilities of individual pharmacists for the provision of drug information has increased substantially over the years. Several others factors are stimulating the evaluation of pharmacists as a drug information provider, including information technology changes, knowledge of drug therapy, changing philosophies of pharmacy practice, the education of a pharmacist and a more knowledgeable patient the sophisticated drug therapy offer opportunity to the pharmacist to demonstrate their expertise in providing the appropriate drug information. The world health authorities such as WHO should fund such center to promote the rational use of drugs through providing drug information. Such stimuli are essential for developing countries like India. The National Human Rights Commission (NHRC) recommended to the Government of India for setting up computerized drug information center in large hospitals for the benefit of all concerned. Core competence and Co operation among all health care professionals in a health care facility is needed to promote rational drug use.

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