FIP Pharmacy Information Section

Requirements for Drug Information Centres

Summary

All countries should provide drug information services either independently or as part of a regional network. The service should include collecting, reviewing, evaluating, indexing and distributing information on drugs to health workers. Drug and poisons information centres are best established within major teaching hospitals. This allows access to clinical experience, libraries, research facilities and educational activities. Drug and poisons information centres should be supported by government authorities. They require clinically trained staff with access to specialist support. In some cases drug information services can be provided in conjunction with toxicology services and pharmacovigilance programs.

INTRODUCTION

Access to authoritative and independent information is fundamental for the rational and effective use of drugs. Information must be available in a format suitable for health practitioners and relevant to current clinical practice.[1] WHO recognises independent drug information centres as a core component of national programs to promote the rational use of drugs.[2,3]

This document outlines the aims and functions of drug information centres which primarily provide support for healthcare professionals. The application of these principles will vary with location, resources and regional health policies. To be effective, drug information centres must be integrated with clinical services and provided with adequate support for resources and training. The FIP Pharmacy Information Section supports the development of drug information centres and will continue to encourage communication and cooperation between drug information practitioners.

BACKGROUND

Drug information is the process of providing information on the safe and effective use of therapeutic and diagnostic pharmaceuticals. The term ‘medicines information’ is also used and has the same meaning as ‘drug information’ in this context.

All countries require drug information support to optimise the use of pharmaceuticals. Internationally there are many disparities in access to drugs and the knowledge needed to use them appropriately. There are significant deficiencies in the use of drugs even in countries with well developed regulatory authorities, local manufacture and sophisticated health delivery systems. In most countries the pharmaceutical market encourages the development and sale of drugs for profit. While this model has created many innovative therapies and efficient production processes its output does not necessarily correspond with overall health needs. For example, the inappropriate use of antimicrobials can lead to resistance and expenditure can be wasted on drugs to control diseases which could be better controlled by improvements in diet or lifestyle. Poor adherence to prescribed therapy is a major problem, particularly in chronic conditions.[4] There is also a substantial use of herbal and traditional remedies in many countries. This raises issues of efficacy and safety especially when these therapies are combined with conventional drugs.

The supply of drugs to a community must be balanced by access to impartial information which supports national healthcare priorities. Drug information is essential to the use of drugs. Inappropriate use is a waste of precious resources and increases the risk of avoidable drug-related toxicity. Governments should recognise this requirement and provide financial support for organisations which offer independent drug information to healthcare workers and the general community.

Pharmacists and other healthcare workers routinely provide drug inform-ation to the community. Dispensed drugs should always be accompanied by appropriate directions for consumers, and pharmacists should have the skills and resources to provide basic information to other health professionals. These functions can be described as drug information services and can be distinguished from the more

specialised activities of a drug information centre. Adequate pharmaceutical education and clinical training is required for pharmacists to provide drug information services. Drug information centres support the functions of healthcare professionals to deliver high quality drug use. They focus resources and specialist staff to answer complex questions, provide education and training in drug information practices, and assist with other public health initiatives.

Drug information centres can function locally or regionally and should liaise with other centres to maximise the use of resources and share expertise. Interactions between drug information practitioners can be within geographical regions, within specialist areas of practice or between centres which share common interests or languages. Communication between a centre and its clients is of paramount importance. The appropriate form of this communication will depend on local practices and infrastructure. For drug information centres, adequate communication via the Internet is essential for access to resources and international exchange of information and support. Before establishing a new centre, a senior member of staff should visit established centres to determine the range of resources which are most appropriate for the new service. Training in an established centre should be considered for staff developing a new centre.

Different levels of drug information are required by healthcare providers and recipients. Medical practitioners and pharmacists need access to the information required by regulatory authorities for new drugs. Healthcare workers who have limited prescribing authority require a subset of this information together with protocols for diagnosis and treatment. All health providers require information resources for therapeutic decision support, implementation and monitoring of outcomes. People receiving medication need instructions for use of prescribed and over-the-counter medicines. Additional information may be necessary for high-risk groups (e.g. paediatrics, geriatrics, pregnancy and breastfeeding) and in some diseases (e.g. diabetes, kidney and liver dysfunction). Strategies to promote adherence include once-daily dosing, and drug selection and dosing to minimise adverse effects.

FUNCTIONS

The primary function of a drug information centre is to respond to enquiries on therapeutic drug use. Most centres provide services to health professionals and some also offer a service to the public. In some cases toxicology information is also provided. Where patient care is the primary focus, drug information practitioners must have adequate clinical training and experience to complement their information retrieval skills. Every enquiry should be handled within a reasonable period of time and at a level appropriate to the nature of the enquirer.

A drug information centre must be geared to the needs of its users. Information must be dependable, timely, and of the highest possible standard. The centre's expertise should be readily accessible to all potential users. Standard operating procedures should include an approach to categorising enquiries and maintaining search patterns for common types of questions. This facilitates the optimum use of available resources.

Drug Evaluation

Assessment of therapeutic drugs is an important function of a drug information centre. The centre must have access to the principal medical and pharmaceutical journals. The staff should be capable of critically assessing the medical literature, and information from industry and media sources. Critical analysis of published research includes an interpretation of the results in terms of relevance to local practice.

Therapeutic Advice

Many centres offer patient-related drug information as their primary activity. This requires an adequate understanding of disease states and therapy. It also requires access to appropriate resources for rapid support in situations where response time is an important factor in delivering optimum therapy. Therapeutic advice includes factors such as efficacy, optimum dosage, interactions, adverse effects, mode of administration, effects of other disease states, and strategies to promote adherence in chronic conditions.

Pharmaceutical Advice

Most other enquiries will relate to pharmaceutical preparations generally and include issues of availability, formulation, cost, storage and stability.

Education and Training

Educational activities are important to support the quality use of drugs. Providing information to health professionals and the public is part of continuing health education. A drug information centre can also support national and regional authorities responsible for drug use programs. Training graduate and undergraduate students is an important aspect of overall clinical training. Healthcare practitioners need to understand the scope and functions of drug information centres in order to utilise the services they offer.

Dissemination of Information

Drug information centres can disseminate information in the form of drug monographs, bulletins and websites. Editorial skills are important for these functions. The International Society of Drug Bulletins (ISDB) runs training courses for editors and, together with WHO, is preparing a manual for developing independent drug bulletins.[5]

Research

Drug information centres should be involved in research activities including pharmaco-epidemiology, e.g. drug utilisation studies and pharmacovigilance. The nature of enquiries received can be used to plan educational programs within the centre or provided to organisations responsible for improving the quality of drug use. Specialist centres should also assess the quality and relevance of commonly used information resources.

ANCILIARY ACTIVITIES

Pharmacovigilance

Drug information centres often have a role in programs which monitor adverse drug reactions. Enquiries about a potential adverse reaction can lead to reports of suspected reactions and research may be required to assess the likelihood that a drug has contributed to a reaction or for subsequent patient management. Some centres may serve as adverse drug reaction monitoring sites for hospitals or regions. Centres with regional responsibilities should be a member of the WHO Programme for International Drug Monitoring.[6]

Toxicology

Most countries have one or more dedicated poisons information centres. However, there may be economic or personnel advantages in combining a drug information service with a toxicology service. Toxicology services provide information and advice on the diagnosis and treatment of poisonings. Suitable information should be available to health professionals and the general public. Personnel need to be specifically trained in toxicology. They must be able to respond to requests for information on the acute management of poisoning and know when to refer potentially severe cases. Toxicology services are best located within hospitals where there is liaison with clinicians who treat patients with poisoning. This provides an opportunity for staff to enhance their clinical understanding of poisoning and its management.

A poisons information centre should also provide a public health service through educational programs to reduce the incidence of poisoning. Centres should systematically collect data on the circumstances leading to poisonings and the outcome of specific cases. This can form the basis for research in the epidemiology of human toxicology.

RESOURCES

Drug information centres should be organised on a cooperative model involving a multi-disciplinary team. Where possible, existing resources such as a libraries, computers and databases should be used.

Personnel

The number of personnel required will depend on the range of activities offered and the hours of service. A centre should aim to provide a direct service during periods of major demand by its clients. For patient-related enquiries this is likely to be when clinic consultations occur and during peak periods for hospital functions. The professional staff should include a full-time clinical pharmacist or a clinical pharmacologist. Clinical training and experience is essential for effective communication with clinicians. Other important attributes are computer skills, literature analysis, editing and library management.

Management is an important component of a successful drug information centre. All pharmacists provide drug information services to some extent during dispensing and consultation services; however, a centre specialising in drug information requires coordination, monitoring and promotion. The manager's responsibilities include:

- establishing and maintaining a viable financial base;
- staff recruitment and coordination;
- training;
- promoting the service;
- identifying and maintaining appropriate resources;
- data management and reporting;
- quality assurance and improvement;
- liaison with colleagues, professional organisations (e.g. FIP Pharmacy Information Section), networks, university departments of pharmacy practice, and government agencies;
- strategic development.

The manager of a drug information centre should have experience with service delivery as well as managerial skills.

Medical and non-medical specialists may be required as additional resource personnel. As the centre expands, it may be necessary to include some of these specialists as advisers on a part-time basis. It is also necessary to have secretarial assistance and support staff for maintaining equipment and cleaning. There should be a career structure for all professional staff with the possibility of additional training and advancement. Twinning arrangements between established centres and developing centres can facilitate the exchange of staff for education, training and sharing of experience.

Texts and Databases

The centre should maintain its own library of commonly used resources. Additional books and other publications should be accessible in hardcopy or electronically from external sources.

Data can be extracted from textbooks, databases, data sheets, reports and scientific journals. Information from previous enquiries can also be used. An adequate literature search requires an understanding of available sources and their limitations, and training in the use of indexing terms and functions. Access to the full text of medical and pharmaceutical journals is necessary to assess the value and relevance of research.

Primary information sources provide unique data which has not been previously published. This includes the results of research studies and descriptions of unexpected clinical experience such as adverse drug reactions. Summaries or further analysis of primary information ('secondary' or 'tertiary' sources) aim to make the primary literature more accessible and easier to apply to practice. Formats include literature reviews, databases and textbooks. The most appropriate type of information will depend on available resources and the time available for access. Many patient-related questions can be answered from basic textbooks. General questions of optimum drug use or safety will require access to primary sources.

Facilities

Basic equipment required for a centre include:

- furniture - desks, chairs, shelving;
- communications - telephones, facsimile, internet access;
- computers - including external data backup, printer;
- software - for word processing, spreadsheets, databases and presentations;
- photocopier;
- textbooks and electronic information resources.

FINANCE

A drug information centre should have an independent source of income and status guaranteeing its stability and objectivity. Funding from external organisations cannot be accepted unless the centre's neutrality is guaranteed. Financial support from the pharmaceutical industry or other groups which could represent a potential conflict of interest will tend to undermine a centre's reputation for independent analysis and advice.

Services should be provided free of charge to enquirers or through a contract arrangement which does not discourage appropriate use of the service to support quality healthcare. Separate charges may be made for specific reports which do not directly relate to individual patient care.

Capital equipment and management costs should be included in the budget. Sufficient

expenditure to maintain up-to-date resources is essential for the long-term viability of the centre.

TRAINING

Specific training is required for drug information practice. In addition to clinical knowledge and experience, drug information practitioners require:

- communication skills to receive and comprehend enquiries;
- knowledge of all available resources;
- literature searching skills;
- capacity for critical analysis;
- writing skills;
- ability to summarise complex or conflicting data.

New staff should receive dedicated training or validation based on a standard operating procedure. A program of continuing education should include clinical topics and techniques used specifically in drug information.

QUALITY ASSURANCE

The activities of the drug information centre should be carefully documented. Standard forms or electronic databases can facilitate recording of enquiries. An effective retrieval system is essential to locate previous enquiries, monitor workload and categorise the types of enquiries received. It can also facilitate quality assurance programs based on analysis of selected enquiries and failed deadlines. The recording process should provide secure, long-term storage and the confidentiality of enquirers should be respected.

Drug information centres have a responsibility to provide the highest possible standard of service. This will include an assessment of staff, regular review of calls taken and answers provided, and periodic review of resources and procedures. The process should continuously identify potential improvements and document progress towards implementation.

Direct output can be monitored through peer review of enquiries. A random selection of enquiries can be regularly reviewed and feedback sought from enquirers. Where possible, the peer review process should include comments from one or more external experts, e.g. a drug information pharmacist or clinical pharmacologist.

NETWORKING

Cooperation between drug information centres can help to optimise limited resources and enhance overall service levels. Networking can involve two or more centres, and includes regional, national and international links. Networks provide opportunities for:

- sharing resources and experience;
- establishing standard operating procedures;
- quality assurance programs with external review;
- inter-site training;
- increased awareness of practice in different locations and cultures.

Acknowledgment

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