

Review Article

Professional Provision of Medicines Information

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ABSTRACT

The quality and quantity of prescription medicines information available in daily practice to health professional defines the excellence of pharmaceutical services provided to patients in order to select the most effective and cost effective therapies that cure or alleviate their ailments.

Medicines information is defined as "Independent, accurate, up-to-date, reliable and relevant information about medicines and all aspects of their selection and usage in clinical practice".

Professional provision of medicines information is a crucial task of clinical pharmacists that aims at meeting the medicine information requirements of patients, healthcare professionals and various strata of the society.

Professional provision of medicines information is useful in all settings where medicines are selected and used; however, it can be particularly helpful in specific situations that are highlighted below.

In this article, the topic of medicines information will be explored and introduced to the journal readers.

Key words: Medicines information, drug information, clinical pharmacy, institutional pharmacy



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INTRODUCTION:

The quality and quantity of prescription medicines information¹ available in daily practice to health professionals defines the excellence of pharmaceutical services provided to patients in order to select the most effective and cost effective therapies that cure or alleviate their ailments.

However, the so called "information explosion" which is a characteristic of our modern area, rendered clinicians overwhelmed with the increasing number of available medical information resources (i.e. journals, textbooks, medical databases, the internet and many other resources); such abundance of information made the task of retrieval of medicine-related information uneasy and daunting [1].

In modern healthcare systems, the provision of medicine information is one of several major professional duties of clinical pharmacists in their everyday practice [2, 3]. A competent

clinical pharmacist must be sufficiently trained in order to perceive, evaluate and provide medicine information queries of various consumers (i.e. patients, health care professionals, government agencies and other medicine information seekers) [4]. Medicines information provided by medical representatives of drug companies can be subjective and highly biased, therefore, access of health professionals to impartial medicines information services is considered by the World Health Organization as a positive indicator on the quality of healthcare services provided within any national healthcare system [1, 2].

Formal professional medicine information services are absolutely absent in Libya at both national and institutional levels [5], neither of the Libyan ministry of health nor other government agencies such as the national Libyan FDA and its branches around Libya as well as the Libyan

Board of medical Specialties offer professional medicine information services.

As mentioned earlier, the availability of good quality medicine information services is cornerstone to the excellence of the pharmaceutical services in any national healthcare system [1-4] and has been considered by the WHO as a positive indicator on the quality of pharmaceutical services provided by the national healthcare system [2]. In Libya, all pharmaceutical services- including medicine information services- are suboptimal and requires urgent reform[5].

In this article, the topic of medicines information will be explored and introduced to the journal readers.

Definition of medicines information

Medicines information is defined as "Independent, accurate, up-to-date, reliable and relevant information about medicines and all aspects of their selection and usage in clinical practice"[1][3].

Medicines information can be provided verbally or in a written format, the ultimate aim of professionally providing medicines information is to optimize the pharmaceutical aspect of healthcare provided to specific patients and the general public [3].

Aim of professional provision of medicines information

Professional provision of medicines information is a crucial task of clinical pharmacists that aims at: (1) Meeting the medicine information requirements of healthcare professionals as well as other formal government agencies and the general public, (2) Enhancing quality selection and use of medicines in order to optimize patient care outcomes and (3) Providing unbiased authoritative information on medicines and all aspects of their usage that is independent from the medicines information provided by drug companies and medical representatives[3].

Importance of professional provision of medicines information

Professional provision of medicines information is useful in all settings where medicines are used, however, it can be particularly helpful in specific situations such as ;(1) New medicines on which little evidence on selection and use is available, (2) Medicines that require special advice on how they are administered, (3) Medicines of uncommon use within a specific setting of practice[1, 3, 4].

Professional provision of medicines information

In order to provide medicine information with the

qualities described in the definition above,the clinical pharmacist need to identify: (1) Various resources from which medicines information is retrieved and their classification according to their proximity to the origin such information, (2) How to use various medicine information resources efficiently and proficiently and, (3) How to find other information resources if common medicine information resources do not address the demanded medicine information query.

Types of medicines information resources

Based on their proximity to the original source of information, medicines information resources are classified as primary, secondary and tertiary (see Box 1).

Primary medicines information resources

Represent original research information or data in their first formal appearance, usually in journal articles, conference proceedings and many other avenues where original research papers are published. Information presented in primary resources are neither interpreted nor condensed by peers within the same discipline. The reader of primary literature need to critically appraise the available literature in order to formulate a specific conclusion related to a specific matter. It is important to note that primary literature can vary in the scientific quality of available information, therefore care need to be taken in order to ensure that retrieved information are from high quality primary information resources.

Secondary medicines information resources

Secondary medicine information resources include indexing and abstracting systems which offer systematic means that assist scientific readers in locating various types of published (primary) literature. Examples of such indexing and abstracting systems are Medline, Embase, OVID, and International Pharmaceutical Abstracts and Cochrane Library. It is important to note that secondary information resources assist only in locating primary literature, full access to original research need to be available to the user of secondary literature in order to make full benefit of them.

Tertiary medicines information resources

Tertiary resources present available medicines information on a specific topic to the user in a condensed, abridged, comprehensible format. Tertiary resources also present medicines information in a convenient, coherent and easy to read format that has been evaluated and appraised by other authors. Text books, pharmaceutical compendia, review articles, systematic reviews and full text databases (i.e Micromedex Healthcare Series) are tertiary medicine information resources.

Box 1: Classification of medicine information resource

It is important to note that primary information resources represent the foundation of both secondary and tertiary resources. Table 1 illustrates the advantages and disadvantage of each type of medicine information resource.

A pharmacist needs to master the use of various types of medicine information resources in order to consult them efficiently and effectively[1].

The process of medicines information retrieval and provision

Each pharmacist must apply a systematic approach in order to address various medicine information queries and be capable of communicate such information by utilizing appropriate means.

In order to professional and efficiently provide

medicine information queries[1, 3], a pharmacist need to undertake a systematic approach in the following order:

- 1.Outline medicine information query.
- 2.Outline relevant background information.
- 3.Identify appropriate medicine information resources.
- 4.Retrieve relevant information related to a

specific medicine information query.

- 5.Evaluate retrieved information and synthesize the available evidence.
- 6.Formulate a response.
- 7.Formal documentation of all of the above steps.

Healthcare and pharmaceutical activities that require professional medicine information provision

| Type of medicine information resource | Advantages | Disadvantages |
|---------------------------------------|--|---|
| Primary literature | Current original research papers | Flawed methodology and/or investigator bias |
| Secondary literature | Offers quick access to high standard primary literature Offers access to a large amount of information on a specific topic. | Lag time Expensive to access Command language can vary between databases |
| Tertiary literature | Easy to use Readable Computerized format are continuously updated | Information in hard copies can be outdated. Author bias Important information can be overlooked or missed |

Table 1: Advantages and disadvantage of each type of medicine information resource

Healthcare activities that call for professional provision of medicines information by pharmacists are unlimited, however there are several common activities that require professional provision of quality medicine information that match the characteristics indicated before in the definition above[1, 3, 4], such activities include:

- 1.Therapeutic decision making.
- 2.Provision of information regarding selection and use of medicines to healthcare professionals, clinicians, patients and government bodies and agencies.
- 3.Developing and maintaining a hospital formulary based on scientific evidence of safety, efficacy and cost-effectiveness as well as cultural values.
- 4.Pharmacovigilence.
- 5.Establishment and maintenance of appropriate policies, procedures and guidelines on medicines selection and use in clinical settings.
- 6.Education of patients as well as health professionals on all aspects related to pharmaceuticals and their selection and use.
- 7.Drug utilization evaluation reviews.
- 8.Pharmacoeconomics.
- 9.Pharmacy practice research.

Skills needed for proficient provision of medicine information

Professional provision of medicines information should be an inherent skill in clinical pharmacists

regardless of their setting of practice. Nevertheless, medicine information pharmacists need to be equipped with several professional skills such as verbal and written communication skills, critical appraisal skills, appropriate training on evidence based-medicine and pharmacoepidemiology[1].

Medicine information centers

Medicines information centers (commonly known as drug information centers) are formal government or institutional facilities that are specializing in providing medicine information services. Medicines information centers are run and operated by competent clinical pharmacists [3, 4].

Medicine information services in Libya

As mentioned earlier in the introduction, professional medicine information services are absolutely lacking in the Libyan healthcare system which requires urgent attention from the Libyan Ministry of Health.

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¹In this article the term “medicine” will replace the term “drug” in order to indicate clinically used drugs as the broader term “drug” may indicate illicit substances.