ASHP Guidelines on the Pharmacist's Role in Providing Drug Information

Background and Rationale

The provision of drug information (DI) is among the fundamental professional responsibilities of all pharmacists. Recent practice trends, including increased provision of medication therapy management services and efforts to obtain provider status, have placed pharmacists in increasingly complex patient-care roles and necessitated a higher level of competence by all pharmacists in meeting DI needs. Drug information may be patient specific, academic (for educational purposes), or population based (to aid in the decision-making process for evaluating medication use for groups of patients). The goal of providing carefully evaluated, evidence-based recommendations to support specific medication-use practices is to enhance the quality of patient care, improve patient outcomes, and ensure the prudent use of resources. The primary focus of these guidelines is to describe contemporary DI activities, including the application of a systematic approach, appropriate documentation methods, and use of high-quality DI resources. This information is intended to assist pharmacists in providing optimal DI services in a variety of practice settings, including hospitals and health systems, outpatient care centers, managed care environments, medical communication departments, and university or academic-based drug information centers. Some of the activities described in these guidelines are the subjects of other American Society of Health-System Pharmacists (ASHP) policy and guidance documents, which should be referred to for additional information. Pharmacists providing DI should use professional judgment in assessing ASHP's policy and guidance documents and in adapting them to meet their health care organizations' and patients' needs and circumstances.

Drug Information Activities

To be an effective provider of DI, the pharmacist must exercise excellent oral and written communication skills and be able to

1. Anticipate and evaluate the DI needs of patients and health care professionals.
2. Obtain appropriate and complete background information as described under the section Systematic Approach for Responding to Drug Information Requests.
3. Use a systematic approach to address DI needs by effectively searching, retrieving, and critically evaluating the literature (i.e., assessment of study design, statistics, bias, limitations, applicability).
4. Appropriately synthesize, communicate, document, and apply pertinent information to the patient care situation.[1,2]

A variety of DI activities may be performed by pharmacists, depending on the particular practice setting and need. Every pharmacist should have the skills to perform the following DI activities[2,3]:

1. Providing DI to patients, caregivers, and health care professionals.
2. Creating and maintaining currency of a variety of print and online educational resources for patients (e.g., tip sheets, pamphlets) and health care professionals (e.g., in-service documents, newsletters) on topics such as optimal medication use, general health, or select clinical questions.
3. Educating health care professionals on safe and effective medication-use policies and processes, including development of resources to communicate this information.
4. Leading or participating in continuing education services for health care professionals.
5. Precepting and educating pharmacy students and residents.
6. Participating in quality improvement research projects and drug cost analyses.
7. Contributing to the biomedical literature and providing peer review for other contributors.

Some activities may be more appropriate for pharmacists with additional expertise and training in DI, such as those who have completed a postgraduate year two (PGY2) drug information residency. Drug information specialists often perform DI activities that overlap with other pharmacists and health care professionals. However, as a result of their advanced training and experience, DI specialists may be able to more efficiently retrieve, evaluate, and disseminate information in order to develop evidence-based recommendations and assist in patient care decisions.[2] Many DI specialists are also involved in medication-safety activities and collaborate with experts in informatics. These activities are highlighted in other ASHP statements.[4,5] Specific activities of the DI specialist may include some or all of the following[2,6-11]:

1. Providing information when there is not sufficient time for other health care professionals to appropriately research the DI question, when there is a knowledge gap, or when the question requires more thorough research.
2. Establishing and maintaining a formulary based on scientific evidence of efficacy and safety, pharmacoeconomics, and institution-specific factors.
3. Coordinating programs to support population-based medication practices that maximize patient outcomes (e.g., development of pharmacotherapeutic guidelines, medication-use evaluation criteria, and therapeutic interchange protocols).
4. Developing and participating in efforts to prevent medication errors and adverse drug events, including surveillance, ensuring institutional compliance to Risk Evaluation and Mitigation Strategies

(REMS), and leading reporting and analysis programs (e.g., MedWatch).

5. Monitoring and assessing the clinical significance of medication safety alerts communicated by the FDA, drug manufacturers, and other sources.
6. Performing health outcome and comparative effectiveness analyses.
7. Coordinating investigational drug services, including participating on institutional review boards (IRBs), evaluating protocols, and providing DI to patients, caregivers, and health care professionals.
8. Managing drug shortages, including identifying alternative treatments, developing protocols for restrictive use, and addressing formulary concerns.
9. Developing clinical decision support tools such as order sets, dosing protocols, and order-entry alerts.
10. Maintaining DI and medication-use policy-related intranet resources.
11. Precepting or providing advanced DI education and training to interprofessional and pharmacy students and residents.
12. Coordinating selection and purchase of pharmacy and institution-wide DI resources.
13. Participating in various fee-for-service projects (e.g., formulary support, database development, training programs) for clients.
14. Planning and delivering academic detailing programs.

Although the above activities may be best suited for pharmacists with advanced DI training, many institutions lack a formal DI specialist. Therefore, other pharmacists may be involved in more in-depth DI activities, depending on their level of expertise. For example, preparing drug monographs for pharmacy and therapeutics committees was once considered almost exclusively the responsibility of the DI specialist. As pharmacy practice has evolved, the expertise and knowledge of all pharmacy practitioners have been integrated into this process.

Today, depending on the institution, pharmacists without specialized DI training may prepare monographs, assist in the design of medication-use evaluation criteria, participate in medication monitoring activities, or educate health care professionals on appropriate medication use. If available, a DI specialist may serve in an oversight role by editing and providing feedback on these projects or providing general DI support to pharmacists involved in direct patient care. Moreover, a DI specialist may be involved in implementation and follow-up of medication-use policies and formulary changes as part of a larger medication policy management program, which may include interpreting the impact of legislation, regulation, and public policy on medication utilization.

Systematic Approach for Responding to Drug Information Requests

A systematic approach for responding to DI requests was first introduced by Watanabe, et al. in 1975.[12] This approach has been modified and expanded over the years to ensure that all relevant information is considered prior to formulating a response.[1,13] The importance of gathering pertinent patient data and understanding the context of a question prior to answering a DI request is described in the literature.[14-16] Of note, a full systematic approach may not be practical for all requests, especially for urgent clinical needs in the direct patient care setting. In addition, consideration should be given to the ethical and legal aspects of responding to DI requests, including patient privacy concerns.[1]

A systematic approach may be outlined as follows.[1,13]

1. *Identify the requestor.* In order to obtain complete information and develop a response with the appropriate perspective, consider the health literacy and professional background of the requestor.
2. *Define the true question and information need.* Identify the true question and information needed by asking probing questions of the requestor. For example, "Why is the question being asked?" and "Does the question pertain to a specific patient?" may help reveal important details of the true question.[1] This kind of information helps in optimizing the search process and assessing the appropriate time frame of response need.
3. *Obtain complete background information.* Obtain more complete background information, including examining the medical record for patient data, if applicable, to individualize the response to meet the requestor's need.
4. *Categorize the question.* Classify requests as patient-specific or academic and by type of question (e.g., product availability, adverse drug event, compatibility, compounding/formulation, dosage/administration, drug interaction [drug-drug, drug-disease, drug-laboratory], drug product identification, pharmacokinetics, therapeutic use/efficacy [FDA approved vs. unlabeled indications], safety in pregnancy/nursing toxicity/poisoning) to aid in tailoring the search strategy and selecting resources.
5. *Perform a systematic search.* Perform a systematic search of appropriate tertiary, secondary, and primary resources, including electronic resources, as necessary.
6. *Analyze the information.* Evaluate, interpret, and combine information from the resources used. Other information needs should be anticipated as a result of the information gathered.
7. *Disseminate the information.* Provide an oral or written response, or both, as needed by the requestor that specifically applies the information to the particular situation. The information, its urgency, and its purpose may influence the method of response. Supporting documentation (e.g., primary literature) should be included when possible.
8. *Document.* Document the request, information resources used, the information found in each source, time spent on the response, and the response itself as appropriate for the request and the practice setting.
9. *Follow-up.* Perform a follow-up assessment to determine the utility of the information provided and whether the information resulted in changes in medication-use practices or patient outcomes.

Documentation and Quality Assessment

Numerous methods of documenting pharmacist interventions, including the provision of DI, have been described in the literature. Drug information centers are moving toward increased use of electronic documentation systems, which have helped to increase the depth and quantity of documentation, as well as provide increased efficiency and cost savings.[17-21] In addition, an electronic system can promote a standardized and systematic approach and provides a readily retrievable archive that can be used to rapidly search previously answered questions.[22,23] Documentation of DI services should incorporate elements identified through the systematic approach. The ASHP Guidelines on Documenting Pharmaceutical Care in Patient Medical Records states that "the professional actions of pharmacists that are intended to ensure safe and effective use of drugs and that may affect patient outcomes should be documented in the patient medical record."[24] Therefore, if the DI request is patient-specific, it is appropriate, but not always necessary, to document the request and response in the patient's medical record. Documentation is critical to appropriate patient care, highlights the value of pharmacist services, demonstrates accountability, provides a basis for quality assessment and performance improvement, and details an appropriate systematic approach in case a medico-legal dispute arises from a DI request. Consequently, even academic or population-based DI activities should be appropriately documented. Despite the importance of assessing the quality of drug-related information provided by pharmacists, there is currently no standardized method described in the literature. However, some DI centers have reported use of double-check systems prior to providing a response, random retrospective audits by a DI specialist or another individual, obtaining feedback from the requestor, and conducting an internal review by a committee as methods of quality assessment.[25]

Resources

It is important for pharmacists to use appropriate and credible resources. The amount of medical knowledge has grown substantially and access to information has changed dramatically over the last few decades. Traditional print resources are rapidly being replaced by electronic databases (both online and included in health information management systems), online resources, and mobile applications.[26] The internet and mobile technology have allowed for convenient and quick access to medical information. However, pharmacists should critically evaluate all resources prior to use to ensure that they are accurate, current, and unbiased.

General principles to consider when critically evaluating medical information available on the internet have been published.[27] Pharmacists should work closely with others within the organization to ensure that up-to-date resources, including representative primary (e.g., peer-reviewed original studies), secondary (e.g., indexing or abstracting services such as MEDLINE and International Pharmaceutical Abstracts), and tertiary resources (e.g., electronic databases, textbooks, review articles, clinical practice guidelines) are available to assist in answering a variety of DI requests. Pharmacists should be familiar with the features of each resource; familiarity makes searching more efficient so that more time can be devoted to analyzing, applying, and communicating the information.

The following factors should be considered when purchasing DI resources, including electronic subscriptions, for the pharmacy department or practice setting:

1. Features of the resource (e.g., frequency of updates, qualifications and affiliations of authors, year of publication, type of information, organization of material, method of delivery, cost).
2. Practice setting (e.g., type of facility and needs of health care professionals within that environment, state-specific regulatory requirements).
3. Accessibility of the resource (e.g., location of print resources, number of users allowed by subscription).

Keeping Current

Pharmacists are challenged with keeping up to date with an increasing number of new drugs and literature.[3] Drug information and literature evaluation skills are crucial for building clinical knowledge and providing evidence-based recommendations. It is the responsibility of the pharmacist to commit to lifelong learning and make an effort to keep abreast of advances both in the methods of delivering DI and the information itself. In addition to keeping up to date with clinical knowledge, it is important for pharmacists to keep current on changes in pharmacy practice as the health care system evolves. Recommendations for staying current include the following:

1. Subscribe to table of contents of or full access to relevant journals, as appropriate.
2. Subscribe to appropriate email listservers (e.g., Food and Drug Administration Drug Information Updates, National Guideline Clearinghouse, Centers for Disease Control and Prevention, Medline Plus).
3. Receive email alerts from relevant health-related websites (e.g., MedWatch, Medline Plus).
4. Bookmark important websites and check regularly for updates (e.g., Institute for Safe Medication Practices, ASHP Drug Shortages Resource Center).
5. Choose pertinent continuing education activities and methods that challenge learning.
6. Maintain active membership in local, state, and national pharmacy associations/societies.
7. Pursue board certification from the Board of Pharmacy Specialties.

Conclusion

All pharmacists are involved in the provision of DI, which includes a broad array of activities. A systematic approach should be considered for all DI requests, and pharmacists should document their services to demonstrate accountability and justify the value of pharmacist care. Increased availability of medical information, both due to increased knowledge and technological advances, has not changed the overall process of DI practice. It is important for pharmacists to select appropriate resources and keep current on new literature and new tools to address a variety of DI requests.

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Shadi Ghaibi, Pharm.D., BCPS, is Pharmacist, Drug Information and Medication Safety, Intermountain Medical Center, Murray, UT. Heather Ipema, Pharm.D., BCPS, is Clinical Assistant Professor; and Michael Gabay, Pharm.D., J.D., BCPS, is Clinical Associate Professor, Pharmacy Practice, University of Illinois at Chicago, Chicago.

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