## Introduction

This is the third edition of guidelines regarding the provision of drug information services published by the Canadian Society of Hospital Pharmacists (CSHP). These guidelines, approved by the CSHP Board in 2015, replace the Drug Information Services: Guidelines (2009).

These guidelines were developed by a group of CSHP members who are drug information pharmacists, in collaboration with the CSHP national office. The guidelines are consensus-based, reflecting current best practice in the provision of drug information services.

## 1 Scope

These guidelines provide practical information on aspects of developing and operating a drug information service. Suggested references relating to the provision of drug information are presented in Appendix A, List of Auxiliary Drug Information Resources.

The guidelines do not provide detailed information about each aspect of a drug information service provided by pharmacists, nor do they pertain to establishing a toxicology service. The guidelines do not address the legislative requirements associated with the provision of drug information services, and it is assumed that the provision of any drug information services will comply with the legislation and practice framework relevant to this area of practice.

## 2 Glossary

The following definitions apply to terms used in these guidelines. They may have different meanings in other contexts.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Client</td>
<td>An individual or group of individuals who receive drug information services.</td>
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<tr>
<td>Drug information</td>
<td>“The provision of unbiased, well-referenced, and critically evaluated information on any aspect of pharmacy practice.”</td>
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<tr>
<td>Drug information centre</td>
<td>A defined area, physically separated from the pharmacy dispensary, where the drug information service operates.</td>
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<tr>
<td>Drug information pharmacist</td>
<td>A pharmacist who specializes in research, documentation, and provision of drug information using a modified systematic approach.</td>
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<tr>
<td>Drug information service</td>
<td>A formalized unit with staff and resources dedicated to providing information to healthcare professionals and/or the public on aspects of drug therapy. The staff and resources dedicated to the provision of drug information services usually work, where feasible, within a drug information centre.</td>
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<tr>
<td>Drug information services</td>
<td>The services provided by the drug information service. The provision of drug information services incorporates a variety of activities and typically occurs in response to one of three types of situations:</td>
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<tr>
<td></td>
<td>a) a request from a caregiver or patient for a specific patient or group of patients;</td>
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<td></td>
<td>b) a need identified through general safe medication practices or by the hospital/regional formulary system committee (such as a pharmacy and therapeutics committee or pharmacotherapeutic committee); or</td>
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<td></td>
<td>c) a request from a person or organization (such as a lawyer or pharmaceutical company).</td>
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<tr>
<td>Evidence-based medicine</td>
<td>“The integration of best research evidence with clinical expertise and patient values.”</td>
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<tr>
<td>Implemented</td>
<td>Accomplished or achieved and incorporated into practice.</td>
</tr>
<tr>
<td>Internal peer review</td>
<td>An independent review of the drug information provided by a drug information pharmacist.</td>
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</table>
Modified systematic approach A seven-step method used to research drug information inquiries:

- **Step I.** Secure demographics of requester
- **Step II.** Obtain background information
- **Step III.** Determine and categorize ultimate question
- **Step IV.** Develop strategy and conduct search
- **Step V.** Evaluate and analyze the information
- **Step VI.** Formulate and provide response
- **Step VII.** Conduct follow-up and documentation

<table>
<thead>
<tr>
<th>Primary sources of information</th>
<th>Sources that provide first-hand direct evidence (or research) about a particular topic, without interpretation or evaluation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary sources of information</td>
<td>Sources that provide an interpretation or evaluation of information obtained from primary sources.</td>
</tr>
<tr>
<td>Shall</td>
<td>A mandatory requirement.</td>
</tr>
<tr>
<td>Should</td>
<td>A recommendation, something that is advised but not mandatory.</td>
</tr>
<tr>
<td>Tertiary sources of information</td>
<td>Sources that provide compilations, analyses, or digests of secondary sources.</td>
</tr>
<tr>
<td>Toxicology service</td>
<td>A service that provides information to healthcare professionals and/or the public for the assessment of potential toxic effects and the management of drug or chemical exposures. Also known as poison control services.</td>
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</table>
3 Objectives of a Drug Information Service

A drug information service shall support the high-quality, safe, and effective use of medications, and shall discourage the use of questionable, unproven therapies. It shall improve the quality of patient care and patient outcomes through the timely provision of drug information and advice on the therapeutic use of drugs. The drug information provided shall be well organized, current, objective, independent, comprehensive, and accurate, and it shall be presented in a useful format.

4 Scope and Promotion of Drug Information Services

The scope of drug information services shall be defined by the needs of the clients served by the drug information service.

The drug information service shall be promoted to the client to inform them of the services available.

4.1 Defining Criteria for Potential Clients

The hospital shall define criteria to determine the potential clients of the drug information service. Where a health region is responsible for the services of a hospital, the health region should define these criteria.

4.2 Provision of a Drug Information Service

A drug information service that serves a hospital or healthcare region shall, on a regular basis:

- respond to clinical information inquiries; and
- support the learning needs of pharmacists and other healthcare professionals.

4.3 Provision of Additional Services

The drug information pharmacist may provide the following additional services where feasible:

- support the hospital/regional formulary system committee and its formulary system, protocol development, and other related projects;
- prepare communication tools, such as a website, newsletters, patient information handouts, data sheets about non-marketed drugs, guidelines for parenteral administration, and therapeutic drug handbooks;
- encourage and participate in patient-specific reporting of adverse drug reactions and medication errors;
- participate in revising the formulary;
- participate in data collection and evaluation, drug inventory maintenance, and/or protocol set-up for investigational drug studies;
- participate in the Health Canada Special Access Programme, on behalf of the hospital or healthcare region;
- assist in responding to supply chain issues, drug shortages, recalls, and discontinuations;
- participate in medication safety initiatives;
- participate in clinical research studies; and
- participate in other direct patient care activities (such as patient counselling, medication history interviews, and discharge interviews).

4.4 Contractual Agreement to Provide Services to External Organizations

Before drug information services are provided to an external organization, a contract should be established between the hospital (or healthcare region, if applicable) and the external organization. This contract should include the terms and conditions under which the drug information services will be requested, provided, and paid for.

4.5 Promotion of Drug Information Services

The drug information service shall, where feasible, develop a communication strategy to inform potential clients of the drug information services that are available to assist them in improving patient care. Any particular conditions (such as the expected level of service, hours of service, response times, or applicable fees charged) shall be communicated to all groups of potential clients.

5 Access to Drug Information Services

Drug information services should be accessible to approved clients in a timely, efficient manner. Users should be able to request drug information services through a verbal or written means of communication (for example, face to face, or via electronic means).

5.1 Drug Information Centre within the Pharmacy Department

Where the drug information service is located within the hospital pharmacy department, hospital personnel involved with patient care should have access to drug information services 24 hours a day, including:

- on-site access during business hours;
- evening and weekend coverage by staff pharmacists if on duty; and
- after-hours coverage by an on-call staff pharmacist.
Clients external to the hospital shall be informed of the hours of operation and shall be able to leave a message after hours.

5.2 Drug Information Centre outside the Pharmacy Department, within the Hospital

Where the drug information service is located outside the pharmacy department, hospital personnel involved with patient care shall have access to drug information services as defined by policies for provision of after-hours service.

Clients external to the hospital or healthcare region shall be informed of the hours of operation and shall be able to leave a message after hours.

5.3 Hours of Service: Drug Information Centre outside the Hospital

In settings outside a hospital where the drug information service is not staffed continuously, clients shall be informed of the centre’s hours of operation and will be able to leave a message after hours. Clients shall be advised to seek help from a suitable alternative source if the call is of an urgent or emergent nature (for instance, access to emergency drug information may be specified as a provision of the contract).

5.4 Access to Service by Pharmacists of the Pharmacy Department

All pharmacists in the pharmacy department should have access to the drug information service.

6 Human Resources

Overall responsibility for the day-to-day service shall be assigned to the drug information pharmacist.

Each person working in the drug information service shall be aware of his or her respective responsibilities and will be trained and instructed to refer any drug or related request to a drug information pharmacist.

6.1 Number and Mix of Staff

The staff working within the drug information centre shall include a drug information pharmacist and may include other personnel, such as pharmacy technicians and clerical staff.

The number and skill mix of the personnel assigned to the drug information centre shall be adequate and appropriate to meet the demands for the service.

6.2 Referral to Other Experts

The drug information pharmacist may seek the expertise and knowledge of other pharmacy practitioners and/or healthcare professionals as needed.

6.3 Competencies of Drug Information Pharmacist

All pharmacists providing drug information shall demonstrate the following competencies:

a) effectively and efficiently gather information;

b) critically analyze, evaluate, select, synthesize, and use scientific literature from various sources of information (in this order, as appropriate: tertiary, secondary, and primary), facilities, literature retrieval systems, and electronic data processing systems;

c) efficiently apply principles of evidence-based medicine;

d) effectively communicate using written and verbal communication skills, tailored to meet the needs of each requestor;

e) educate clients and contributes to the development and delivery of service education programs;

f) apply knowledge regarding clinical drug use and therapeutics;

g) apply knowledge of pharmaceutical care;

h) apply knowledge of the legal and ethical responsibilities associated with supplying drug information;

i) identify and analyze issues or trends regarding medication use (such as adverse events and medication incidents) and assists in determining the related root causes; and

j) effectively manage projects.

6.4 Clerical Services

Clerical services should be available for such duties as word processing, filing, records management, and dissemination of information developed by the drug information service.

6.5 Staff Orientation

In a hospital setting, staff working in the drug information service shall be familiar with the services provided by the pharmacy department.

6.6 Staff Training, Development, and Assessment

Programs to train, develop, and assess personnel shall be implemented to ensure that the personnel working in the drug information service area possess the required competencies to perform their duties as required.

7 Facilities and Equipment

The area where drug information services are provided shall have adequate facilities to support the safe provision of drug information. The area shall be kept clean and...
orderly, shall be exposed to minimal distractions, shall have adequate resources to allow staff members to work safely, and shall employ a security system that prevents access to the area by unauthorized persons.

7.1 Designation of a Drug Information Centre
In settings where the drug information service is provided by the pharmacy department, a specific area of the pharmacy department should be designated as the drug information centre.

7.2 Facility Requirements for a Drug Information Centre
The drug information centre shall have the following features:

a) adequate workspace;
b) shelving for reference texts and journals;
c) comprehensive filing system(s);
d) a dedicated telephone line;
e) a venue or website for posting notices;
f) a computer with e-mail, printer, and Internet access; and
g) access to equipment for faxing, scanning, and copying documents.

8 Drug Information Resources
The drug information centre shall have adequate information resources and systems to access up-to-date, relevant information. The resources may be in electronic or paper format.

8.1 Reference Material for Main Pharmacy
In settings where the drug information service is provided from a location physically removed from the pharmacy, sufficient reference sources should be readily available in the main pharmacy to fulfill routine drug information requests. This material may be provided in electronic or paper format. At a minimum, the reference sources shall comply with the provincial/territorial requirements for the pharmacy.

8.2 Consultation Service for Reference Material
The drug information service should offer consultation services for the procurement of drug information references used by hospital pharmacy dispensaries and other areas served by the hospital or healthcare region (such as patient care areas and libraries).

8.3 Selection of Reference Material
The drug information references maintained by the drug information service shall conform, at a minimum, to the applicable legislated provincial/territorial requirements for a library maintained by a licensed pharmacy for use by its own staff.

Additional resources may be procured to suit the individual practice settings served by the drug information service. The reference material should include a mix of tertiary, secondary, and primary sources.

Note: A list of suggested auxiliary references pertaining to specific areas of practice is provided in Appendix A.

8.4 Selection of Drug Information Sources Not Listed in the Provincial/Territorial Requirements
The decision to select an additional drug information resource that is not listed in the applicable legislated provincial/territorial requirements for a pharmacy library should take into account the following considerations:

a) the practice setting served by the drug information service;
b) the attributes of the literature proposed for inclusion (for instance, editorial independence, evidence-based objectivity, currency, qualifications and affiliations of author[s], organization of material presented); and
c) the additional benefits and costs in relation to the information already held by the drug information service.

8.5 Reviewing and Updating Resources
The drug information service shall regularly review its non-electronic drug information resources to ensure that they are current and appropriate for the drug information services being provided. All outdated resources shall be identified and shall not be used as current reference resources.

8.5.1 Retaining Old References
The drug information service may retain old references as a means to obtain information about older medications; in these cases, the risks and limitations of using obsolete resources shall be acknowledged.

Note: A resource is generally considered out of date when a new edition is published.
9 Budget

Adequate financial resources are necessary to support the operational and capital plans of a drug information service.

9.1 Expenses

The operating and capital expenses of the drug information service should take into consideration the following cost categories:

a) personnel;

b) staff development;

c) capital facilities and equipment;

d) communication; and

e) information resources (procurement and maintenance of updates).

9.2 Revenues

Any revenues earned by the drug information service should be applied to offset the expenses.

10 Policies and Procedures

Written policies and procedures shall be established to promote the consistent delivery of high-quality drug information services that meet the needs of the clients and the organization and that comply with regulatory requirements. The policies and procedures should be kept up to date and should be reviewed at least every two years. Policies and procedures shall be developed and implemented to address the following issues:

a) setting the hours of service;

b) providing after-hours access to the service;

c) defining the population served;

d) defining the range of services that will and will not be provided;

e) selecting the information resources to be made available;

f) receiving and prioritizing requests;

g) designing and executing search strategies;

h) evaluating information;

i) preparing responses, including the chosen style to cite references used (e.g., the most recent reference style used by the Canadian Journal of Hospital Pharmacy);

j) communicating responses;

k) providing drug information education to pharmacy undergraduate and graduate students, residents, and staff pharmacists;

l) defining methods to obtain literature reprints and other information;

m) identifying and removing outdated resources from circulation;

n) reporting adverse drug reactions;

o) handling of Special Access Programme drugs and investigational drugs, where this is part of the responsibility of the drug information service;

p) establishing methods to manage drug information requests and statistics;

q) interpreting ethical principles for use in working through ethical dilemmas;

r) identifying and working through medicolegal issues, including liability;

s) developing indicators and plans for quality assessment and improvement;

t) defining borrowing privileges and procedures for access to and use of drug information resources by personnel outside the drug information centre;

u) setting a fee structure for information requests and surcharges for extraordinary requests;

v) establishing criteria for referring queries to another group of experts or another organization; and

w) handling media relations.

11 Receipt of Requests for Drug Information

Requests for drug information received from defined clients of the drug information service should be handled using the modified systematic approach.

11.1 Communication of Requests

Requests may be communicated verbally (face to face or by telephone) or in writing (by e-mail, facsimile, or other electronic media).

11.2 Responsibilities of Drug Information Pharmacist upon Receipt of Request

Upon receipt of a request, the drug information pharmacist shall:

a) elicit, understand, and assess the requestor's needs and the urgency of the request;

b) assess the requestor's level of understanding of the clinical and professional issues related to the request;

c) identify any legal or ethical issues related to the request;

d) prioritize the request; and

e) negotiate with the requestor the time frame for the response.
11.3 Documentation of the Request
All requests for drug information shall be documented using a standardized request form or database, which shall protect patient confidentiality. The form shall facilitate the preparation of a response, allow recording of the statistical data, and include the following elements:

a) professional background of requestor;

b) classification of the request;

c) degree of urgency (in terms of when the answer is needed by the requestor);

d) information resources already consulted by the requestor;

e) additional background information obtained after the initial request was received;

f) date and time of the request; and

g) name of the person receiving the request.

Additional data may be appropriate, such as:

a) specific method by which the request was communicated;

b) category of request (patient-specific or general);

c) patient’s current and past medications;

d) patient’s clinical condition; and

e) patient’s laboratory results.

12 Provision of Drug Information
The drug information pharmacist shall provide an accurate, complete, and timely response to requests for drug information using the modified systematic approach.

12.1 Timely Response
Responses shall be provided in a timely manner, with minimal delay, taking into consideration the complexity and urgency of the request.

The drug information pharmacist shall prioritize the request according to its urgency, in relation to other requests that must be addressed.

12.2 Design and Execution of Search Strategy
The drug information pharmacist shall design and execute a search strategy to respond to the request.

The drug information pharmacist may solicit the expertise and knowledge of other pharmacy practitioners and/or healthcare professionals as needed.

12.3 Evaluation and Use of Information
The drug information pharmacist shall evaluate and use the available information to formulate a response to the requestor.

12.4 Referencing of Comments and Statements
All comments and statements provided in the response shall be referenced and should be evidence-based.

12.5 Communicating the Response
The drug information pharmacist shall communicate the response to the requestor in a manner that best suits the urgency for and complexity of the drug information, regardless of the communication mode used for the original request.

When the response is provided verbally, the person providing the response should:

a) attempt to ensure that the recipient of the information has clearly understood what was communicated; and

b) assess whether a written follow-up response is required.

Complex responses should be provided in written format. Requests for information to substantiate the response provided (such as links to abstracts) should be accommodated, whenever possible.

12.6 Protecting Copyright
Copies of materials provided to the requestor shall protect the copyright held by the owner of the material. The drug information service should consider having a licensing arrangement with a copyright clearance or licensing organization.

12.7 Disclaimer
All information provided by the drug information service shall include a disclaimer specifying that it is the best information from the resources available to the drug information service at the time the response was formulated.

12.8 Documenting the Response
All requests, copies of references from the literature and other resources used in formulating responses, and the responses themselves, including the name of the drug information pharmacist who prepared the response, shall be documented using a standardized form or database.
The following information about the response should be recorded and stored with the request:

a) follow-up information obtained;
b) patient’s outcome (when available);
c) date and time of request;
d) date and time of response; and
e) method used to communicate the response (verbal, written, or both) to the requestor.

Additional, optional data may be appropriate, such as:

a) time required to generate the response; and
b) materials sent to the requestor if not mentioned within the response.

12.9 Supporting the Formulary System Committee

To support the hospital/regional formulary system committee in promoting safe, economical medication use, the drug information pharmacist shall:

a) critically appraise and evaluate the medical and pharmaceutical literature, in light of applicability to the hospital’s patient population;
b) provide objective, complete reviews of drugs that may be considered for inclusion in the formulary to ensure safe, appropriate, and cost-effective drug use;
c) evaluate drug information provided either verbally or in writing by pharmaceutical representatives;
d) maintain, or assist in maintaining, an up-to-date formulary system of approved drugs and/or drug-use guidelines;
e) contribute to the review and revision of drug libraries, drug protocols, and alert systems used in technological tools (such as computerized prescriber order entry systems, pharmacy systems, bar-coding systems, smart infusion pumps); and
f) collaborate with individual practitioners who have clinical expertise within patient care areas related to the information being developed.

c) educate undergraduate and graduate pharmacy students and residents about the drug information service; and
d) act as a preceptor to undergraduate and graduate pharmacy students when feasible.

13 Information Management

All documentation pertaining to the receipt of a request for drug information and the provision of drug information in response to such requests should be stored in a secure manner that permits timely retrieval by authorized personnel.

13.1 Filing of Requests and Completed Responses

Requests received, and the completed responses, shall be systematically filed for potential future use.

The filed response shall be assessed before it is reused, to determine if the information needs to be updated.

13.2 Filing System

The filing system used by the drug information service should be systematic, comprehensive, and current and should facilitate timely retrieval of individual drug information inquiries.

The method of indexing the information that is stored in the drug information files shall be based on a systematic method outlined in departmental policies. The American Hospital Formulary System therapeutic classification system\textsuperscript{13} for numbering drugs, the International Classification of Diseases\textsuperscript{14} for classifying diseases, and miscellaneous systems for clinical files that do not contain either a medication or disease within the title may be used to index paper and electronic drug files.

The inclusion and exclusion criteria for filing information shall depend on the scope of services offered and the type of storage system used.

Unnecessary duplication of information should be discouraged.

13.3 Retention of Records

Records shall be retained according to legislative requirements and the organization’s policies and procedures and for a minimum of seven years after the document was created.

\textbf{Note}: For records containing patient-identifying information, the reader is referred to the relevant provincial/territorial act(s) protecting health information.
13.4 Culling of Records
The contents of the filing system should be reviewed periodically to ensure the timely removal of outdated records.

14 Quality Management
The quality of the drug information service shall be continuously evaluated and reported to assess whether the information provided has been useful and has assisted clients to optimize patient outcomes.

14.1 Assessing the Structure for Providing Drug Information Services
The structure of the drug information service shall be evaluated by reviewing the following:

- adequacy of staffing levels;
- effectiveness of organizational structure;
- appropriateness of hours of service;
- availability and use of resources;
- suitability of premises; and
- development and use of policies and procedures.

14.2 Assessing the Process of Providing Drug Information Services
The process for answering drug information questions shall be independently evaluated by randomly selecting, and auditing the documentation of requests, the references used, and the responses provided by the drug information pharmacist. The evaluation process shall assess the quality of the services provided and should consist of the following elements:

- periodic internal peer reviews;
- periodic audits; and
- periodic surveys of clients to assess their satisfaction with the service.

**Note:** The form “Audit of Responses to Requests for Drug Information,” provided in Appendix B, may be used for such assessments.

14.2.1 Following up to Provide Additional Information to the Requestor
If the audit reveals additional information that is relevant to the original drug information request, the drug information pharmacist shall communicate that information to the original requestor within a reasonable time frame after the additional information comes to light.

14.3 Assessing the Outcome of the Drug Information Services
The outcome of the provision of drug information shall be evaluated by a client survey (in writing or by telephone) designed to identify the following:

- client satisfaction with the timeliness and perceived quality of the response;
- what was done with the information (such as change to an order or modification of a dose); and
- impact of the information on patient outcome (such as cure of disease or improvement, resolution, or prevention of symptoms).

14.4 Reporting Performance
A report should be prepared periodically (at least annually) and submitted to the pharmacy management entity to which the drug information service reports. The report shall facilitate the documentation, review, and reporting of the performance of the drug information service. It shall summarize the performance of the drug information service and should include the following elements:

- project priorities;
- summary of client assessments performed (see 14.3);
- achievements, including a summary of:
  - requests received;
  - workload; and
  - additional professional responsibilities;
- performance compared with the prior reporting period; and
- unresolved issues that affect the performance of the drug information service.

14.5 Follow-up Action Plan
Pharmacy management and the drug information service shall develop an action plan to continuously improve the quality of the drug information service, in terms of its structure, process, and outcomes. The plan should be implemented and revised as needed to ensure that the service meets the drug information needs of the clients it serves.
15 Literature Cited


