GUIDELINES FOR PRACTICE

PREFACE

These guidelines were originally published by the Canadian Society of Hospital Pharmacists (CSHP) as the CSHP Standards of Practice (1993).

These guidelines are intended to describe the optimal level of hospital pharmacy practice and reflect pharmacists' commitment to providing quality care for the patient. Their purpose is:

1. To define the scope and responsibility of health care facility pharmacy practice;

2. To define the role of the pharmacist in the health care facility;

3. To provide direction for identification of priorities and development of pharmacy services;

4. To serve as a reference or source of information for faculties and colleges of pharmacy in the development of their curricula; and,

5. To provide a definition of exemplary pharmacy services which can be used as a reference source for accrediting bodies, other health care organizations and governments.

With the development of the new **CSHP Standards of Practice in 2000**, these 1993 standards become a set of interim guidelines. They will provide information to the practitioner until such time as guidelines specifically directed to the new standards are developed over the next three years.

August, 2002

1. SCOPE

1.1
These Guidelines specify the ideal requirements for the practice of pharmacy in hospitals. Specific pharmacy services provided shall depend on the size, location, and function of the hospital. Users of this document are also referred to the Canadian Council on Health Facilities Accreditation (CCHFA) standards for accreditation purposes**.**

1.2
These Guidelines do not provide detailed information about the provision of each aspect of hospital pharmacy practice. References providing such information are included in the bibliography.

1.3
In these Guidelines, "shall" indicates a mandatory requirement; "should" indicates a recommendation, or that which is advised but not mandatory.

2. DEFINITIONS

The following definitions apply in these Guidelines:

Adverse drug reaction - a reaction that has neither therapeutic, prophylactic or diagnostic benefit to the patient.

Ambulatory pharmacy services - the provision of pharmacy services to patients who require medical attention yet do not require admission to an institution.

Automatic stop order - the practice of automatically terminating a drug order after a specific time period if the physician has not specified a limit to the time or number of doses. The purpose is to avoid prolonged administration of medications which may inadvertently result in harmful consequences to the patient and unnecessary expense**.**

Continuous quality improvement - a proactive process with the underlying assumption that every process can be improved. The core theoretical constructs are: focus on customers, focus on processes, and improve continuously. CQI builds on quality assurance (QA) by extending activities beyond problem resolution to ongoing improvement of all key processes involved in patient care/service.

Controlled dosage system - a form of drug distribution, also known as a monitored dosage system, in which medication orders are filled individually and packaged (e.g., blister cards, cassettes) in accordance with scheduled administration times. Each package contains no less than one day's and no more than approximately one month's supply of medication. This is not a unit dose system.

Cytotoxic drug - a drug that has a deleterious effect on cells; usually refers to antineoplastics or drugs used in the treatment of cancer.

Dispense - to provide a medication in response to a medication order but does not include the administration of a medication.

Drug distribution service - a pharmacy-coordinated hospital system used to provide medications to the patient in a controlled manner.

Drug recall - a request for and the subsequent removal of a defective medication from stock. This usually results when a particular lot number of a medication is of substandard quality or when a particular medication produces unexpected side effects.

Drug use control - a system of knowledge, understanding, judgments, procedures, skills, controls and ethics that assures optimum safety in the distribution and use of drugs (Brodie, 1967).

Drug use evaluation - the prospective or concurrent analysis of the pattern of use of drugs against a predetermined set of criteria, followed by assessment, implementation of corrective action, and reassessment.

Drug utilization review - the retrospective analysis of the pattern of use of drugs against a predetermined set of criteria, followed by assessment, implementation of corrective action, and reassessment.

Emergency release drug - a drug not approved for use in Canada and whose use is limited to specific physicians approved by the Health Protection Branch.

Formulary - a dynamic compilation of medications, information, and related policies, approved for use within the hospital, that reflects the current clinical judgment of the medical and pharmacy staff.

Goal - a statement addressing a desired end result based on the mission and vision of the department described in proactive, broad, long-range terms. A goal is a general philosophical commitment indicating the conceptual direction of the department over a period of time.

Health record - patient's medical chart or medical record.

Hospital - a facility that is approved or designated by a federal, provincial or territorial government, in accordance with the appropriate laws to provide health services treatment to persons suffering from diseases or illness (may also refer to other organized health care settings).

Individual patient prescription system - a form of drug distribution in which medications are dispensed by the pharmacy in patient-specific labelled prescription containers.

Investigational drug - a medication approved by the Health Protection Branch for limited clinical use in Canada by approved investigators.

Medication discrepancy - an event that does not involve the actual administration or omission of a drug to a specific patient, but is a situation where an error in the drug process has been detected and corrected before reaching the patient. This includes the unexplained loss or theft of a medication.

Medication incident - a patient-related event which involves the incorrect administration or omission of a medication to a specific patient.

Medication profile - an ongoing record of patient specific information used to monitor drug therapy. This record includes all medications prescribed and dispensed for the patient.

Night cabinet - a suitable, locked storage area (a cupboard, room, cart, etc.) containing supplies of repacked medications required when the pharmacy is closed.

Non-Formulary drug - a drug not listed in the hospital Formulary.

Objectives - the concrete steps to achieve identified goals which include action plans indicating the person(s) responsible; have identified start and completion dates; are realistic and measurable; are written annually; and are monitored to determine if they are being achieved.

Patient counselling - counselling of selected patients about their medications. Written information is provided when appropriate to supplement verbal counselling.

Pharmaceutical Care - is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. The process of pharmaceutical care involves designing, implementing and monitoring a therapeutic plan. (Hepler and Strand, 1990)

Pharmacist - one who meets the requirements of a regulatory body in Canada.

Pharmacokinetics - the action of drugs in the body over a period of time, including the processes of absorption, distribution, localization in tissue, biotransformation, and excretion.

Pharmacotherapy monitoring - a patient-specific assessment by the pharmacist of medications based on the diagnoses, concurrent therapy, indication, adverse effects, allergies, laboratory tests, and prognosis.

Pharmacy and therapeutics committee - a committee composed of representatives from pharmacy, medicine, nursing, administration, and other disciplines which serves as a policy recommending body on all matters relating to the use of medications in the hospital. This committee may be known by other names - e.g. Pharmacology Committee, Pharmacotherapy Committee.

Pharmacy service - a system that integrates the application of the pharmacist's specialized knowledge with the distribution of the medication to assure optimal medication therapy for the patient.

Policy - A general statement of principle pertaining to a specific issue, task, or service.

Preprinted order - a series of predetermined orders that are accepted by the clinical team for use in the management of a specific diagnosis or following a specific diagnostic procedure. Using the preprinted form the physician can individualize any element of a particular drug order.

Principal functions - the main areas of responsibility for a pharmacy service.

Procedure - detailed guidelines for implementing policy.

Repackage - to remove drugs from manufacturer's original package and place within another form of packaging (e.g., strip packaging, blister packaging, etc.).

Self-administration program - an organized program in which patients are taught how to and allowed to administer their own medications in the hospital, in accordance with the hospital and pharmacy policies and procedures.

Statement of purpose - a statement describing the department's reason for existence. The statement defines the nature and range of the activities to be accomplished, and includes the broad identification of the type of operations, the department's major areas of service, and its clientele or user groups.

Telephone drug order - a medication order given over the telephone by a legally qualified prescriber.

Therapeutic interchange - a process where drug products, which are chemically different but considered by the medical and pharmacy staff to be therapeutically equivalent, are interchanged according to hospital policies.

Unit dose distribution - a form of drug distribution in which orders for each patient are filled individually and packaged in unit-of-use packages. Each package contains one dose and not usually more than a 24-hour supply of doses is available in the patient care area at any time.

Verbal drug order - a medication order given verbally, other than by telephone, by a legally qualified prescriber.

Ward stock - those medications which are stocked in the patient care area at all times and are not individually labelled for a specific patient's use.

Workload measurement system - a means by which productivity of a pharmacy service is measured through a system which identifies and defines the activities of pharmacy practice and determines the time required to perform these activities against established values.

WHMIS - Workplace Hazardous Materials Information System - legislation to establish national requirements to ensure that information regarding the hazards of material produced or sold in, imported to, or used within workplaces in Canada is provided by suppliers to employers and in turn to employees.

3. DEPARTMENT ADMINISTRATION

3.1 Provision of Pharmacy Services

3 .1.1
The hospital shall make provision for the delivery of pharmacy services either by employing pharmacy staff within the hospital or by making an alternate arrangement with an outside source, for example, a community pharmacy.

3.1.2
The pharmacy service shall be administered in accordance with accepted ethical and professional practices and legal requirements and shall meet the needs of the patients.

3.1.3
The pharmacy service shall be responsible for drug-use control including purchasing, storing, distributing, and ensuring the optimal patient outcomes resulting from the use of medications in the hospital.

3.2 Direction

3.2.1
A pharmacist shall direct all pharmacy services.

3.2.1.1
The director of pharmacy services shall be a pharmacist who is experienced in the practice of hospital pharmacy and should have completed an accredited hospital pharmacy residency program.

3.2.1.2
The director of pharmacy services should be a member of the Canadian Society of Hospital Pharmacists.

3.2.2
The director of pharmacy, in consultation with the pharmacy staff**,** shall develop a statement of purpose, goals, and objectives for the pharmacy service that are consistent with the mission of the hospital and that assure the safe and appropriate distribution and use of medications.

3.2.2.1
The statement of purpose, goals and objectives shall be reviewed regularly, revised when necessary and dated accordingly.

3.2.2.2
The goals and objectives shall include, but not be limited to, the following:

(a) the practice of pharmacy consistent with the size, location, and function of the hospital and the changing needs of the patients and the medical and nursing staff;
(b) the provision of pharmacy programs to encourage safe, appropriate, and economical medication therapy;
(c) the provision of a drug distribution service which ensures safe, appropriate, and economical use of medications—unit dose is the system of choice;
(d) the participation with other health care team members in the assessment and medication treatment of the individual patient;
(e) the promotion and maintenance of educational and information programs for the hospital staff which are designed to enhance the understanding, recognition, management, and prevention of medication-related problems in patients; and,
(f) the provision of an environment for the practice of pharmacy which will encourage the growth and development of the individual pharmacy staff member and student in the health care field.

3.3 Organization

3.3.1
A written organizational chart for the provision of pharmacy services shall define the relationships and formal lines of communication within the service and relationships of the service with other departments and services within the hospital.

3.3.1.1
The organizational chart shall be available to all pharmacy personnel.

3.3.1.2
The organizational chart shall be reviewed every 3 years, revised as necessary, and dated accordingly.

3.3.2
The pharmacy service shall be represented by a pharmacist in planning, decision making, and policy formulation related to the service and to medication therapy. This includes membership on the Pharmacy and Therapeutics Committee and may include membership on other hospital and medical staff committees.

3.4 Staffing

3.4.1
The pharmacy department shall be staffed by sufficient numbers of professional, technical, and other support personnel to meet the goals and objectives of the department and of the hospital.

3.4.2
There shall be written job descriptions for all pharmacy personnel clearly delineating professional and technical functions.

3.4.2.1
Job descriptions shall be reviewed at least every 3 years, revised as necessary, dated accordingly, and approved in accordance with hospital and pharmacy policies and procedures.

3.4.3
Support personnel shall be used to minimize the direct involvement of pharmacists in technical, clerical, and secretarial activities.

3.5 Hours of Pharmacy Service

3.5.1
Hours of pharmacy services shall be adequate to meet the scope and programs of the service and the needs of the customer. They shall depend on the size, location and the functions of the hospital and the availability of staff.

3.5.2
If 24-hour pharmacy service is not available on-site, there shall be provision for after-hours pharmacy service.

3.5.2.1
There shall be a medication night cabinet for after-hours pharmacy service so medications ordered for a patient after regular pharmacy hours may be obtained to commence therapy if necessary.

3.5.2.1.1
The medication night cabinet shall be stocked with a minimum supply of the medication most commonly required for immediate use.

3.5.2.1.2
Narcotics and controlled medications may be stocked in the medication night cabinet provided they are secured with a double lock.

3.5.2.1.3
The medications shall be stored in labelled unit-of-use containers with an indexing system to permit rapid accessibility.

3.5.2.1.4
The pharmacy department shall regularly restock the night cabinet with the medication that has been removed.

3.5.2.1.5
The medication night cabinet shall be checked on a regular basis for expired or missing medications.

3.5.2.1.6
When the pharmacy is closed, an authorized nurse shall obtain the needed medications from the medication night cabinet. All withdrawals from the night cabinet shall be documented. The physician's original order or direct copy should be left with this record for a pharmacist to check at the earliest time after regular service resumes. Information on the record and order shall include:
(a) the patient's name, hospital number, and location:
(b) a complete description of the medication product;
(c) the prescriber's name; and,
(d) the name and signature of the authorized nurse.

3.5.2.1.7
In the event a required medication is not available in the night cabinet or drug information is required, a designated pharmacist shall be available for consultation after regular pharmacy hours.

3.5.3
A policy shall be established for an emergency situation, when the pharmacy is closed, which necessitates immediate access by designated non-pharmacy personnel. Access shall be documented and communicated to the pharmacist as soon as possible. Examples of emergency situations would include fire, flood or security breach. Access for obtaining medications should only be by the pharmacist or designated non-pharmacy personnel under authority and guidance of the pharmacist.

3.6 Policy and Procedure Manual

3.6.1
The pharmacy department shall develop and maintain a complete policy and procedure manual that is well organized, easily

accessible to all pharmacy personnel, and familiar to all pharmacy personnel.

3.6.2
The manual shall provide pharmacy staff with clear direction on the scope and limitations of their functions and responsibilities.

3.6.3
Written policies which govern drug use control and patient-oriented pharmacy services shall be developed by pharmacists in collaboration with the medical and nursing personnel and other appropriate disciplines, and approved by the Pharmacy and Therapeutics Committee and other appropriate administrative committees.

3.6.4
The policy and procedure manual shall include information relating to the administrative, and procedural aspects of pharmacy services as well as those guidelines for all medication-related activities in the hospital that have been approved by hospital administration or the Pharmacy and Therapeutics Committee.

3.6.4.1
The policies and procedures shall identify personnel involved in each pharmacy activity.

3.6.5
The pharmacy department shall communicate the appropriate policies, procedures, and guidelines necessary for the attainment of drug use control to other departments and health care professionals within the hospital.

3.6.6
The policies and procedures shall be reviewed at least every three years, revised as necessary, dated accordingly, and approved in accordance with hospital policies and procedures.

3.7 Pharmacy and Therapeutics Committee

3.7.1
A Pharmacy and Therapeutics Committee shall:
(a) review and monitor compliance to all relevant policies related to medications, including medication administration;
(b) make recommendations to administration and medical staff on the maintenance and improvement of policies and procedures relative to the safe, effective, and economical use of medications;
(c) compile and effectively maintain a formulary suited to the hospital's needs; and,
(d) undertake critical evaluations of all requests for changes to the formulary.

3.7.2
The Pharmacy and Therapeutics Committee membership shall include representatives from:
(a) pharmacy;
(b) the medical staff;
(c) nursing;
(d) administration; and,
(e) other disciplines as required.

3.7.3
The Pharmacy and Therapeutics Committee shall meet regularly, at least four times annually, and shall document its terms of reference, its activities, its findings, its recommendations, and actions resulting from these recommendations.

3.7.4
All recommended policies shall be ratified by the appropriate medical and administrative committees.

3.8 Pharmacy Department Reports

3.8.1
The pharmacy department shall provide reports to administration to assist with monitoring and evaluation of pharmacy services. These reports may include, but are not limited to:
(a) workload data;
(b) staffing data;
(c) variance analysis reports;
(d) quality improvement activities;
(e) educational activities; and,
(f) progress with respect to goals and objectives.

3.8.2
The pharmacy department shall be involved in budget preparation for the service.

3.9 Workload Measurement System

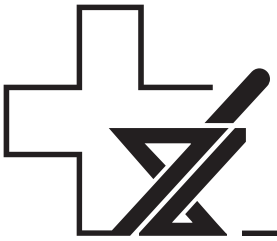
3.9.1
The Canadian Hospital Pharmacy Workload Measurement System shall be the basis to quantify workload and monitor activities of the pharmacy department.

3.10 Quality Improvement Process

3.10.1
The pharmacy department should use a continuous quality improvement (CQI) process to evaluate the quality of pharmacy services provided to the customer.

3.10.2
Documentation supporting this process should include, but not be limited to:
(a) identification of pharmacy department's customers;
(b) evaluation by those customers of pharmacy services;
(c) staff training, specific to CQI;
(d) staff involvement in the processes; and,
(e) feedback to staff and appropriate customers.

3.10.3
Documentation supporting the CQI process should include, but not be limited to:
(a) identification of problem or area for improvement;
(b) identification of customers relevant to the problem;
(c) implementation of quality improvement teams with staff and cross-functional representation;
(d) application of relevant tools and techniques (e.g., flow chart);
(e) data collection and analysis;
(f) identification of key measurements;



(g) identification of target levels;
(h) analysis of gaps in performance;
(i) actions necessary to improve performance or the process; and,
(j) implementation and evaluation plan.

3.10.4
Outcome indicators to assess the quality of pharmacy services provided to the customers should include, but not be limited to:
(a) organizational pre-requisites (structural);
(b) operational indicators (processes);
(c) medication-use indicators; and,
(d) patient-care indicators (outcomes):
  (i) to monitor the most important aspects of pharmaceutical care;
  (ii) to evaluate care to identify problems and opportunities for improvement; and,
  (iii) to implement actions to resolve problems and improve the quality of patient care and subsequently its effectiveness.

4. FACILITIES, EQUIPMENT AND SUPPLIES

4.1
There shall be sufficient space, facilities, equipment, information resources, and supplies which are of the type, quality, and quantity to:
(a) support the principal functions and related processes, goals, and objectives;
(b) ensure a safe working environment for pharmacy staff (e.g., consideration for handling antibiotic, cytotoxic, biological, and hazardous products); and,
(c) integrate the pharmacy with the hospital's communication and delivery systems.

4.2
All equipment used in the preparation, distribution, and administration of medication shall be appropriately and regularly serviced to ensure accurate and safe operation.

4.3
There shall be procedures established to authorize and control access to computer information systems.

5. PHARMACEUTICAL CARE AND PHARMACY SERVICES

5.1 Medication Order Review

5.1.1
All medication orders should be reviewed by the pharmacist prior to medication administration to the patient. After-hours or ward stock orders shall be reviewed at the earliest opportunity.

5.1.2
Prior to dispensing any medication, the pharmacist shall review the prescriber's original written order or a direct copy to ensure that the prescriber's medication order is authentic, accurate and appropriate. The pharmacist shall check the medication order for:
(a) the patient's name, hospital number and location;
(b) signature of authorized prescriber;
(c) the name of the medication and formulary status;
(d) dose, form, and strength;
(e) route and frequency of administration;
(f) duration of treatment, if limited;
(g) complete directions for appropriate use;
(h) date and time order was written; and,
(i) for verbal and/or telephone orders, the name and signature of the person who received the order and name of the prescriber.

5.1.3
The pharmacist shall ensure that a complete and current medication profile, either through a manual or computerized system, is available. Patient medication profile information shall include:
(a) name of the patient, hospital number, and location;
(b) admission date;
(c) attending physician's name and/or prescriber's name;
(d) date of birth;
(e) gender;
(f) weight (for pediatric/neonatal patients);
(g) allergies and/or sensitivities;
(h) list of current medication orders;
(i) list of medications which have been prescribed since admission to the hospital (in a chronological sequence);
(j) for each medication order: medication name, dose, route, dosage form, directions for use, and administration times (if not following standardized times);
(k) start and stop date of the medication, when applicable;
(l) date medications were dispensed, refilled, or discontinued; and,
(m) signature or initials of the pharmacist or technician entering or verifying the transcription or computerized entry of medication orders into the medication profile.

5.1.4
The following information should also be kept as part of the medication profile, but not be limited to**:**
(a) medication history prior to hospital admission;
(b) other pertinent monitoring data (e.g., drug serum concentrations, renal function, etc.);
(c) other therapies (e.g., parenteral nutrition, enteral nutrition, etc.);
(d) diagnosis on admission and updates when applicable; and,
(e) selected medical data and diet information relevant to medication therapy.

5.1.5
The pharmacist shall review the profile information prior to dispensing the patient's medications. The pharmacist shall assess the physician's original medication order, utilizing the patient's medication profile for the detection of:
(a) duplication of therapeutically similar medications;
(b) potential allergic or adverse drug reactions;
(c) possible drug-disease incompatibilities;

(d) significant drug-drug interactions;
(e) correct dosage and dosage interval;
(f) appropriate dosage form and route of administration;
(g) problems related to intravenous administration including potential incompatibilities, drug stability, volume of intravenous fluid for medication administration, and rate of administration; and,
(h) appropriate length of therapy.

5.1.6
The pharmacist shall resolve any questions regarding the order with the prescriber and shall document the resolution in the patient's health record. Telephone and verbal orders received by the pharmacist from the prescriber shall be reduced to writing immediately on the order form, and shall be countersigned by the prescriber at a later time in accordance with hospital policy and legal requirements.

5.1.7
The use of preprinted medication orders, if considered necessary:
(a) shall be approved individually by the appropriate hospital committee (e.g., Medical Advisory Committee);
(b) shall be reviewed annually and revised as necessary;
(c) shall have a copy that can be appended to the medical record; and,
(d) shall be authorized by the prescriber and individualized according to the patient's needs.

5.1.8
Written policies and procedures shall govern the use of p.r.n. medication and automatic stop orders.

5.2 Pharmaceutical Care

5.2.1
The pharmacist should provide pharmaceutical care to all patients. For selective monitoring, if resources are limited, the pharmacist may identify patients using criteria such as:
a) patients whose clinical state or condition may affect medication absorption or disposition, alter dosage requirements, or predispose them to adverse drug reactions or medication toxicity;
(b) populations (e.g., geriatrics, pediatrics, or pregnancy) where age, weight, or physiologic parameters are important considerations in determining appropriate medication therapy;
(c) patients on multiple drug therapy;
(d) patients taking medications with a low therapeutic index;
(e) patients taking investigational or emergency release medications;
(f) patients taking medications in doses greater or less than recommended by the manufacturer or recognized references; and,
(g) patients on parenteral nutrition.

5.2.2
The pharmacist should discuss the desired outcome of drug therapy with the physician, the patient or delegate, and other health care professionals as required. The pharmacist shall actively evaluate patient needs to ensure that the patient is receiving drug therapy that is achieving the desired therapeutic outcome.

5.2.3
The pharmacist shall:
(a) identify, prevent, and resolve drug-related problems in patients. These include patients:
  i) needing pharmacotherapy but not receiving it;
  ii) taking or receiving the wrong drug;
  iii) taking or receiving too little of the correct drug;
  iv) taking or receiving too much of the correct drug;
  v) experiencing an adverse drug reaction;
  vi) experiencing a drug-drug, drug-food interaction;
  vii) not taking or receiving the drug prescribed; and/or,
  viii) taking or receiving a drug for which there is no valid medical indication; and,
(b) document provision of pharmaceutical care in the patient health record in accordance with hospital and pharmacy policies and procedures.

5.2.4
The pharmacist should assess the patient for development of drug-related problems throughout the patient's stay by evaluating:
(a) the patient's response to medication therapy and achievement of the desired therapeutic outcome;
(b) adverse medication effects including allergies and sensitivities; and,
(c) changes in the patient's clinical condition (including altered kinetics of drug absorption, distribution, metabolism, or excretion) which necessitate an alteration in medication therapy or dosage.

5.2.5
The pharmacist should consider the potential cost implications of drug therapy for the individual patient and the health care system to ensure the most beneficial and most economical therapy is utilized.

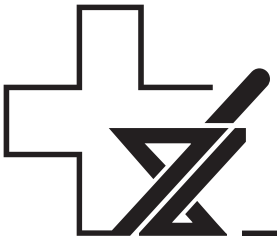
5.3 Interprofessional Team Participation

5.3.1
The pharmacist shall participate with other health care team members in the provision of patient care by discussing the patient's medication therapy with other members of the health care team during informal discussions, bedside rounds, interdisciplinary team conferences or meetings.

5.3.2
The pharmacist should participate in the assessment, implementation, monitoring, and evaluation of the patient medication self-administration program, where applicable.

5.4 Drug Use Evaluation

5.4.1
The pharmacy department shall coordinate, in cooperation with the medical staff and the Pharmacy and Therapeutics Committee, a system for the ongoing evaluation of medication use within the hospital that may include:
(a) development of medication use criteria;



(b) evaluation of medication use against the predetermined criteria;
(c) identification of problem areas;
(d) education to correct patterns of inappropriate medication use; and,
(e) evaluation of such educational programs.

5.4.2
The frequency and depth of evaluation shall depend on the disease and therapy complexity of the patients within the institution, and shall allow an accurate assessment of drug use within the institution.

5.4.3
Problems detected during the evaluation process shall be communicated to the responsible bodies.

5.4.4
Recommendations for improvement may include educational programs or structural or procedural modifications.

5.5 Drug Information

5.5.1
The pharmacist shall provide drug information, including patient-specific drug information, to health care personnel, and where appropriate, according to the CSHP Guidelines on the Provision of Drug Information Services.

5.5.2
The pharmacy shall have current drug-related reference material available. (Refer to the CSHP Recommended Drug Information References.) The pharmacy shall develop a system of classification and organization that facilitates the rapid retrieval of drug information.

5.5.3
The pharmacist shall provide information on medications and medication therapy by:
(a) providing information related to a specific patient's pharmacotherapy;
(b) responding to drug-related questions posed by staff or patients;
(c) recommending drug-related references for use by the hospital;
(d) providing drug-related newsletters to health care staff;
(e) providing inservice presentations based on demonstrated need or request;
(f) participation on the Pharmacy and Therapeutics Committee; and,
(g) participation on the Pharmacy-Nursing Committee.

5.5.4
Access to drug information services shall be available 24 hours a day, seven days a week. During hours the pharmacy is not open and in situations which cannot wait for regular hours of service, drug information shall be provided by the on-call pharmacist.

5.5.5
The pharmacist shall provide current information on the assessment, management, prevention of drug poisoning in conjunction with, or in the absence of, a poison control centre.

5.6 Medication Counselling

5.6.1
The pharmacist shall counsel selected patients (or their agents), individually or in groups, to provide specific information required for safe and appropriate medication therapy and compliance.

5.6.2
The medication counselling service shall provide information to the patient on the following aspects of medication use:
(a) the name of the medication and dosage;
(b) the purpose of the medication and therapeutic goals;
(c) administration and/or use of the medication to include the route and frequency of medication administration, the correct use of special dosage forms, the proper scheduling of doses and the duration of therapy;
(d) action to be taken in the event of a dosage omission;
(e) instructions on proper storage of medication;
(f) a discussion of possible adverse and/or toxic drug reactions which may occur. This may include measures to be taken to avoid their occurrence, their effects on normal activities and the appropriate action to be taken by the patient if an adverse reaction occurs;
(g) potential drug-drug or drug-food interactions or other therapeutic incompatibilities;
(h) prescription refill information; and,
(i) other information unique to the specific patient or medication.

5.6.3
Verbal instructions shall be supplemented with written information and other aids, (e.g., audio-visual and compliance aids), where appropriate.

5.6.4
The pharmacist shall evaluate the effectiveness of counselling on the patient's medication knowledge through questioning and/or follow-up.

5.6.5
The pharmacy department, in cooperation with the medical and nursing staff, shall develop policies and procedures regarding patient medication self-administration programs.

5.6.6
The pharmacist shall document the occurrence of the medication consultation and any drug-related problems, concerns or recommendations in the patient's health record.

5.7 Adverse Drug Reaction Reporting Program

5.7.1
The pharmacy department shall coordinate, in cooperation with the medical and nursing staff, the adverse drug reaction reporting program. This shall include:
(a) the identification and immediate reporting of adverse drug

reactions to the prescribing physician and pharmacy;
(b) documentation in the patient's health record;
(c) the investigation and validation of adverse drug reactions including the collection of follow-up information, the treatment of the adverse drug reaction, and the outcome;
(d) the evaluation of the adverse drug reaction to determine the cause-effect relationship;
(e) the tabulation of adverse drug reactions;
(f) the regular reporting of adverse drug reactions to the Pharmacy and Therapeutics Committee;
(g) the reporting of adverse drug reactions to the Health Protection Branch and to the drug manufacturer, according to hospital policy and provincial requirements; and,
(h) the notification of the patient of hypersensitivities detected and mechanisms to avoid recurrence, including, when appropriate, written documentation and Medic Alert bracelets.

5.7.2
The pharmacy department shall maintain current information about adverse drug reactions including those occurring in the hospital and those described in the literature.

5.7.3
Policies and procedures pertaining to the reporting of adverse drug reactions shall be approved and supported by the Pharmacy and Therapeutics Committee and the Medical Advisory Committee.

5.8 Medication Incident and Medication Discrepancy Reporting Program

5.8.1
The pharmacy department shall participate in a medication incident and medication discrepancy reporting program, in accordance with the CSHP Guidelines for Medication Incident and Medication Discrepancy Reporting.

5.8.2
There shall be written policies and procedures to report, document, analyze, and follow-up medication incidents and medication discrepancies.

5.8.3
A written report shall be prepared for the designated hospital committee(s) describing any medication incidents and medication discrepancies occurring in prescribing, dispensing, or administration of a medication.

5.8.4
These reports shall be analyzed and necessary action taken to minimize the possibility of recurrence of such medication incidents and medication discrepancies.

5.9 Medication History Service

5.9.1
The pharmacist shall interview selected patients for the purpose of obtaining medication histories.

5.9.2
The medication history should contain information relating to:
(a) adverse drug reactions, including allergies;
(b) past and currently prescribed medication therapy including the name of the medication, dose, frequency of administration, indication and duration of therapy;
(c) non-prescription medication use; and,
(d) compliance with prescribed medication regimens.

5.9.3
The pharmacist shall evaluate the information within the medication history by correlating the history of medication use with the patient's present medical condition(s) and current medication therapy by assessing:
(a) the possibility of an adverse drug reaction, including drug-induced disease and/or drug sensitivity;
(b) the potential for a drug-drug, drug-food, or drug-lab test interaction;
(c) the presence of drug dependency;
(d) the failure of medication therapy as a result of non-compliant behaviour;
(e) the patient's knowledge of medication therapy; and,
(f) other habits or practices which may lead to medication-related problems.

5.9.4
The pharmacist shall resolve any problems or potential problems with the physician, in consultation with the patient.

5.9.5
The pharmacist shall document the medication history, including any recommendations resulting from the evaluation process, in the patient's health record.

6. DRUG USE CONTROL

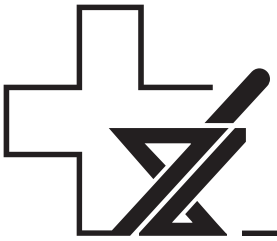
6.1 Formulary System

6.1.1
The pharmacy department, in cooperation with the Pharmacy and Therapeutics Committee, shall maintain a formulary system governing the selection and usage of medications in the hospital.

6.1.2
The formulary system shall be based on therapeutic and economic considerations of medication use.

6.1.3
The formulary shall be approved by the appropriate hospital committee (e.g., Medical Advisory Committee).

6.1.4
The formulary shall contain:
(a) the selected drug products approved for use within the hospital, classified according to pharmacologic-therapeutic use;
(b) information about available dosage forms, dosage strengths, unit-of-use quantities and unit cost;
(c) information on the use of the formulary and its administration by the relevant hospital committees;



(d) a cross-index of selected medication products according to generic and trade names;
(e) aids for medication use, such as tables, dosing charts, and other sources of information; and,
(f) policies and procedures governing additions and deletions to the formulary.

6.1.5
The formulary shall be available to all professionals prescribing, administering, or dispensing medications.

6.1.6
The pharmacy department shall be responsible for the maintenance and control of the formulary system throughout the hospital.

6.1.7
Policies and procedures shall provide for the use of medications within the hospital, including:
(a) formulary;
(b) non-formulary;
(c) sample;
(d) investigational;
(e) emergency release;
(f) drugs required on an emergency basis;
(g) patient-owned medications;
(h) restrictions on the use of specific medications to defined therapeutic indications or specialties within the hospital; and,
(i) therapeutic interchange.

6.1.7.1
The pharmacy department shall be responsible for the storage and distribution of all investigational and emergency release drugs used for inpatients and outpatients**:**
(a) investigational drugs shall be used only under the authorization of the principal investigator;
(b) investigational drugs shall be approved for use by the appropriate hospital committees;
(c) policies and procedures shall be available which describe the approval process for the use of emergency release drugs;
(d) drug information on these medications shall be readily available;
(e) the pharmacy shall maintain utilization records; and,
(f) the use and control of investigational drugs shall comply with the CSHP Guidelines for the Use of Investigational Drugs in Hospitals.

6.1.7.2
The use of sample medications in the hospital shall be discouraged. If sample medications are brought into the hospital, they shall be controlled, stored and distributed by the pharmacy department.

6.1.7.3
Medications brought to the hospital by patients shall not be administered unless the contents can be verified. Written orders to administer a patient's own medications shall be given by the prescriber.

6.1.7.3.1
Patients should be requested and encouraged to have their medications that are brought to the hospital sent home with a family member.

6.1.7.3.2
If the patient's medications cannot be sent home during hospitalization, they shall be identified and stored in a secure space, separate from hospital inpatient medications, in accordance with hospital policy regarding patients' valuables and returned to the patient at time of discharge.

6.1.7.3.3
Medications not returned to the patient shall be destroyed by the pharmacy in accordance with hospital policy and legal requirements.

6.1.8
The formulary shall be reviewed regularly, revised as necessary, and dated accordingly.

6.1.8.1
A request for the addition of a drug to the formulary shall be made in writing by the requesting physician and shall include:
(a) the generic name, strength and dosage form of the drug;
(b) the therapeutic classification, major indications, side effects, precautions, and usual dose of the drug;
(c) the reasons it should be added to the formulary;
(d) any restrictions that should be placed on the use of the drug;
(e) what drugs are currently in the formulary that could be replaced by the new drug; and,
(f) special training or equipment that may be required to administer the drugs or monitor the use of the drug.

6.1.8.2
The full impact of the addition or deletion shall be considered**,** including drug acquisition costs, carrying costs, preparation costs, human resource time, administration equipment required, changes to length of stay, estimated frequency and duration of use and monitoring costs**.**

6.1.8.3
The proposed formulary change shall be presented at a sub sequent Pharmacy and Therapeutics Committee meeting for evaluation.

6.1.8.4
The requesting physician should be invited to attend the Pharmacy and Therapeutics Committee meeting and shall be informed of the subsequent decision.

6.1.8.5
The Pharmacy and Therapeutics Committee shall advise the medical, nursing and pharmacy staff in writing of changes to the hospital formulary.

6.2 Drug Procurement

6.2.1
The purchasing of all medications shall be under the supervision of a pharmacist.

6.2.2
The pharmacist shall use professional judgment and any other sources of information in medication product selection to ensure drug quality.

6.2.3
The pharmacy department shall establish procedures for obtaining emergency supplies of medications.

6.3 Drug Inventory Management

6.3.1
The pharmacist shall be responsible for maintaining records of all drug transactions, including those required by law to maintain adequate inventory control and accountability.

6.3.2
The pharmacist shall maintain an adequate inventory control system that may include but is not limited to:
(a) establishment of minimum and maximum stock levels to avoid the problems of depletion or overstocking of medication products;
(b) accountability for medication products as they are removed from stock;
(c) detection and proper disposal of outdated, deteriorated, recalled, obsolete, or hazardous medication products; and,
(d) analysis and interpretation of medication usage trends and their economic impact.

6.3.3
All pharmaceuticals shall be delivered unopened to the pharmacy department upon receipt in the hospital receiving area.

6.3.4
All medications shall be placed into stock in appropriate storage areas upon receipt.

6.3.5
Medication storage, including investigational drugs, within the pharmacy and throughout the hospital shall be the responsibility of the pharmacy department.

6.3.5.1
All medications shall be stored under proper conditions of sanitation, temperature, light, humidity, ventilation, regulation, and security.

6.3.5.2
Access to medication storage areas shall be restricted to designated personnel.

6.3.5.3
Medications shall be stored to ensure proper stock rotation.

6.3.5.4
Quarterly inspections shall be made of all medication storage areas and medication centres within the hospital. A written record shall verify that:
(a) disinfectants and medications for external use are stored separately from internal and injectable medications;
(b) medications requiring special environmental conditions for stability are properly stored;
(c) no outdated or obsolete medications are stocked;
(d) narcotics and controlled drug substances are being stored with proper measures of security;
(e) medications are not being overstocked;
(f) medications which may be required on an urgent or emergency basis are in adequate and proper supply;
(g) patient medications no longer required are returned to pharmacy; and,
(h) standards of neatness and cleanliness are consistent with good medication handling practices.

6.3.6
Non-usable and expired medications shall be disposed of in accordance with professional standards and legal requirements.

6.3.6.1
All expired and non-usable medications shall be stored in a separate, secure area in pharmacy until final disposal.

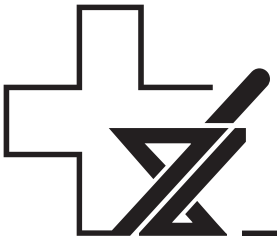
6.3.7
There shall be drug recall procedures that can be readily implemented. The results of any recall shall be documented.

6.4 Medication Distribution Service

6.4.1 General Principles

6.4.1.1
The pharmacy department shall develop and provide medication distribution services to meet the needs of the patients and to optimize safety, efficiency and economy.

6.4.1.2
The following criteria shall be considered during the design of the medication distribution system in order to help reduce the potential for error and to reduce the nursing time involved in handling and administering medications. The system should:
(a) reduce or eliminate transcription of medication orders (e.g., utilizing self-copying order forms);
(b) provide legible patient and medication order information;
(c) provide the medication in an identified dosage unit ready for administration, wherever possible and practical;
(d) protect the medication from contamination;
(e) minimize nursing time required to prepare the medication prior to administration;
(f) eliminate the drug ticket as a means to identify and schedule medications;
(g) simplify charting and allow recording of medications at the time of administration;
(h) provide a means to determine whether or not an individual dose has been administered;



(i) simplify the recording procedure; and,
(j) eliminate or reduce the need to maintain ward stock.

6.4.1.3
The unit dose system is the drug distribution system of choice. Other distribution systems may include but are not limited to:
(a) controlled dosage system;
(b) individual patient prescription system;
(c) ward stock; and/or,
(d) patient medication self-administration programs.

6.4.2 Dispensing

6.4.2.1
Dispensing shall be restricted to the pharmacist or authorized personnel under the direction and supervision of the pharmacist. The accuracy of the dispensed medication shall be verified prior to administration. (Refer to the CSHP Guidelines for the Delegation of Functions to Pharmacy Technicians and Other Support Personnel.)

6.4.2.2
A stop-order procedure shall be developed for antibiotics, post-operative narcotics, and other classes of drugs for which a limited duration of therapy is usually desirable. The stop-order procedure shall be in effect when a definite number of doses or a time limitation for administration has not been stipulated by the prescriber on the medication order.

6.4.2.2.1
The prescriber shall be notified of the impending expiration of the medication order so that appropriate patient reassessment is completed prior to rewriting the order.

6.4.2.3
Special orders (e.g., stat, non-formulary drugs) shall be processed and dispensed according to specific written procedures in accordance with hospital policy.

6.4.2.4
In circumstances where the administration time is critical to pharmacy workload planning, the nurse shall notify the pharmacist whenever it is necessary to deviate from the standard medication schedule.

6.4.3 Medication Labelling

6.4.3.1
The pharmacy department shall use standardized format, terminology, SI units, and generic nomenclature on all medication labels.

6.4.3.2
There shall be a list of abbreviations and symbols approved by the Pharmacy and Therapeutics Committee.

6.4.3.3
Other labelling considerations shall include when appropriate:
(a) appropriate directions for medications requiring dilution or reconstitution;
(b) expiration date and proper storage conditions;
(c) acceptable route of administration for parenteral medications;
(d) lot numbers or codes for repackaged medications; and,
(e) use of non-proprietary names.

6.4.3.4
Medication labels shall be typed or machine printed and shall be free from erasures and strikeovers and shall be firmly affixed to the container.

6.4.3.5
Only pharmacy personnel shall alter medication container labels.

6.4.4 Unit Dose Medication System

6.4.4.1
Unit dose packaging shall be consistent with either the CSHP Drug Packaging and Labelling Guidelines for Manufacturers sections on single unit packaging or the CSHP Guidelines for Repackaging Medications in Hospitals.

6.4.4.2
Unit dose carts or medication trays shall be used as medication storage on the ward.

6.4.5 Controlled Dosage System

6.4.5.1
Medications shall be dispensed in individually labelled controlled dosages cards/containers.

6.4.5.2
The amount of medication dispensed shall be determined by hospital policy.

6.4.5.3
Medication shall be labelled with:
(a) name of the patient and location;
(b) name of the medication;
(c) strength;
(d) route of administration;
(e) accessory or cautionary statements as indicated; and,
(f) date dispensed.

6.4.6 Individual Patient Prescription System

6.4.6.1
Medications shall be dispensed in individually labelled prescription containers.

6.4.6.2
The amount of medication dispensed shall be determined by hospital policy.

6.4.6.3
Medication shall be labelled with:
(a) name of the patient and location;
(b) name of the medication;
(c) strength;

(d) route of administration;
(e) accessory or cautionary statements as indicated; and,
(f) date dispensed.

6.4.7 Ward Stock System

6.4.7.1
Ward stock medications shall be limited to those medications commonly prescribed on a "when needed" basis or medications which are involved in routine patient treatment and do not have a high potential for toxicity, are not complex to manipulate, and are not extremely expensive.

6.4.7.2
The pharmacy department shall be responsible for the distribution and control of ward stock medications.

6.4.7.3
Minimum and maximum levels of ward stock medications shall be established for each patient care area.

6.4.7.4
When narcotic and controlled drug substances are provided through a ward stock system, they shall be stored in accordance with legal requirements and appropriate records shall be maintained.

6.4.7.5
Medications required on an urgent or emergency basis shall be provided as a special form of ward stock and shall be stored in sealed units. The emergency medication container shall be returned to pharmacy for inspection and replacement when the seal is broken during use or when the stock becomes outdated. The Pharmacy and Therapeutics Committee or appropriate committee shall decide the medications to be maintained in emergency stocks.

6.4.8 Medication Self-Administration

6.4.8.1
Self-administration of medications by patients shall be permitted when specifically ordered by the prescriber.

6.4.8.2
Written policies and procedures shall be approved by the hospital.

6.4.9 Delivery of Medications

6.4.9.1
Medications shall be delivered to the patient care area with the least amount of delay. Medication may be sent through the use of pneumatic tubes, dumb-waiters, porters, or trolleys.

6.4.9.2
All parts of the transportation system shall protect medications from pilferage and breakage.

6.4.9.3
When appropriate, special procedures for delivery of selected medications (i.e., narcotics, controlled drugs, investigational drugs, TPN solutions, IV admixtures, chemotherapy admixtures, etc.) shall be established to ensure that the medications are delivered safely, promptly, intact and placed in proper storage areas upon their arrival in the patient care area. (e.g., locked storage cupboards, refrigerators).

6.5 Return of Medications

6.5.1
Medications dispensed for administration, but not used, shall be returned to the pharmacy.

6.5.2
Procedures for crediting and returning medications to stock shall consider the integrity of the returned drug package and the proper storage of the medication in the patient care area.

6.5.3
The following medications shall be discarded when returned to pharmacy:
(a) opened topical medications (e.g., creams, ointments, lotions, ophthalmic/otic/nasal drops/ointments)
(b) used inhalation products, unless cleaned and sterilized**;**
(c) opened multi-dose and single-dose vials;
(d) opened liquid products;
(e) medications handled by patients;
(f) medications returned by ambulatory patients;
(g) improperly stored medications; and,
(h) all oral dosage forms, unless packaged in unit-dose containers.

6.6 Repackaging of Medications

6.6.1
The pharmacy department shall, when necessary, repackage medications for use within the medication distribution system according to the CSHP Guidelines for Repackaging Medications in Hospitals.

6.6.2
Written policies and procedures, including the maintenance of quality control records, shall be in place for repackaging medications.

6.6.3
Precautions shall be taken to:
(a) ensure the label correctly states the contents of the package;
(b) assure hygienic packaging;
(c) assure stability;
(d) prevent cross contamination of drugs; and,
(e) use appropriate techniques for special medication products (e.g., cytotoxic drugs).

6.6.4
Auxiliary labels, instructions, WHMIS labels, and cautionary statements shall be used where applicable.

6.7 Medication Preparation

6.7.1 General Principles

6.7.1.1
The pharmacy department shall prepare those dosage forms, dosage strengths and medication delivery systems required to meet the specific needs of the patient.

6.7.1.2
Written policies and procedures shall be in place for medication preparation including the compounding of medications and the preparation of sterile products and cytotoxic drugs.

6.7.1.3
The pharmacy shall comply with the CSHP Guidelines for Bulk Compounding of Products in Hospitals.

6.7.2 Sterile Product Preparation

6.7.2.1
A pharmacy-based intravenous admixture program is the system of choice for admixing parenteral products**.** The pharmacy shall aseptically prepare those sterile drug products required to meet the specific needs of the patient, in accordance with the CSHP Guidelines for Preparation of Sterile Products in Pharmacies.

6.7.2.2
All personnel working in aseptic areas shall receive training in aseptic technique.

6.7.2.3
Cytotoxic drugs shall be handled and prepared in accordance with the CSHP Guidelines for the Handling and Disposal of Hazardous Pharmaceuticals (Including Cytotoxic Drugs).

6.7.2.4
Medication preparation quality control records shall be maintained using a log book or individual patient record. (Refer to CSHP Guidelines for Preparation of Sterile Products in Pharmacies.)

6.7.2.5
Parenteral admixtures and solutions shall be prepared in a laminar air flow hood equipped with a high efficiency particular air (HEPA) filter to prevent contamination with microorganisms and particulate matter. Cytotoxics shall be prepared in a Class II, biological safety cabinet.

6.7.2.6
All completed parenteral admixtures and solutions prepared by technical personnel shall be checked by the pharmacist or delegate (refer to CSHP Guidelines for the Delegation of Functions to Pharmacy Technicians and Support Personnel) to ensure:
(a) the correct medication and quantity has been added to the appropriate solution;
(b) the appropriate information has been included on the label; and,
(c) the correct label has been affixed to the completed admixture or solution.

6.7.2.7
The pharmacist shall ensure:
(a) the dosage calculations are correct for all orders;
(b) the label correctly states the contents of the package;
(c) hygienic packaging;
(d) stability and compatibility of contents; and,
(e) all completed parenteral solutions are inspected for particulate matter, signs of incompatibilities, degradation, or contamination before they are dispensed.

6.7.2.8
Parenteral admixtures and solutions shall be labelled in a standard format. (Refer to CSHP Guidelines for Preparation of Sterile Products in Pharmacies.)

6.7.2.9
An end product testing procedure and acceptance criteria should be developed and performed in accordance with the CSHP Guidelines for Preparation of Sterile Products in Pharmacies.

6.7.2.10
A scientifically sound program of environmental monitoring should be used to ensure recognized standards are maintained.

6.8 Administration of Medications

6.8.1
The Pharmacy and Therapeutics Committee shall develop written policies and procedures to govern the safe administration of medications which shall include the following:
(a) medications shall be administered only upon the order of an individual who has been assigned clinical privileges or who is an authorized member of the house staff;
(b) medications shall be administered only by appropriately licensed personnel in accordance with laws and regulations governing such acts;
(c) in a unit dose drug distribution system, medications shall be administered directly from the medication cart (or its equivalent) at the patient's room. Medication shall not be removed from the unit dose package until it is to be administered;
(d) in an individual patient prescription medication distribution system, medications shall be prepared for administration in a manner to minimize the potential for error. This would involve minimizing the number of transcription steps by eliminating patient identification cards/tickets and by using medication carts similar to the process in the unit dose system [(c) above].
e) in a controlled dosage system, medications shall be administered directly from the medication card/container. Medication shall not be removed from the controlled dose package until it is to be administered;
(f) in the absence of the recommended intravenous additive service, precautionary measures for the safe admixture of parenteral products in the patient care area shall be developed. A distinctive supplementary label shall be affixed to indicate the patient name**,** the name and amount of medi-

cation added, the date and time of the addition, and the name of the person who prepared the admixture;
(g) a parenteral drug manual which shall include the hospital's policy with respect to each medication;
(h) medication shall be given as near to the specified time as possible (as defined by the hospital policy);
(i) the patient for whom the medication is intended shall be positively identified in accordance with hospital policy (e.g., by checking the patient's identification band or hospital number, patient's photograph);
(j) the person administering the medication shall stay with the patient until the dose has been taken, except for self-administration medications;
(k) all administered, refused or omitted medication doses shall be recorded in the patient's health record, according to established procedure. Information to be recorded shall include the medication name, dose, route of administration, date and time of administration, and initials of the person administering the dose;
(l) procedures for medication administration by non-nursing personnel (e.g., physicians, respiratory technologists, nursing assistants) should be established;
(m) all medications that have not been administered to the patient shall be returned to pharmacy;
(n) when personnel are administering medications normally not their responsibility or by a route normally not their responsibility, a detailed policy shall cover their qualifications, and the circumstances under which they may act; and,
(o) specific parenterals or other medications which must be checked by two health care professionals before being administered.

7. SPECIALIZED PHARMACY SERVICES

7.1 General Principles

7.1.1
The pharmacy shall provide specialized programs in response to the needs of the patients and the hospital.

7.2 Ambulatory Patient Service

7.2.1
The pharmacist shall provide pharmacy services to ambulatory patients such as dispensing of medications, medication counselling, maintenance of patient profiles, medication history taking, and medication therapy monitoring, when appropriate.

7.2.2
The pharmacist shall participate as a member of the home care team, when appropriate.

7.2.3
The pharmacist should provide services to the emergency department and ambulatory clinics, as required, to meet the pharmaceutical care needs of the patients.

7.3 Nuclear Pharmacy Service

7.3.1
The nuclear pharmacy service shall provide the pharmaceutical services related to the handling, preparing, and administering of nuclear diagnostic and therapeutic agents.

7.3.2
The nuclear pharmacy service shall be developed in cooperation with the pharmacy department, nuclear medicine department, administration, and other appropriate departments.

8. EDUCATION AND STAFF DEVELOPMENT

8.1
All staff involved in pharmacy services shall be provided with educational and staff development programs including orientation, inservice education, and continuing education programs, based on a needs assessment.

8.2
Pharmacy staff shall be encouraged to attend meetings or seminars relevant to the function of the department or their particular service. Financial support and/or time in lieu should be provided by the institution where possible.

9. RESEARCH

9.1
The pharmacy staff should be encouraged to participate in research activities, recognizing this as an important contribution to the knowledge base of the profession and the development of institutional pharmacy practice.

9.2
Communication of research results should be considered an integral component of the process.

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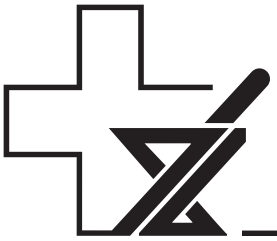

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