

## Department of Pharmacy Policy

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**SUBJECT:        *Pharmacy Services Mission, Vision, Values and Plan of Care and Scope of Practice***

Pharmacy Services at the University of Kentucky Hospital utilizes the guidance and direction described in the hospital's Mission, Vision, Critical Success Factors and Core Values as the basis for its Scope of Practice/Plan of Care document. This document also serves as UK HealthCare Pharmacy Services' overall Strategic Plan.

### ***Purpose of Pharmacy Services***

To provide the highest quality of pharmaceutical care available through a philosophy of "Best Practice". "Best Practice" is defined at UKH as safely providing collaborative and interdisciplinary care in a cost-effective manner that is evidenced based and improves the care outcomes of individual patients.

### ***Hospital Mission Statement***

The mission of the University of Kentucky Hospital is to help people of the Commonwealth and beyond to gain and retain good health through creative leadership and quality initiatives in patient care, education, and research.

### ***Hospital Vision Statement***

The vision of the University of Kentucky Hospital is to be a Top 20 academic health center recognized nationally and internationally for excellence in patient care, education, and research.

### ***Hospital Behavioral Expectations***

- Patient Focused
- Service Oriented
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- Resource Wise

### ***Hospital Core Values***

- Sense of Urgency
- Teamwork
- Accountability
- Innovation
- Respect

### ***Application to Pharmacy***

Pharmacy's ability to flourish in the current environment depends on its ability to meet the critical success factors listed above, but more specifically, striving for and

targeting the “Best Practice” philosophy:

- To add value to individual patient care through assuring safe, accurate, rational and cost-effective use of drugs
- To engage in collaborative and inter-disciplinary practice with other healthcare practitioners for the purpose of improving care and conserving resources
- To optimize the use of human resources through expanded roles for pharmacy technicians, increased utilization of automation and technology, and the development of the professional role of the pharmacist and pharmacy intern
- To make patient-focused transitions into and out of acute care practice settings, ambulatory care or alternative site settings with the patient’s best interest in mind
- To optimize the impact of pharmacy student and resident training through development of an educational practice model which results in attainment of department, hospital, and professional goals.

### ***Specific Goals for FY2010***

- To execute plans to meet the goals and objectives outlined in the ASHP 2015 Initiative for enhancing pharmaceutical care provision. Details of the UK goals for 2010 and initiative progress can be found on the UK Pharmacy Services Website.  
[http://www.hosp.uky.edu/pharmacy/pdf/UK\\_ASHP\\_2015.pdf](http://www.hosp.uky.edu/pharmacy/pdf/UK_ASHP_2015.pdf)

The six primary goals of the initiative are as follows:

1. Increase the extent to which pharmacists help individual hospital inpatients achieve the best use of medications.
  2. Increase the extent to which health-system pharmacists help individual non-hospitalized patients achieve the best use of medications.
  3. Increase the extent to which health-system pharmacists actively apply evidenced-based methods to improve medication therapy.
  4. Increase the extent to which pharmacy departments in health systems have a significant role in improving the safety of medication use.
  5. Increase the extent to which health systems apply technology effectively to improve the safety of medications.
  6. Increase the extent to which pharmacy departments in health systems engage in public health initiatives on behalf of their communities.
- To implement a contemporary outpatient pharmacy computer system (PSCi) designed to perform on-line adjudication, ScriptPro integration, handle over 200,000 prescriptions per year and enhance patient care.
  - To meet or exceed <USP 797> requirements for sterile product preparation in all sites.
  - To actively support, design and implement computerized physician order entry and clinical documentation throughout the hospital (Sunrise Clinical

Manager – SCM)

- To implement an integrated inpatient pharmacy computer (Sunrise Pharmacy – SRx) system with SCM.
- To actively support and drive hospital compliance with National Patient Safety Goals.
- To actively support and drive hospital performance with core indicators.

### ***Admission/Discharge Criteria***

- Patients must be registered as an inpatient, same day surgery patient or outpatient to receive care at the University of Kentucky Hospital Inpatient Pharmacy, Markey Inpatient or Outpatient Pharmacy, Pediatrics Pharmacy or Operating Room Pharmacy.
- Patients desiring to be patients at the Kentucky Clinic Pharmacy must qualify as a “hospital’s own” patient including:
  - Kentucky Clinic patient
  - Kentucky Clinic North patient
  - Kentucky Clinic South patient
  - Hospital discharge patient
  - UK employee/physician under UK physician care

### ***Types/Ages of Patients***

Patients at the University of Kentucky Hospital settings include the full range of ages, neonatal, pediatric, adolescent, adult and geriatric. Appropriate training and competency demonstration is required for pharmacists to provide care to neonatal, pediatric or geriatric patients.

### ***Departmental Integration***

Pharmacists collaborate with other allied health disciplines to provide pharmaceutical care to patients. Pharmacy services are provided to all patient care units. Major groups of staff with whom pharmacy collaborates to provide care include: medical and dental staffs, nursing staff, social services, respiratory care staff, and clinical dietitians. In addition, Pharmacy Services staff collaborate with many other hospital staff to expedite care delivery.

### ***Standards of Practice***

Pharmacy practice standards that are established by the following organizations are a guide for practice at the University of Kentucky Hospital:

- American Society of Health-System Pharmacists
- American Pharmaceutical Association
- The Joint Commission (TJC)
- Kentucky Board of Pharmacy (also, Medicine, Nursing, etc.)
- Food and Drug Administration

- Drug Enforcement Agency

### ***Uniform Level of Care***

All pharmacists must be graduates of an accredited college of pharmacy and meet all requirements identified in the Kentucky Pharmacy Practice Act. Pharmacy Services follows standards of practice as identified by the American Society of Health-System Pharmacists, The Joint Commission, American Pharmaceutical Association, and the Kentucky Board of Pharmacy.

### ***Measure Meeting Customer Needs***

Customer needs are primarily assessed through the conduction of surveys of medical and nursing staff for inpatient practice and directly of outpatients for patients seen at the Kentucky Clinic Pharmacy.

### ***Availability & Timeliness of Services***

A. Pharmacy Services are responsible for providing optimal pharmaceutical care to both inpatients and outpatients through promoting safe, accurate, rational, and cost-effective drug therapy. Patients at the University of Kentucky Hospital settings include the full range of ages, neonatal, pediatric, adolescent, adult and geriatric. Pharmacy services are provided from numerous pharmacy locations:

1. Pharmacy Services employs 6 pharmacy administrators, 70 pharmacists, 70 pharmacy technicians, 16 pharmacy residents and 2 staff support personnel.
2. Comprehensive pharmacy services are provided through a 24-hour central pharmacy located on the second floor of University Hospital, the primary order entry area, unit dose area, sterile products compounding center, the Investigational Drug Service, controlled substances center, and bulk storage of pharmaceuticals.
3. Pharmacy Services provides an Investigational Drug Service. This service is involved with the procurement, inventory and dispensing of investigational drugs for approximately 150 research protocols. Protocols are developed in conjunction with the primary researcher in each investigational drug study.
4. The Medical Center is a member of Novation/University Health-System Consortium and maintains several thousand drug items on contract with that group. Pharmacy Services purchases and dispenses approximately \$60,000,000 worth of pharmaceutical products and IV solutions annually.
5. An outpatient satellite pharmacy located on the second floor of the Whitney Hendrickson Building of the Markey Cancer Center Clinic to serve oncology and bone marrow transplant outpatients. Hours are Monday through Friday, 8:00am to 4:30pm.

6. A UK Children's Hospital Satellite Pharmacy located on the fourth floor of University Hospital to serve neonatal and pediatric patients. Hours are Monday through Friday, 8:00am to 10:00pm and weekends 8:00am to 4:00pm.
7. An inpatient operating room satellite pharmacy located in the operating room suites (second floor), which is open Monday through Friday 6:30am to 6:00pm.
8. An outpatient pharmacy located on the first floor of the Kentucky Clinic to serve ambulatory patients seen within the UK health system and the Kentucky AIDS Drug Assistance Program. Hours are Monday through Friday, 7:30am to 6:30pm and, Saturdays 9:00am to 1:00pm.
9. An outpatient pharmacy located in the University Health Service to serve students seen in UHS. Hours are Monday through Friday, 8:30am to 4:30pm during the University of Kentucky academic year.
10. Decentralized zone pharmacists providing pharmaceutical care to acute care patients throughout the hospital, Monday through Friday 7:30am to 4:00pm.
11. Decentralized critical care pharmacists providing pharmaceutical care to adult intensive care patients, daily 7:30am to 4:00pm.
12. Ambulatory care pharmacists providing care in select locations (i.e., Family Medicine, Solid Organ Transplant, Bone Marrow Transplant, Infectious Diseases, Internal Medicine, Kentucky Clinic North).
13. Faculty practitioners, clinical pharmacy specialists, residents and students providing clinical services on numerous allied health professional teams.

### ***Availability of Necessary Staff and Maintenance of Quality Care or Service Through Staffing Shortages***

Staffing is arranged to meet patient care needs. Workload is monitored and evaluated on an ongoing basis. Shift manager reports are communicated each shift, including weekends. E-Mail distribution lists are routinely utilized in the department. At any given time four individuals are on-call to be utilized to assist in variable patient care demands including the Hospital Pharmacy Administrator, the Shift Manager Pharmacist, the Technician Supervisor On-Call and the Pharmacy Resident On-Call. The University of Kentucky Hospital is unique nationally among hospital pharmacy residency programs in that a Doctor of Pharmacy trained pharmacy resident is on-site 24 hours a day (with call room), like medical residency training programs.

### ***Adjustment of Staffing Levels/Variance Monitoring of Staffing Levels***

The inpatient Pharmacy Services has a systematic plan for adjusting staffing when there are staffing shortages. Employees may be assigned to varying portions of jobs to assist in covering the workload of an area. Technician shortage staffing adjustments are as follows: when dayshift is minus one technician, CP1 is reassigned to cover and the IV1float assists in both the IV and CP areas; when dayshift is minus two technicians, IV1float is reassigned; when evening shift is minus one technician, M2F is reassigned to cover and the UD covers both UD and Manufacturing areas; when evening shift is minus two technicians, IV2float is reassigned; when night shift is minus one technician, partial coverage is arranged by extending an evening shift or early dayshift technician. Pharmacist shortage staffing adjustments are as follows: when planning is possible, when Department is minus one pharmacist, Floor coverage for floors 7 and 8 are doubled up; when the department is minus two pharmacists, floor coverage for floors 7&8 and 5&6 are coupled. Alternatively, the middle shift oncology pharmacist is omitted and the first shift oncology pharmacist shift is extended to 12 hours. When advanced planning is not possible, additional pharmacist coverage is arranged.

### ***Competency Determination of Staff***

The minimum qualifications for pharmacists practicing comprehensive pharmaceutical care are a Pharm.D. degree and/or completion of a pharmacy practice residency (or equivalent training/experience). All of our pharmacists are registered with the Kentucky Board of Pharmacy and practice under the Pharmacy Practice Act of the Commonwealth of Kentucky. Pharmacists also include pharmacy practice and specialty residents who are in training in residency programs accredited by the American Society of Health System Pharmacists. Student pharmacists in training also practice but are always under the supervision of a registered pharmacist and are in a program accredited by the American Council on Pharmaceutical Education.

### ***Contract Staff Used***

Contract staff are not used by pharmacy.

### ***Competency Determination of Contract Staff***

Contract staff are not used by pharmacy.

### ***Pharmacy Services - Director Responsibilities***

The Director is responsible for the operation of Pharmacy Services, including strategic planning, day-to-day operations, pharmaceutical care, clinical and distributive services, financial management, and personnel management. Pharmacy Services includes both inpatient and ambulatory pharmacy locations and services. The position serves as a critical link between the Hospital and the College of Pharmacy for educational programs, an important aspect being to provide a contemporary and exemplary pharmacy service. The Director of Pharmacy Services serves on the faculty of the College, and on the Executive Committee of the College as Assistant Dean for Medical Center Pharmacy Services. The position also oversees all residency programs

co-sponsored by the Hospital and the College.

Specific Responsibilities:

1. Strategic Planning
  - a. Establish and coordinate the achievement of goals and objectives.
  - b. Develop an organizational structure with clearly defined lines of authority and job responsibilities that enable employees to work together toward common objectives.
  - c. Integrate pharmacy services with other hospital departments and the medical staff to establish a multidisciplinary approach to improving patient care.
  - d. Develop and justify new pharmacy programs and services to improve patient care.
2. Day-to-Day Operations
  - a. Develop, approve, interpret, and enforce hospital and departmental policies and procedures to achieve service objectives.
  - b. Assure compliance with all legal and regulatory requirements for pharmacy operations (e.g., FDA, DEA, Kentucky Board of Pharmacy).
  - c. Assure compliance with standards of practice from accreditation organizations (e.g., The Joint Commission, ASHP, Kentucky Cabinet for Health Services).
  - d. Coordinate activities and serve as Secretary of the Pharmacy and Therapeutics Committee.
  - e. Develop and maintain a system and program of continuous quality improvement.
  - f. Serve on university, medical center and hospital committees and task forces as a representative for medication use issues requested.
  - g. Assure pharmacy computer systems are contemporary, functional, and appropriately integrated into the Medical Center Integrated Clinical Information System (ICIS).
3. Financial Management
  - a. Prepare and administer the pharmacy services operations budget.
  - b. Prepare and administer the pharmacy services capital equipment budget.
  - c. Prepare, monitor, and administer the pharmacy services personnel budget, including recharges and benefits.
  - d. Seek innovative ways to reduce and contain costs while providing quality care.
  - e. Assure that appropriate charge capture and billing systems for pharmacy charges are developed and maintained.
4. Personnel Management
  - a. Establish policies and procedures for recruiting, hiring, orienting, training, supervising, evaluating, and disciplining staff.
  - b. Approve position descriptions and performance standards for all pharmacy staff.
  - c. Establish appropriate staffing levels and positions to achieve departmental objectives.
5. College of Pharmacy
  - a. Establish and maintain a contemporary, exemplary pharmacy service to serve as a suitable environment for training pharmacy residents and

- students.
- b. Develop innovative methods of delivering pharmaceutical care in cooperation with the College.
  - c. Serve as the liaison between the Hospital and College on all pharmacy related matters.
  - d. Teach courses and/or classes related to institutional practice in the College.
  - e. Serve as a member of the College Executive Committee as the Assistant Dean for Medical Center Pharmacy Services.
  - f. Oversees UK residency programs co-sponsored by the College and the Hospital.
6. Authority:
- a. Establish goals and objectives for pharmacy services.
  - b. Develop organizational structure for pharmacy services.
  - c. Approve pharmacy services policies and procedures.
  - d. Expend funds consistent with pharmacy services budget.
  - e. Recruit, hire, evaluate, coach and discipline staff.
  - f. Approve pharmacy services position descriptions and performance standards.
  - g. Assures that pharmacy residency programs are consistent with ASHP standards.
  - h. Able to react to change productively and to handle other appropriate tasks as assigned.

### ***Pharmacy Services – Medical Director Relationship***

Technically speaking Pharmacy Services does not have a medical director, however Pharmacy Services actively utilizes the Pharmacy and Therapeutics Committee and its Chair in assuring alignment of Pharmacy Service goals with Medical Staff goals.

The Chair of the Pharmacy and Therapeutics Committee has the following responsibilities:

1. The Chair of the Pharmacy and Therapeutics Committee, in collaboration with the Director of Pharmacy Services, is responsible for the development and implementation of systematic policies and procedures for medication use at the University of Kentucky Hospital.
2. The Chair of the Pharmacy and Therapeutics Committee, in collaboration with the Director of Pharmacy Services and Drug Information Center, is responsible for the development and implementation of a Formulary of Approved Drugs at the University of Kentucky Hospital including: formulary restrictions, formulary guidelines, clinical pathways, and drug use algorithms
3. The Chair of the Pharmacy and Therapeutics Committee will act as liaison between attending physicians and house staff in all matters relating to medication use at the University of Kentucky Hospital.

4. The Chair of the Pharmacy and Therapeutics Committee, in collaboration with the Director of Pharmacy Services, will ensure appropriateness and quality of pharmaceutical care, including maintenance of a comprehensive performance improvement process to monitor all aspects of pharmaceutical care in accordance with Board of Medicine, Board of Pharmacy, Cabinet for Health Services and TJC standards including: Adverse Drug Reaction (ADR) reports and summaries, Medication Error report summaries, Medication Use Evaluation (MUE) plans and reports.
5. The Chair of the Pharmacy and Therapeutics Committee and Director of Pharmacy Services will meet at least monthly. Recent developments, concerns, and/or future plans for Pharmacy and Therapeutics Committee activities will be planned at these meetings.
6. The Chair of the Pharmacy and Therapeutics Committee is responsible for formal conferences and educational programs relative to medication use for the medical staff as may be necessary or as requested by the medical staff.
7. The Chair of the Pharmacy and Therapeutics Committee provides liaison with hospital computer informatics departments and information systems (UKHC IT and ICIS) relative to medication use, pharmacy and physician computer order entry.
8. The Chair of the Pharmacy and Therapeutics Committee in collaboration with the Director of Pharmacy Services is responsible for participation in UK Hospital Business Planning process for all Pharmacy and Drug related programs.
9. The Chair of the Pharmacy and Therapeutics Committee is responsible for facilitating corporate compliance adherence within the hospital, including pharmaceutical sales representatives.
10. The Chair of the Pharmacy and Therapeutics Committee in collaboration with the Director of Pharmacy Services will participate in budget development and execution of activities impacting fiscal matters as required. Review monthly financial reports of Pharmacy Services. Meet as necessary with administration to monitor and discuss fiscal matters. Participate in the hospital budgeting process as it relates to Pharmacy Services.

## ***Services Offered***

### ***Clinical and Educational Services***

Clinical Services – the goal of is to promote safe, accurate, rational, and cost-effective use of pharmacotherapy and to collaboratively manage medication therapy for quality individual patient care outcomes. This should occur within the context of a safe, accurate, efficient, timely medication distribution system.

#### A. Scope of Practice

- a. Pharmacists who provide clinical services at University of Kentucky HealthCare are all registered with the Kentucky Board of Pharmacy and practice under the Pharmacy Practice Act of the Commonwealth of Kentucky.
- b. Pharmacists are assigned to specific services for the provision of care. Pharmacists may either rotate between different services or may be assigned full-time to those services where specialty knowledge may be required. Care involves the process through which pharmacists collaborate with the patient and other healthcare professionals in designing, implementing, and monitoring a therapeutic plan. The functions of pharmaceutical care include the following: identifying potential and actual drug-related problems; resolving actual drug-related problems; and preventing drug-related problems.
- c. As available therapies and treatment modalities have increased over time, so too has the complexity of individual patient care. As such, there has become an increased need in some therapeutic areas for specialization amongst all healthcare practitioners in order to provide the highest level of care; the same is true of pharmaceutical care services. In response to this need, pharmacists at UK HealthCare are entrusted with providing different aspects of pharmaceutical care services across the healthcare continuum in addition to sharing different educational and research responsibilities:
  - i. **Distributive Pharmacist Services:** Pharmacists functioning in this capacity are responsible for providing leadership and oversight of the medication distribution system.
    - 1. Requirements: Pharmacy licensure
    - 2. Added expectations:
      - a. Basic clinical pharmacy services such as allergy screening, age and renal function appropriate dosing, drug duplication and drug interaction screening (add more here)
      - b. Providing educational opportunities for pharmacy technicians, interns, residents and pharmacists in drug distribution roles
  - ii. **Clinical Staff Pharmacist Services:** Pharmacists functioning in this capacity are responsible for providing generalized pharmacotherapy services throughout the hospital.
    - 1. Requirements: Pharmacy licensure
    - 2. Added expectations:
      - a. Generalized clinical services
      - b. Providing educational opportunities for pharmacy students on rotation
      - c. Participation in on-going educational activities provided by the pharmacy department
  - iii. **Clinical Specialist Pharmacist Services:** Pharmacists functioning in this capacity are responsible for providing specialized pharmacotherapy services throughout the hospital.
    - 1. Requirements: Pharmacy licensure; Additional post-graduate training (i.e. PGY1/2 residencies)
    - 2. Added expectations:
      - a. Specialized clinical services
      - b. Providing educational opportunities for pharmacy students, PGY1 and PGY2 residents on rotation

- c. Providing educational opportunities for pharmacists practicing in other areas
  - d. Providing didactic educational lectures to the College of Pharmacy as part of a faculty appointment
  - e. Contributing to the advancement of patient care through research activities and publications
  - f. Leadership of medication-use evaluations and developing protocols to elevate patient care
  - g. Tracking and analyzing adverse drug reaction reports and medication errors to enhance patient care
  - h. Contributing to the advancement of patient care through participation in professional organizations
- d. Pharmacists also include PGY1 and PGY2 residents who are training in residency programs. Pharmacists in-training also practice but are under the supervision of a preceptor.
  - e. Pharmacists attend medical staff rounds and collaborate with allied health disciplines to provide quality patient care.
  - f. Pharmacists respond and actively participate in Code Blues, Stroke Alerts, Chest Pain Alerts, Snake Bite Treatments, Factor VII Treatments Disaster Responses and other medical emergencies.
  - g. Pharmacists, as a part of the care process, monitor specific drugs for the purpose of providing pharmacokinetic dosing to individualize drug therapy for patients.
  - h. Pharmacists conduct an outpatient pharmacotherapy referral clinic to manage patients on chronic medications, patients with multiple prescriptions, and patients with medication compliance issues.
  - i. A pharmacist provides clinical services in the Kentucky Clinic North and Kentucky Clinic.
  - j. Pharmacists supervise and provide training for pharmacy technicians who work in Pharmacy Services.
  - k. Pharmacists serve on, and may chair, various standing committees, ad-hoc committees, and task forces for Pharmacy Services, University Hospital, College of Pharmacy and the University.
- B. In the future our scope of practice will include:
- a. An expanded role for pharmacotherapy specialists in emergency medicine throughout the day.
  - b. An increased use of decision support databases to monitor drug utilization and compare data to other institutions in order to identify and prioritize opportunities for improvement.
  - c. Providing leadership for the development of a clinical development program for new clinical pharmacy practitioners.
  - d. Providing leadership in the enhancement of compliance with core measures of medical care.

## ***Drug Distribution Services***

The goal of a quality drug distribution system is to provide medications in a ready-to-use form in an accurate, timely, and efficient manner.

A. Scope of practice:

Appropriate checks and balances are built into the system so that a pharmacist is in a position to make the ultimate decision as to whether a medication is prepared correctly (i.e., the order is interpreted, entered into the computer, labeled, and prepared accurately). Minimizing the risk of medication errors is an important outcome of a safe drug distribution system.

1. The role of technicians is expanding beyond the traditional philosophy that technicians can do anything that can be checked and does not require a professional decision. Now that technicians can be nationally certified, additional roles have been established, e.g., technician checking other technicians filling unit dose carts where the product still maintains its identity.
2. Drugs are provided to patient care areas in unit dose packages where the medication maintains its identity until it is used. The use of prepackaged medications or premixed I.V. admixtures are maximized in order to reduce the risk of medication errors and to improve efficiency.
3. Many drug distribution functions are automated.
  - a. This is done in the inpatient setting decentrally with automated dispensing machines, through which medications are dispensed. Pharmacists must review the order and verify that it has been entered into the pharmacy computer system accurately before nurses have access to medications in automated dispensing machines (override capability available for select medications approved by the P&T Committee).
  - b. A Pyxis vault is also utilized in the central pharmacy to store and dispense controlled substances and high cost agents.
  - c. ScriptPro was implemented in 2004 to automate the prescription filling process for greater accuracy and efficiency.
  - d. No automated system, however, takes the pharmacist out of the loop in assuring that the medication order is entered into the computer system accurately.
4. Compounding of cardioplegia, patient controlled analgesia and epidural solutions are outsourced to an approved compounding center.
5. Computerized prescriber order entry (SCM) with pharmacist verification in WORx via a unidirectional interface. Eliminates need for pharmacist transcription of orders allowing the pharmacist to focus on order evaluation and provision of pharmaceutical care.

## ***Drug Information/Drug Policy Development***

The goal of a quality drug information/drug policy center is to provide evidence-based, timely pharmacotherapeutic information and to develop organizational policies and

programs to support the rational, cost-effective use of medications.

A. Scope of practice:

1. In general drug information is now decentralized to all pharmacists for the provision of drug information to patients and providers.
2. Traditional services such as managing the formulary, performing medication use evaluations, tracking and analyzing adverse drug reaction reports, providing support to the Pharmacy and Therapeutics Committee, disseminating information on medications through paper and web-based technology are provided.
3. Information is extracted from decision support databases to monitor medication utilization and cost of care.
4. The drug therapy components of various treatment protocols are developed.

## ***Computer Systems***

The goal of a quality pharmacy computer system is to provide information on which to base clinical and management decisions.

A. Scope of practice:

1. Computer system are efficient tools for processing medication orders, facilitating dispensing, detecting drug interactions and therapeutic duplicates, and producing required management and clinical reports.
2. Computer systems are used to generate drug utilization data and to identify patients currently receiving specific drugs.

B. In the future, our scope of practice will include:

1. Standardization of a patient care computer system throughout the health-system network that permits access to information across disciplines (e.g., pharmacists have immediate on-line access to laboratory data) and regardless of location (e.g., E.D. physician can access medication profiles from outpatient pharmacy).
2. Expert systems available to guide physicians and pharmacists in selecting drug therapy given a particular diagnosis, taking into consideration pathways, algorithms, formulary status and cost of medications.
3. Bar code technology to check accuracy of drugs prepared against orders, chart administration of medications, order drugs, track process times, etc.

## ***Research Programs***

The goal of a pharmacy research program is to assure appropriate control over investigational drugs, as with any other drug, and to be actively involved in research projects.

A. Scope of practice:

1. An investigational drug service through which all investigational agents for inpatients are stored and dispensed is operational.
2. Pharmacists are active participants on the medical center IRB in order to provide pharmacy review of investigational protocols early in the process.
3. Enhance the research structure and output for resident research.

B. In the future, there will be:

1. Greater guidance and control over investigational drugs by pharmacy, especially in the ambulatory setting.
2. More involvement in collaborative research with physicians and college of pharmacy faculty as the qualifications and academic credentials of clinical pharmacists increase.

## ***Outreach and Alternative Site Pharmacy Services***

The goal of a quality pharmacy service involved in a network is to provide comprehensive medication related, patient care services across the continuum of care.

The scope of practice in the future will include:

1. Communications and an exchange of information across the continuum of care throughout the network between pharmacists and other healthcare practitioners in acute care, sub-acute care, ambulatory care, home care, infusion centers, and long term care facilities.
2. Centralization of some pharmacy services within the health-system network, including drug information, computer systems, policies and procedures, purchasing, drug policy development, formulary management, etc. to provide consistency and to take advantage of economies of scale.

Approved: \_\_\_\_\_ Authorized: \_\_\_\_\_  
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