

PHARMACY PROCUREMENT,

INVENTORY CONTROL

413 - 68

AUTHORS: R. McMAHON

M. JACOBS

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COMMUNITY SYSTEMS FOUNDATION

August 24, 1966

Mr. John J. Laverty
Assistant Administrator
The Johns Hopkins Hospital
Baltimore, Maryland 21205

Dear Mr. Laverty:

An analysis and evaluation of the pharmacy procurement and inventory control system has been completed. This report presents a documentation of the system along with specific recommendations to improve the operation of the inventory control system.

I would like to thank Mr. Marvin Jacobs of the Foundation's staff for his assistance on this project. I would also like to thank Mr. H. J. Derewicz, Director of Pharmacy Services and his staff for their cooperation during this study.

Sincerely,

Richard M. McMahon

Richard M. McMahon
Project Director

RMM/jml

SYNOPSIS

Project Objectives

The objectives of this project are:

1. To evaluate the present pharmacy procurement and inventory control system.
2. To develop an improved pharmacy procurement and inventory control system which will enable better control over drug purchases and inventory.

Summary of Recommendations

A brief summary of the major recommendations of this report are:

1. Implement and follow the procurement and inventory control procedures outlined in this report.
2. Increase the supervision being given by the procurement pharmacist over the billing function.
3. Enforce the policy that only the procurement pharmacist or his aide can dispense drugs from the storeroom during the hours of 8:30 a.m. to 5:00 p.m. on weekdays. It is necessary to authorize withdrawals by pharmacists after hours and on weekends, but an adequate record of all withdrawals must be made.
4. Establish a monthly discrepancy report based on a review of the Inventory Distribution Report and the Supplies and Expense Report.
5. Initiate a report showing the total costs of items purchased through Emergency Prescription Service every four weeks.
6. Implementation of these recommendations will eliminate the need for any increase in staff.

Organization of Report

The body of this report is divided into two sections: The first section describes the present system along with the organization and staffing; the second part presents an evaluation of the present system and the recommended changes.

PRESENT SYSTEM

The present pharmacy procurement and inventory control system will be described only briefly in this part of the report as a more detailed documentation is included in the proposed section.

Basically, the pharmacy operates as a storeroom supplying drugs from stock and replacing the stock when it reaches a reorder level. Therefore, the purpose of the procurement function is to obtain the various drugs when needed and the purpose of the inventory control function is to insure the proper quantity of each drug is kept in stock and to permit reordering at specified levels.

The hospital storeroom fills orders for the inpatient, outpatient, and Laboratory divisions of the pharmacy as well as departmental, university, and special ward stock requisitions. The inventory control system consists of an inventory card for each stocked item on which a perpetual inventory is maintained by recording all receipts and subtracting all withdrawals. An item should be ordered when the inventory card indicates the balance on hand is below the standard level or a request is received for item not stocked by the pharmacy.

Drugs and supplies are ordered from the following sources:

1. Central Stores - Drugs purchased by the hospital in large quantities for which there is not sufficient storage space in the pharmacy storeroom and all containers.
2. Other departments - Miscellaneous supplies such as sugar, glucose, etc.
3. Drug manufacturers or suppliers - All items not stocked by Central Stores or other departments.
4. Drugs wholesalers - All items not stocked by Central Stores or other departments.
5. Drug stores or other hospitals - Drugs required during times when all other suppliers are not available.

The following procedure is used by the pharmacy in procuring drugs and supplies:

1. Central Stores - A preprinted Central Stores requisition is prepared twice per week and sent to Central Stores. The items are then delivered to the pharmacy storeroom.

2. Other departments - An interdepartmental requisition is prepared and delivered to the Supplying Department. The items are picked up and delivered to the pharmacy storeroom.
3. Stock items
 - a. Blanket items - A blanket item is a drug on which the hospital Purchasing Department has established one vendor based on competitive bidding. An annual purchase order is prepared for these items. The procurement pharmacist sends the T/R card (traveling requisition) to the Purchasing Department who places the order with the vendor. The items are received at Central Receiving and delivered to the pharmacy storeroom.
 - b. Other items - The procedure for non-blanket items is the same as for blanket items except the Purchasing Department prepares an individual purchase order each time an item is ordered. Normally three suppliers for each item are authorized, and the selection of the supplier for the order is made by the Purchasing Department based on competitive bidding.
4. Non-stock items - A purchase requisition is prepared and sent to the Purchasing Department. A purchase order is then prepared and the item is ordered from a supplier based on competitive bidding. Items are received at Central Receiving and delivered to the pharmacy storeroom.
5. Emergency Prescription Service - These are items which are not stocked by the pharmacy or are currently not in stock and the need for them is urgent. The procurement pharmacist has authority to order these items directly from a supplier and complete the necessary paper work after ordering. These items are delivered directly to the pharmacy storeroom by the supplier.

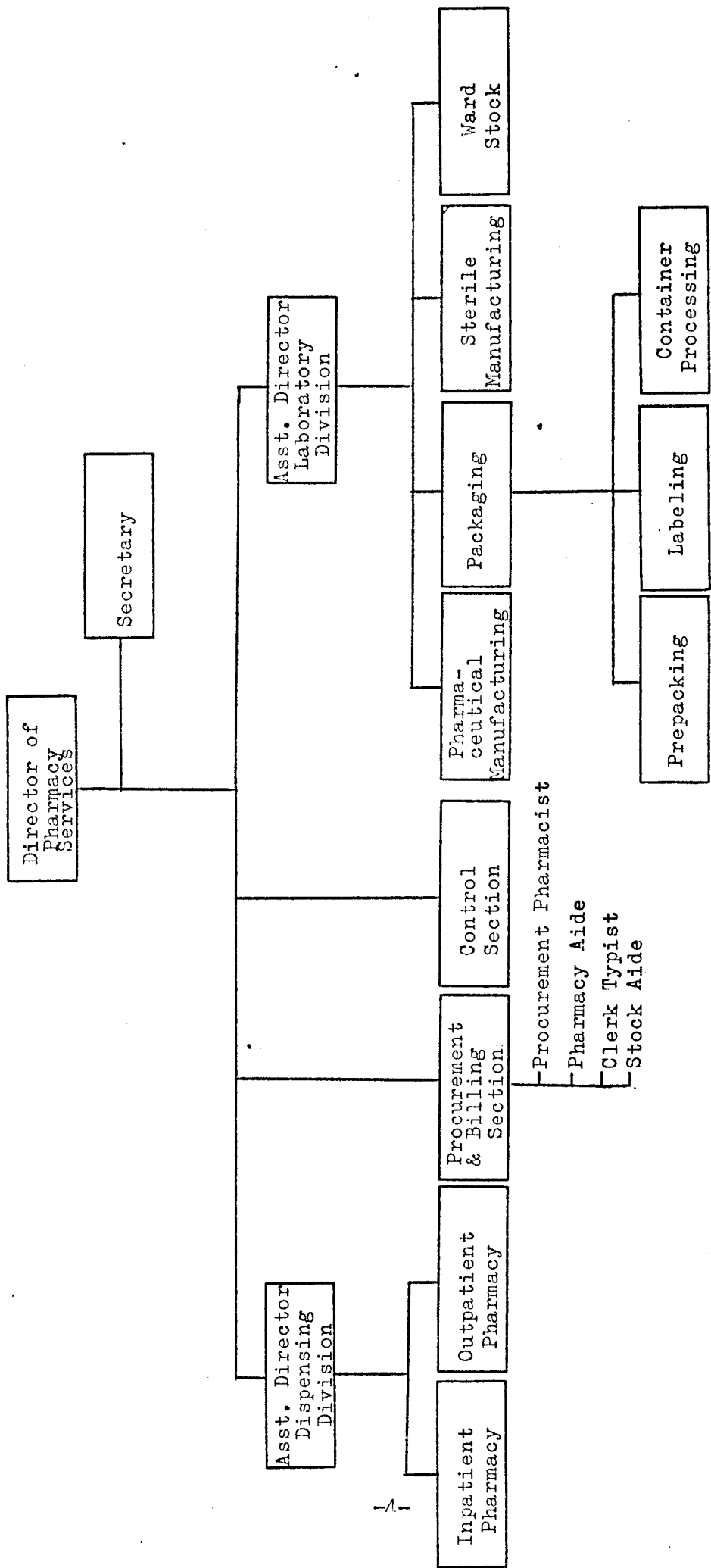
Organization and Staffing

The present pharmacy organization chart is shown on the following page. This chart shows pharmacy organization is divided into four sections: Laboratory division, Dispensing division, Procurement and Billing section, and Control section. The Laboratory and Dispensing divisions report to the respective Assistant Directors of Pharmacy Service who in turn report to the Director of Pharmacy Services. The Control section and the Procurement and Billing section report directly to the Director of Pharmacy Services.

The procurement pharmacist is responsible for the operation of the Procurement and Billing section. A billing clerk and a clerk typist who price all requisitions report to him. The procurement pharmacist is also responsible for the work of a pharmacy aide who assists him in procurement and inventory control functions.

In practice, the procurement pharmacist has exercised little supervision over the billing function. This function is very closely related to the other duties assigned to the procurement pharmacist, and it is necessary for him to exercise more supervision of this phase of the operation.

The pharmacy storeroom is staffed by the procurement pharmacist and pharmacy aide from 8:30 a.m. to 5:00 p.m. on weekdays. The sporadic need for stock drugs during weekends and after hours does not justify extended operation of the storeroom.



PROPOSED SYSTEM

Evaluation of the Present System

The review of the present system has led to the conclusion that the major problem is not with the system itself, but rather that the established procedures are not followed.

Many stock items do not have an inventory control card and, the postings have not been kept up to date on the items for which there is an inventory control card. Until recently, many pharmacists withdrew items from the storeroom with no withdrawal record being made on the inventory control cards. The procurement pharmacist has had to physically check the stock of an item or find that it is out before the item could be reordered.

This practice has undoubtedly been costly to the hospital because Emergency Prescription Service is used to obtain a drug immediately from a wholesaler that could be purchased from the regular source at a lower cost if the need were not urgent. This practice also causes planning and scheduling problems for the Laboratory division when rush orders for additional prepackaged drugs are made or when items used in manufacturing are discovered to be "out" when ingredients are being assembled.

The present practice has also reduced the efficiency of the procurement pharmacist as he must frequently interrupt his schedule to check the inventory of an item or to place a rush order. The job of ordering drugs is performed many times each day rather than once or twice per day. Thus, the procurement pharmacist has not been able to function as effectively as a supervisor because of the time requirements of the procurement function.

Proposed System Changes and Flow Charts

Therefore, any recommended changes to the system must reduce the present inventory control problems and increase the effectiveness of the procurement pharmacist.

The following recommendations are made to improve the operation of this system:

1. T/R cards
 - a. Review and establish a T/R card for all stock items. This step should require little effort as most regularly purchased items presently have a T/R card.
 - b. Revise the filing system of T/R cards as follows:
 1. Drugs - Alphabetically by generic name with combination drugs by brand name.

2. Chemicals - Alphabetically by chemical name.

2. Inventory control cards

- a. Review and establish an inventory control card for all stocked items including prepackaged drugs, chemicals, and supplies.
- b. Revise filing system of inventory control cards to correspond with T/R card system and include a separate section for labels and containers. The inventory control card should be filed on the bottom flap and the T/R card on the top flap in the Kardex file. Items ordered from Central Stores or other departments will only have an inventory control card.
- c. A physical inventory on all items in the storeroom must be taken to update the inventory control cards. It is essential to post all receipts and withdrawals on the card after the item has been inventoried.
- d. Review and revise the reorder point for each item in accordance with the following basis:
 1. Ordered for three months supply
 - A. All prepackaged items
 - B. No short dated items
 - C. Items with established demand
 2. Ordered for two week supply
 - A. New items or items with sporadic demand
 - B. Short dated items
 3. Ordered for one week supply
 - A. Containers and items from Central Stores for which there is insufficient storage in the pharmacy storeroom.
 4. Ordered on other basis
 - A. Special chemicals and reagents where smallest economic purchase lot will last one year.

Reordering on the basis of these standards will permit operation in the present storeroom as well as accomplishing an inventory turnover of between four and five times per year which is acceptable for a hospital pharmacy.

3. Operation of System

- a. Close the doors of the storeroom and authorize only the procurement pharmacist and pharmacy aide to dispense items during weekdays from 8:30 a.m. to 5:00 p.m. This step is mandatory to establish control over withdrawals. Other pharmacists should be authorized to withdraw items only on weekends and after hours, but an accurate record of withdrawals must be kept.
- b. A non-prepack order form has been designed for recording orders and requisitions. (See appendix, Page 21). This form should be used for inpatient and outpatient pharmacy orders along with the prepackaged order form. This same form can be used to record all departmental, ward stock, and university orders as well as to record the weekend and after hours withdrawals. These order forms should be used as the source documents for posting withdrawals to the inventory control cards once per day.
- c. It will not be feasible to maintain a daily record of withdrawal of items such as bulk chemicals which are purchased in 100 pound lots and used in grams. It is recommended that inventory control cards be established for these items. A physical inventory should be taken once per month and the quantity on hand recorded on the inventory control card. Identification of these items can be facilitated by placing a colored Flexoline signal on the visible edge of the inventory control card.
- d. The reorder point must be checked each time a withdrawal is posted on the inventory control card. The T/R card and inventory control card should be removed from the file and given to the procurement pharmacists to reorder the item when the reorder point is reached.
- e. A record of all telephone Emergency Prescription orders should be maintained and placed in the outstanding order file until the order is received.
- f. The duties of filling orders, posting all transactions to the inventory control cards, and file maintenance should be delegated to the pharmacy aide.

The advantages of the proposed system changes are:

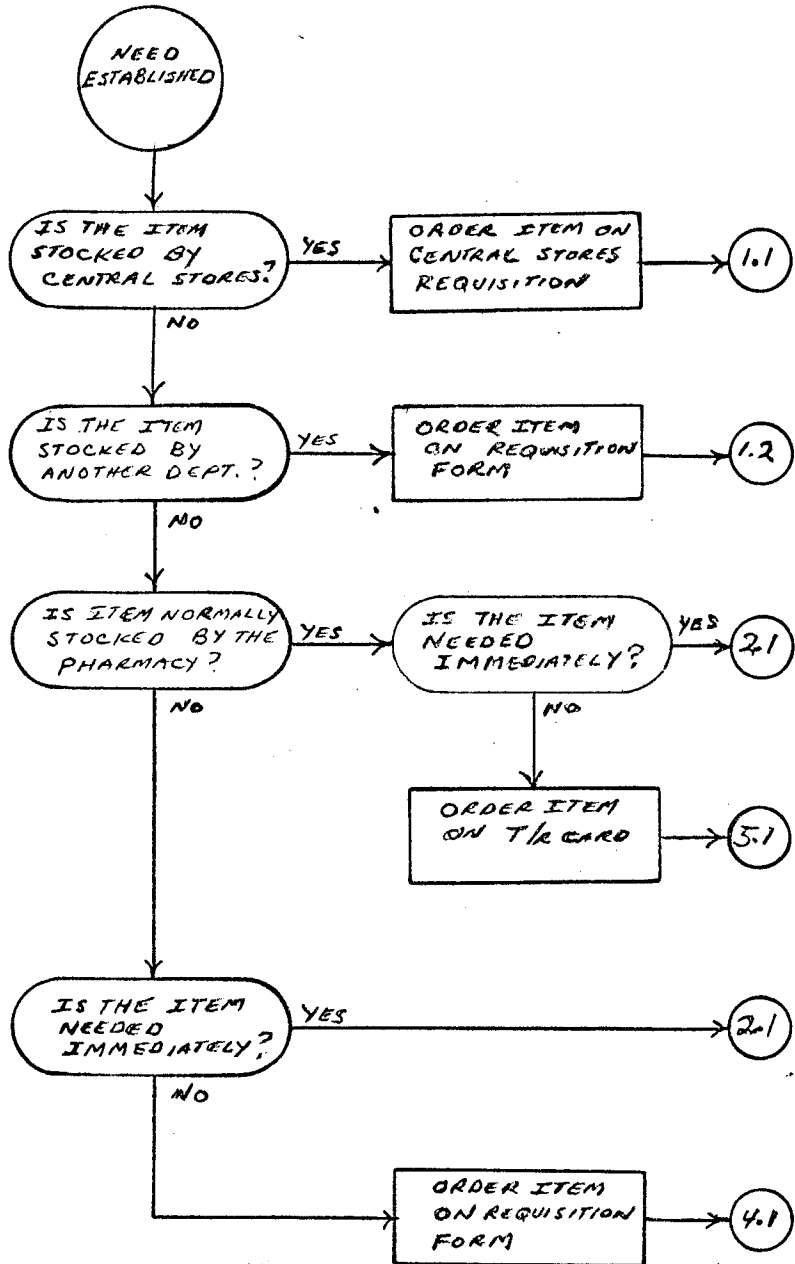
1. Insures adequate inventory control of stock if procedures are followed.
2. Reduces planning and scheduling problems for Laboratory division caused by rush orders for prepackaged drugs or being out of stock of ingredients used in manufacturing.

3. Decreases quantity of stock drugs obtained through Emergency Prescription Service through better inventory control.
4. Reduces time requirements of procurement pharmacist in ordering drugs as it should be possible to do all ordering once or twice per day. This should also help to improve the supervisory effectiveness of procurement pharmacist.
5. Improves utilization of pharmacy aide as work will be more of a routine nature.
6. Decreases training problem for vacation and sickness relief by providing a more uniform system.

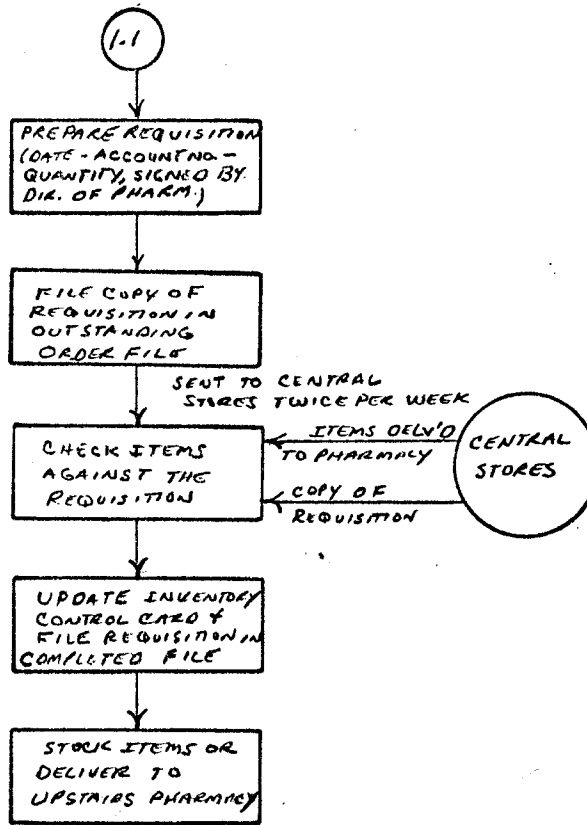
The flow charts included on the following pages show the detail procedures of the proposed system. The general flow chart indicates that the initial step in ordering any item is based on the establishment of need for the item which is done in one of the following ways:

1. The inventory control card indicates the balance on hand has reached the reorder point.
2. The physical inventory check recorded on the inventory control card indicates the balance on hand has reached the reorder point.
3. An item is ordered pending receipt or the wrong item was received so the item must be reordered through Emergency Prescription Service.
4. An inpatient pharmacy request for item not stocked by pharmacy.
5. A departmental or university request for an item not stocked by the pharmacy.

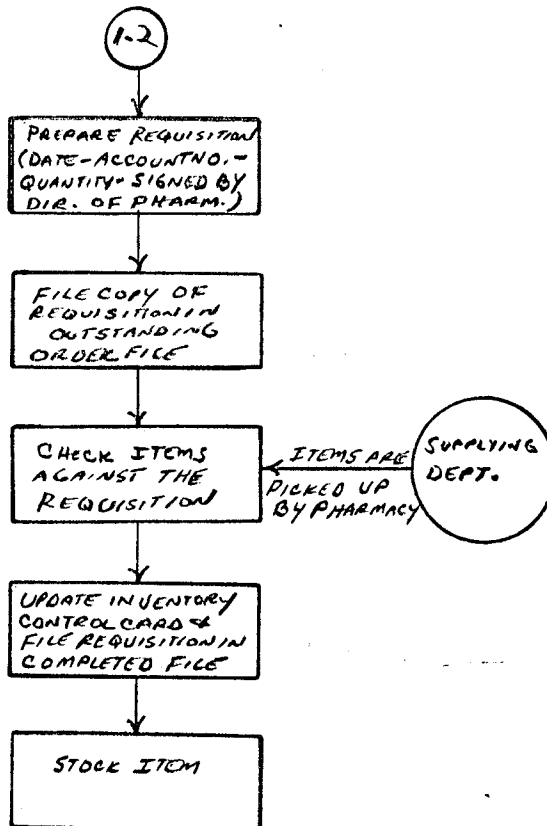
GENERAL FLOW CHART
PROCUREMENT PROCEDURE



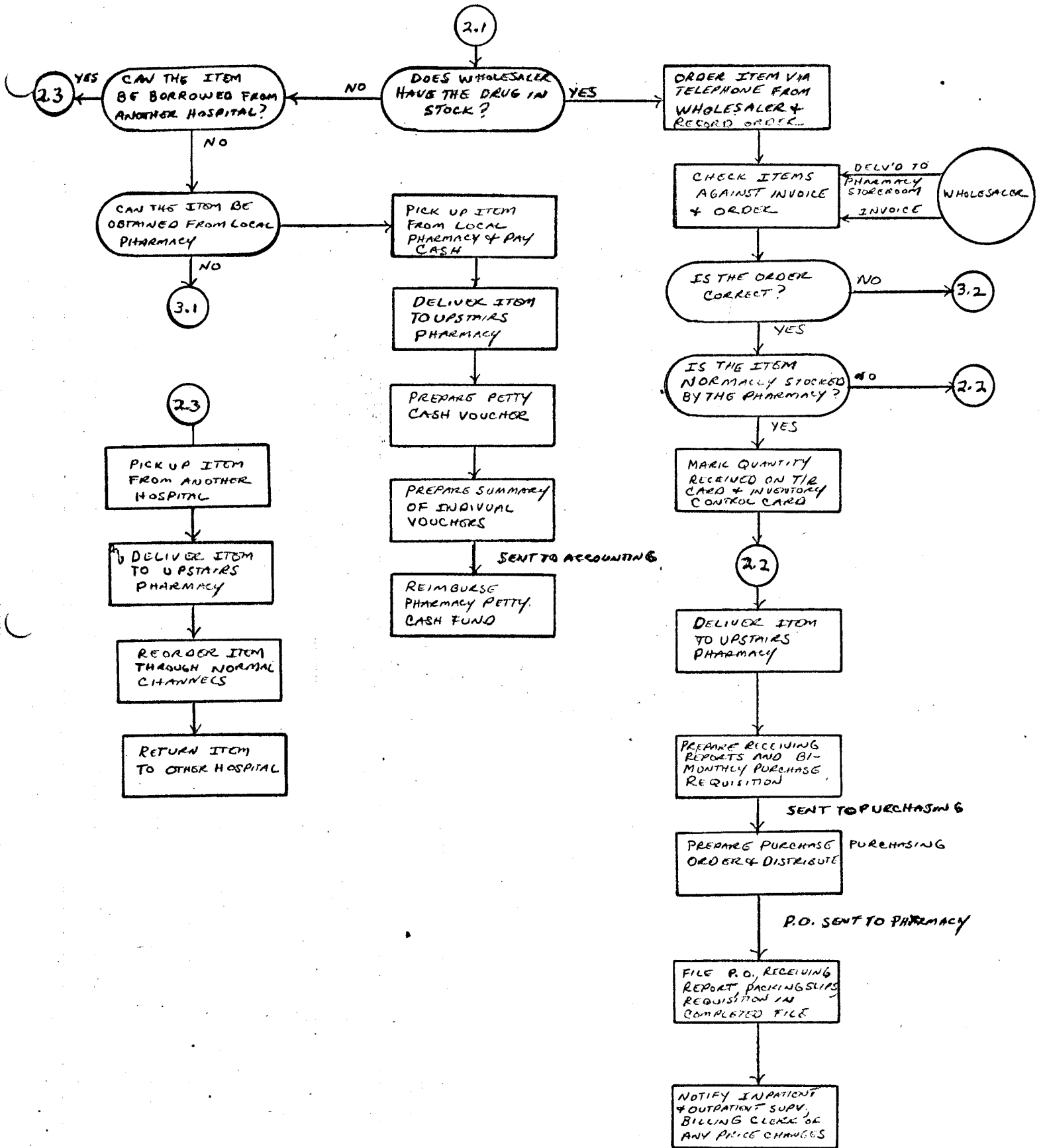
CENTRAL STORES REQUISITION



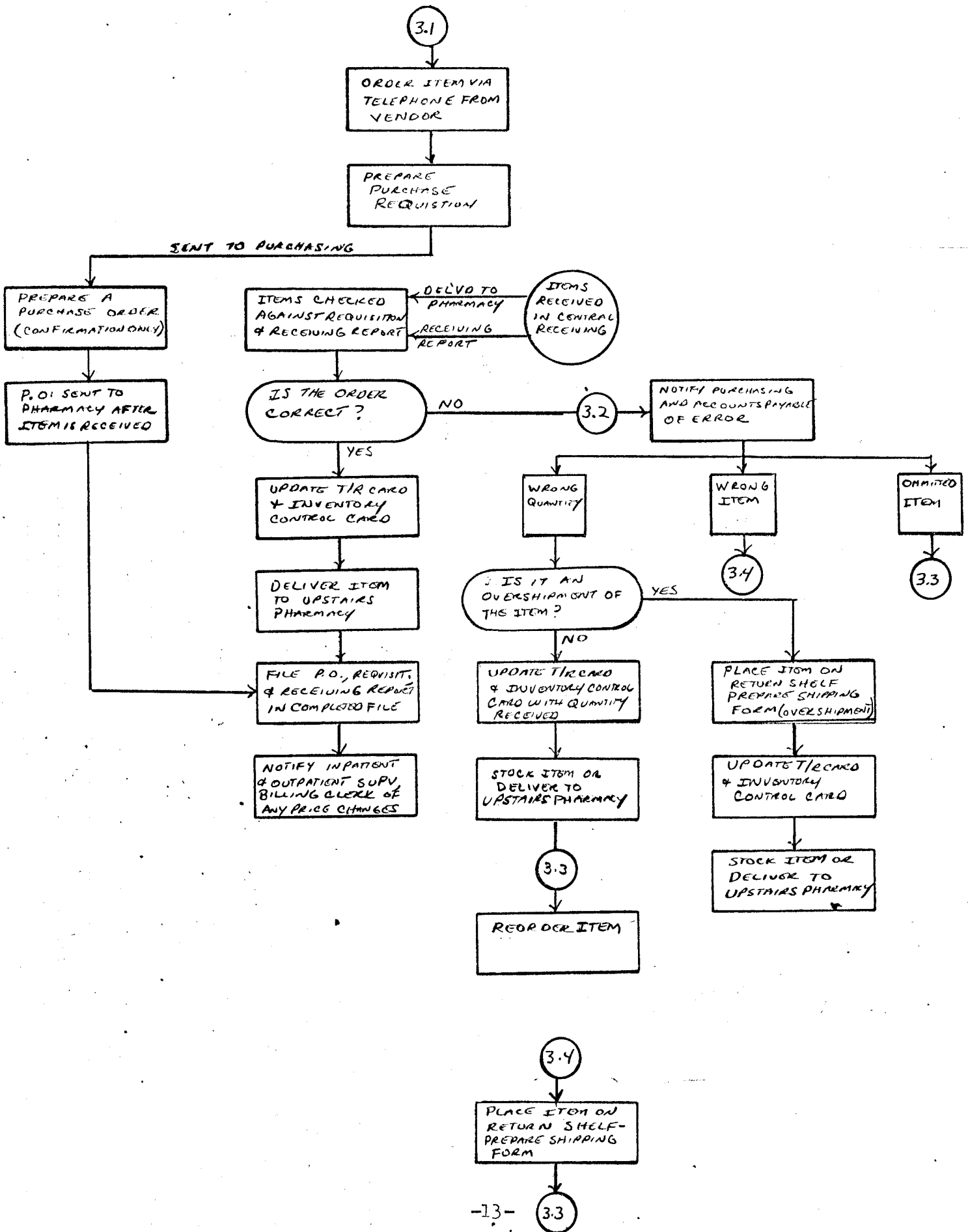
INTERDEPARTMENTAL REQUISITION



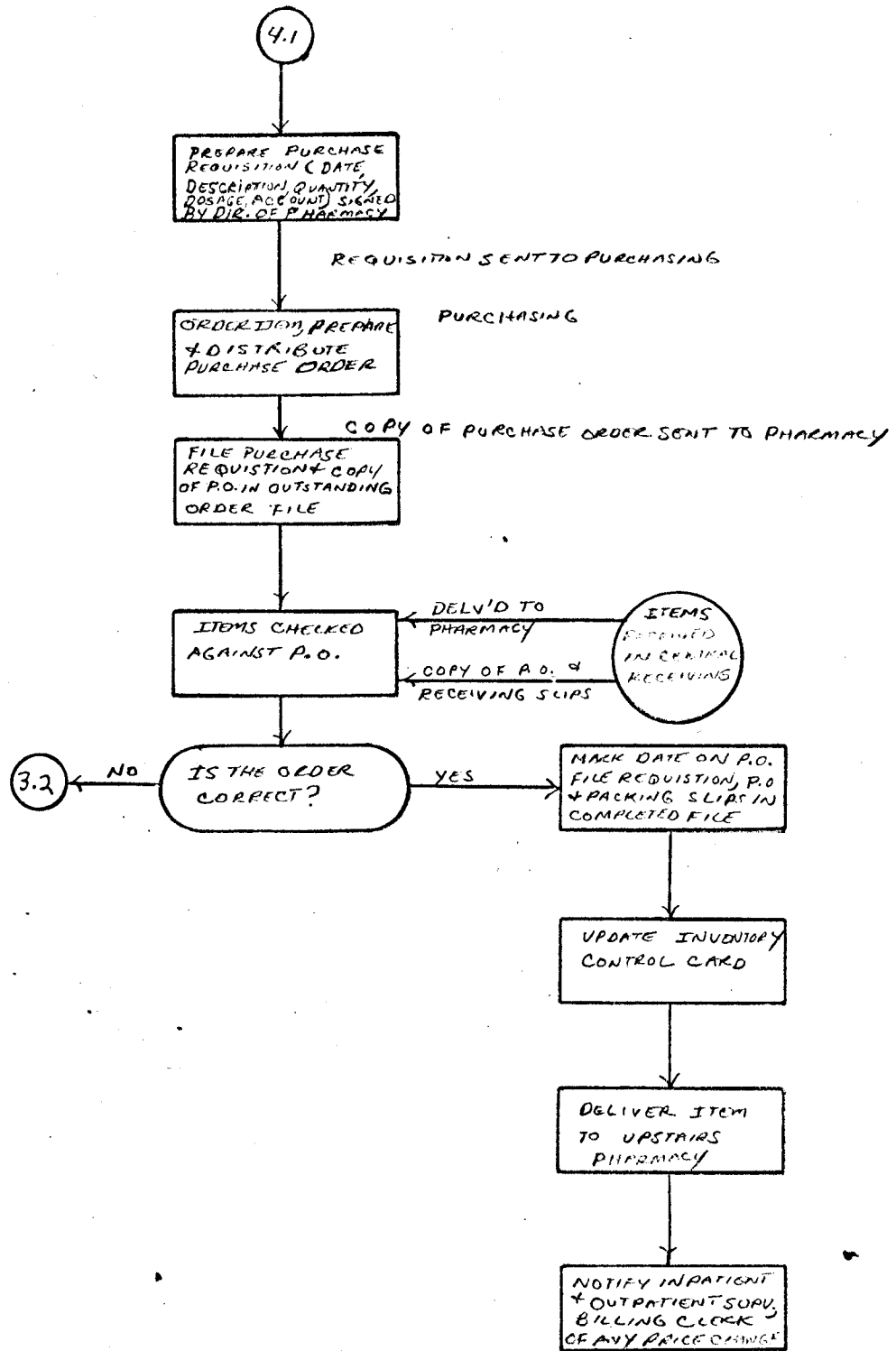
EMERGENCY PRESCRIPTION SERVICE



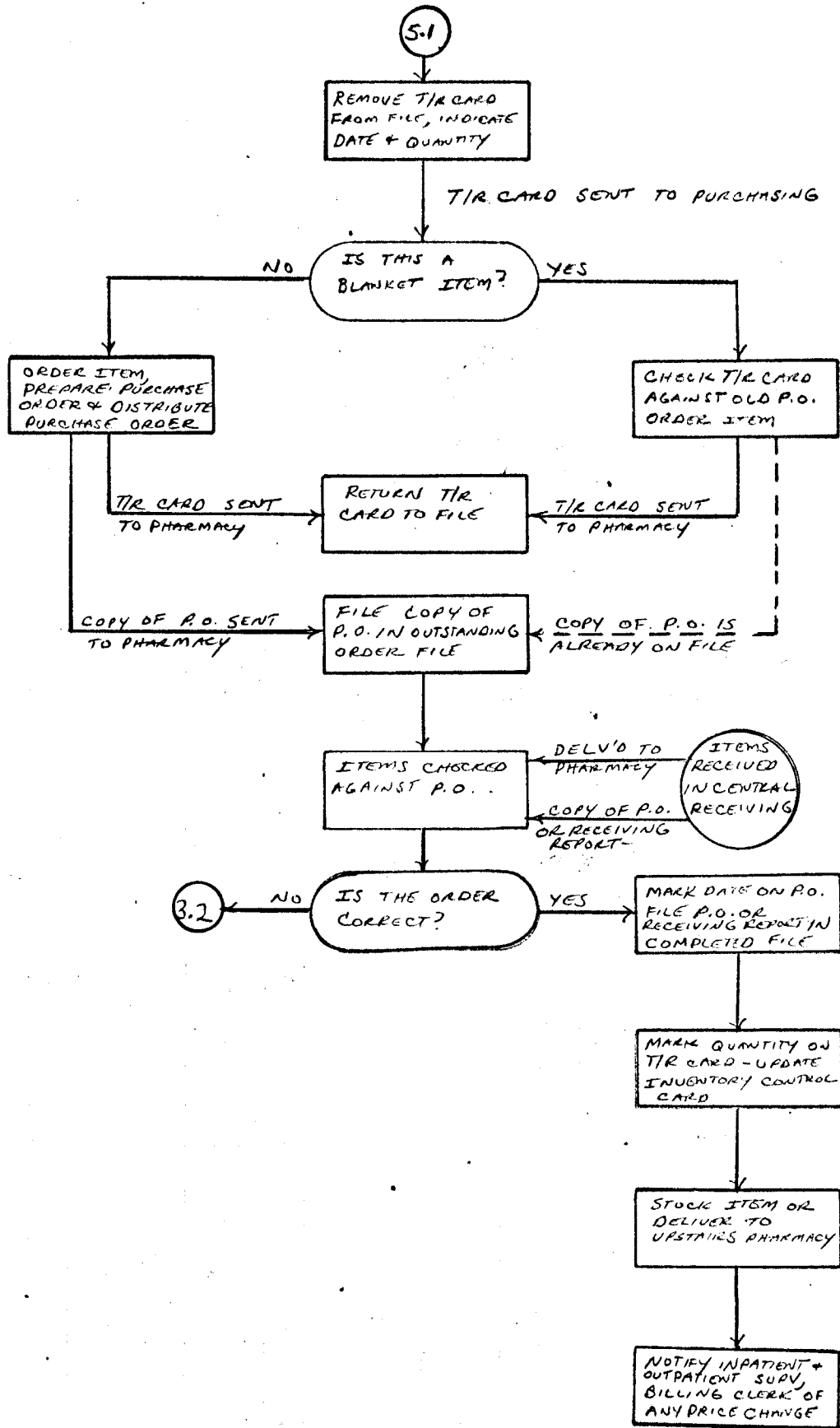
EMERGENCY PRESCRIPTION SERVICE



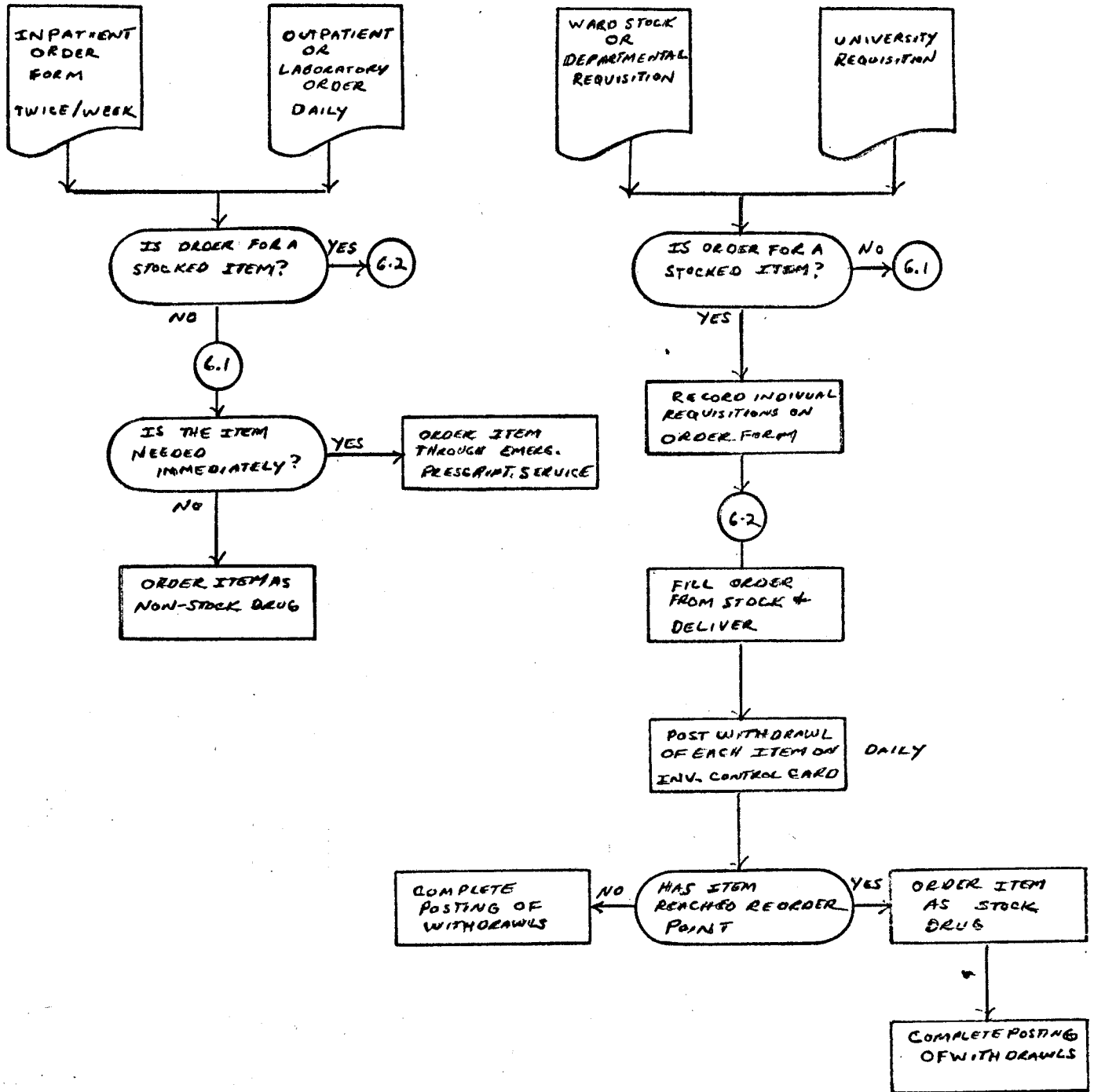
PURCHASE REQUISITION FOR NON-STOCK ITEM



REGULAR STOCK ITEMS



GENERAL FLOW CHART
DISPENSING PROCEDURE



Organization and Staffing

Consideration has been given to placing the Procurement and Billing section under the responsibility of the Assistant Director of Pharmacy Services in charge of the Laboratory division. The procurement pharmacist would report to the Assistant Director rather than directly to the Director of Pharmacy Services.

The reasons for making such an organizational change are:

1. It would provide more supervision of the procurement and billing functions.
2. The geographical location of the Assistant Director's office near the storeroom would facilitate supervision.
3. The Assistant Director of the Laboratory division presently provides vacation and sickness relief for the procurement pharmacist.

The reasons for not making this organizational change are:

1. The procurement function serves the entire pharmacy not just the Laboratory division.
2. A conflict will arise between the Dispensing and Laboratory divisions regarding the priority and control of the procurement function.
3. The procurement pharmacist should require little supervision as he must be able to function independently.

Therefore, after weighing these considerations, it is recommended not to change the present pharmacy organization. It is recommended that the procurement pharmacist should provide more supervision over the billing function. The procurement pharmacist will have more time available to function as a supervisor after implementation of the proposed procurement and inventory control system.

Job descriptions have been prepared for the procurement pharmacist and procurement pharmacy aide positions. (See appendix, page 22). It is suggested that the job descriptions should be reviewed with the procurement pharmacist to make him more aware of his supervisory responsibilities.

The procurement pharmacist's job description indicates that the qualifications require a registered pharmacist. This point is subject to some disagreement. The major responsibilities

requiring a pharmacist's qualifications are selection of the three suppliers for each drug based on knowledge of the product and conducting product interviews with detailmen. These responsibilities might be assigned to another pharmacist which would reduce the qualifications for this position. However, the requirement of extensive knowledge of all drugs and pharmaceutical manufacturing practices coupled with the above responsibilities have led to the recommendation that the position should be filled by a registered pharmacist.

The implementation of the proposed procurement and inventory control system will not necessitate any increase in staff. The present system is placing demands for increased staff because of its inefficient operation. Many tasks must be performed several times each day rather than once each day and frequent interruptions to order rush items have caused poor job planning and personnel utilization. Therefore, it is recommended that the pharmacy storeroom should continue to be staffed by the procurement pharmacist and a pharmacy aide.

Reports

A review of the monthly reports prepared by the accounting department for the pharmacy was made. At present, these reports are not effectively used by the pharmacy. The following recommendations regarding reports are made to assure better control over purchases.

1. The monthly Inventory Distribution Report showing all purchases from Central Stores should be reviewed by the procurement pharmacist for erroneous account numbers. Many examples of wrong account numbers were discovered, and it is important that purchases be charged to the proper account for proper preparation of the pharmacy budget. A written report should be given to the Director of Pharmacy Services and reviewed with the accounting department to correct any discrepancies.
2. The monthly Purchase Order Report represents only a listing of pharmacy invoices received during the month. It does not correspond to purchase orders initiated or orders received during the month. It will be difficult to utilize this report for any checking except for the total amount for each account.
3. The Supplies and Expense Report can serve as valuable reports to check the total monthly supply expenditures. The sum of the expenditures for each account on the Inventory Distribution Report plus the Purchase Order Report should equal the total for the account on the Supplies and Expense Report. Again, errors on this report were found which should be corrected for proper preparation of the budget. This check should be

made monthly by the procurement pharmacist and discrepancies reported in the same manner as for the Inventory Distribution Report. The following accounts can not be checked in this manner but the actual charges can be obtained upon request from the accounting department.

- a. Dietary 720-311
- b. Xerox supplies 720-376
- c. Inventory adjustment 720-397
- d. Clearing recovery 720-399-001
- e. Clearing recovery other 720-399-003
- f. Clearing recovery hospital 720-499-001
- g. Alt. bldgs. & equip. AFE 720-552

4. A record of all non-stock drug purchases should be maintained by drug name and date of purchase. A monthly report showing the non-stock drugs that are ordered repetitively should be submitted to the Director of Pharmacy for review by the pharmacy and therapeutics committee.
5. A report showing the total cost of items purchased through Emergency Prescription Service should be made every four weeks. It can be prepared by totaling the individual invoices when the bi-monthly purchase requisitions are typed. This report will serve as an indicator of how well the inventory control system is functioning as the objective should be to decrease the amount spent for Emergency Prescription Service.

APPENDIX

DRUG ORDER FORM

Units	Quantity	Name of Drug	Dose	Order Filled	Reord.

PROCUREMENT PHARMACIST

General Description

This is a professional pharmacist who is responsible for the procurement, inventory control, pricing, and dispensing of all drugs and drug supplies used in the pharmacy. The procurement pharmacist is responsible for the work of a pharmacy aide, clerk typist, and clerk. Work is performed independently within established procedures under the general supervision of the Director of Pharmacy Services.

Duties and Responsibilities

1. Drug and supply procurement
 - a. Orders all drugs, narcotics, chemicals, containers, and labels used by the pharmacy.
 - b. Returns drugs received in error and outdated drugs.
 - c. Checks receipt of all Emergency Prescription Service drugs.
 - d. Prepares annual report of consumption of all drugs obtained on bids.
 - e. Reviews all bids with Purchasing Department for selection of vendors.
 - f. Responsible for security of all drugs and supplies stocked in storeroom.
2. Inventory Control
 - a. Maintains accurate inventory and purchase records on all drugs and supplies.
 - b. Establishes reorder points for all new items and reviews reorder points for existing items.
 - c. Reports usage of new drugs not stocked and drugs that are stocked on a temporary basis.
 - d. Conducts semi-annual inventory and develops costs on all drug inventory.
3. Pricing and Dispensing Drugs
 - a. Develops ingredient costs for pricing purposes on all drugs and reports all price changes.

- b. Fills orders for: inpatient pharmacy, outpatient pharmacy, university requisitions, departmental requisitions, Laboratory division requests, and ward stock items not stored in floor stock room.
 - c. Responsible for inpatient, ward stock, and department billing charges.
4. Sales Representatives, Drug Information, and Samples
- a. Registers sales representatives for all hospital visits and schedules all appointments with physicians and pharmacists.
 - b. Conducts product interviews with all detailmen once per month.
 - c. Schedules all pharmaceutical manufacturers' exhibits.
 - d. Maintains and distributes reference information and catalogs for all drugs.
 - e. Receives all requests for drug samples from physicians, orders and receives samples, and distributes all requested samples to physicians.
 - f. Receives and distributes all non-requested samples to appointed physicians for authorized distribution.
5. Other Responsibilities
- a. Supervises work of pharmacy aide, clerk typist, and clerk.
 - b. Receives and distributes uniforms worn by pharmacy personnel.
 - c. Reviews monthly Inventory Distribution Report and Supplies and Expense Report and prepares written report of any discrepancies.

Knowledge and Abilities

Position requires extensive knowledge of all drugs and pharmaceutical supplies as well as familiarization with pharmacy manufacturing and packaging practices.

Knowledge of drug pricing policies and hospital purchasing and accounting procedures. Ability to plan, and supervise the work assigned to pharmacy aide. Ability to maintain a variety of inventory control and purchasing records.

Ability to evaluate and improve procurement and inventory control system.

Ability to maintain good working relationships with physicians, pharmacists, sales representatives, co-workers, and personnel from other departments.

Qualifications Required

Registered pharmacist with pharmacy supervisory experience.
Desirable - Previous hospital pharmacy procurement or purchasing experience.

PHARMACY AIDE - PROCUREMENT DIVISION

General Description

This is a non-professional pharmacy aide who performs routine work involving inventory control, filing, posting, and filling orders of drug items. He is expected to carry out routine work without specific instructions. Work is performed under the supervision of the procurement pharmacist.

Duties and Responsibilities

1. Checks receipt of all drugs except Emergency prescription Service drugs.
2. Posts drug receipts and withdrawals on appropriate inventory records.
3. Advises procurement pharmacist when reorder point for a drug is reached.
4. Maintains "outstanding order" and "completed order" file.
5. Places stock drugs on shelves in storeroom.
6. Completes shipping requests for all drugs to be returned.
7. Fills and delivers orders for inpatient pharmacy, outpatient pharmacy, laboratory division, departmental requisitions, and special stock requisitions.
8. Checks inventory on all items obtained from Central Stores and completes requisition based on established standard level.
9. Takes monthly physical inventory of all items that it is not feasible to record the daily withdrawals.
10. Assists in taking semi-annual inventory of pharmacy.
11. Delivers and picks up mail and requisitions between pharmacy, purchasing, and accounts receivable.
12. Delivers dirty uniforms and picks up clean pharmacy uniforms from laundry once per week.
13. Performs other related work as required.

Knowledge and Abilities

Position requires knowledge of simple bookkeeping entries of addition and subtraction on inventory records.

Ability to lift and move cases of drugs and supplies.
Ability to learn storeroom location and names of various
drugs and supplies.
Ability to record transactions and maintain files
accurately.
Ability to carry out oral and written instructions.
Ability to accurately fill pharmacy orders.
Ability to establish and maintain good working relation-
ships with co-workers and personnel from other departments.

Qualifications

Male high school graduate or equivalent education.