CSF

DEVELOPMENT OF

MATERIAL MANAGEMENT SYSTEM

380 - 67

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C O N T E N T S

SECTION 1

DEFINITION OF MATERIEL MANAGEMENT SYSTEM (MMS)

A system to assure the adequate, timely and minimum cost supply of consumable and reusable materiel and equipment to hospital departments and patients.

More specifically, things now supplied by:

1. Central Storeroom.
2. Central Supply.
3. Pharmacy.
4. Receiving will be included in this system.

FUNCTION OF MMS

A flow chart of the major systems is shown in Figure 1. These systems are:

1. Inventory maintenance and control.
2. Materiel distribution.

Brief descriptions of these and of the sub-systems are included following the flow chart.

The creation of central control and responsibility for this system requires answering several questions.

1. What skills should the MMS manager have?
2. What will be the function of certain technical specialists in an MMS? (i.e. Pharmacist).
3. How should the systems and procedure development be done? (i.e. by the manager and/or by systems specialists?)

An additional question must also be answered after thinking through the above.

What is C.S.F.'s role?

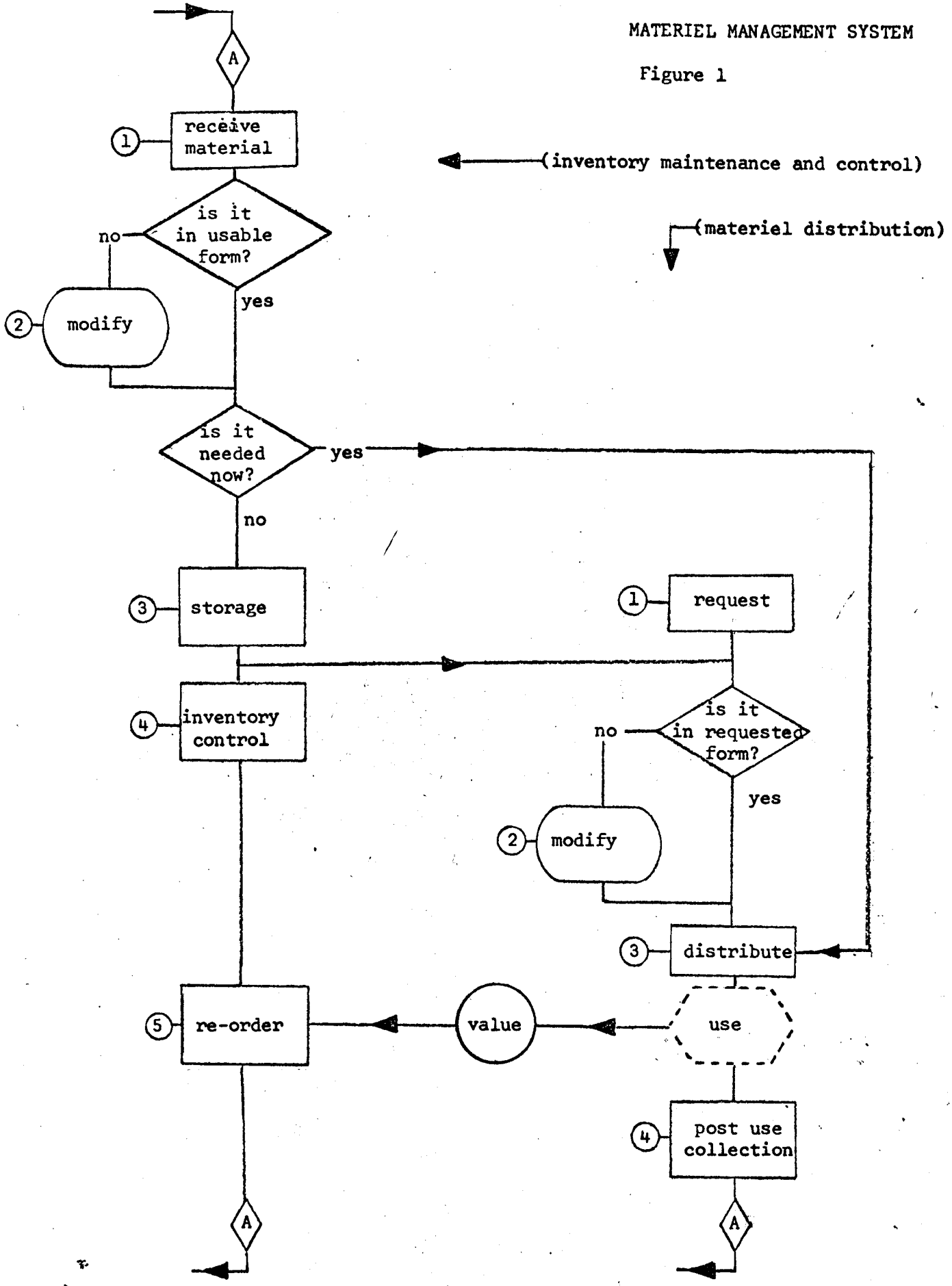
a) System specialists only or

b) Management of department in addition.

SINAI HOSPITAL OF DETROIT

MATERIEL MANAGEMENT SYSTEM

Figure 1



MATERIELS MANAGEMENT SYSTEM DESCRIPTION

INVENTORY MAINTENANCE AND CONTROL SYSTEM

To maintain an adequate and economical supply of materiels to fill user requests within acceptable time spans.

1. Receive Material
   a) Receipt of purchased goods from outside the hospital. Includes quantity, quality and specification inspections.
   b) Receipt of reusable supplies from using areas within the hospital.
2. Modify Goods
   a) Unpack or repack goods received from outside (prepackaging drugs into dispensing units).
   b) Process reusable supplies from inside the hospital (cleaning and re-stocking of suction pumps).
3. Storage: Placing items on shelves or in other areas in the most convenient way for distribution.
4. Inventory Control: Maintaining proper amount of stored items to
   a) Assure adequate supply.
   b) Minimize inventory costs, both storage and order costs.
5. Reorder: Determine quantity, quality, specifications and timing for reordering of materiel.

MATERIEL DISTRIBUTION SYSTEM

To assure that the user has the materiel at the time that it is needed.

1. Request: Determination of need for materiel
   a) Request from user at time of need.
   b) Anticipated need based on past use.

2. Modify Material: Changes in packaging or make-up determined by the nature of the request (pre-medicated solutions; special use trays).
3. Distribution: Movement of material from Receiving, Storeroom or modifying area to user.
4. Post-use Collection: Recovery of reusable material, disposal of non-reusable material.

Between the two major systems is a function called "value". This is a determination of the ability of the material to satisfy the need. It will attempt to relate quality, specifications, price and availability to use so that the material gives the hospital maximum benefit per dollar.

SECTION 2

SKILLS REQUIRED TO DEVELOP, IMPLEMENT AND OPERATE A MATERIEL MANAGEMENT SYSTEM

1. Engineering ability to provide
   a) Space utilization - storage
   b) Plan and schedule distribution
   c) Establish economic inventory levels
   d) Organize "production" operations for supply modifying
   e) Measurement of use value of materiel
2. Management ability to
   a) Supervise workers
   b) Relate to using departments
   c) Recognize changes in the system
   d) Identify problems
   e) Understand the hospital for effective value judgments
3. Technical knowledge of items in the system
   a) Pharmacology
   b) Medical and Nursing procedures
   c) Sanitation and Asepsis
   d) Mechanical and Electrical maintenance

The successful implementation of a central Materiel Management System requires different degrees of each skill at different times.

1. Engineering skills will be required in fairly large quantities during the development of each sub-system. When the system is operating, this skill will be needed in small quantities for improvements, follow-up and development of minor systems.

2. Management ability will be required in increasing quantities. As each sub-system is brought under central control, the scope of responsibility will grow. Successful management will require long range continuity and good system descriptions.
3. Technical knowledge will also be required in increasing quantities. As management tasks are removed from professional positions, these individuals will be free to pursue the technical aspects of their function. The availability of this kind of service should cause an increase in the demand for it, and an increase in the complexity of questions to professionals.

SECTION 3

PROGRAM FOR CONDUCTING THIS PROJECT

1. Role of Personnel.

The division of responsibility between the engineers and the manager is of concern during the start up of this program.

Because the manager's management task grows at the speed of the engineering studies, initially there will be little continuing management function.

The following is a suggested program for conducting this project:

1) An individual be hired whose primary talents lie in management. Engineering know-how is not essential.
2) Engineers begin studying the system, using this individual as a liaison with the present system.
   a) Manager begins to relate to people with whom he will eventually deal.
   b) Manager begins to learn something about systems engineering by doing some of the study work.
3) Implementation of first sub-system takes place, coordinated by the manager, with engineers doing the work.
4) Manager assumes responsibility for running first sub-system.
5) Study of second sub-system is begun.
   a) Manager still acts as liaison but does not do as much actual work.
   b) Engineers are now more familiar with and to other hospital personnel.
6) Second system is implemented; manager assumes this responsibility.
7) This progression continues until the total system is running.
   a) The manager has been brought into the picture from the beginning.

b) His primary skill, management, has been augmented by exposure to systems engineering.

c) The engineers phase out of the system in a logical way.

d) The manager has assumed responsibilities gradually, and in close cooperation with engineers and present system managers.

This progression assumes certain basic philosophies:

1) Management ability is foremost for the successful, long-term running of this system.

2) Engineering ability is required for good system design.

3) An individual good at both will be difficult, if not impossible, to recruit.

2. Sequence of studies for all systems.

1) Establish a coordinated distribution system for all materiel.

a) Extend exchange cart system.

b) Consider sub-areas as suppliers to "distribution".

2) Establish a post-use collection system for reusable elements.

3) Back into sub-areas through the supply door.

a) Storage system; layout; packaging.

b) Inventory control.

c) Remove management from present supervisor.

4) Establish modifying procedures for

a) "Received" to "use" packing.

b) Reusable processing.

c) Other.

d) Remove from present supervisor (except technical supervision).

5) Establish value system with professional personnel participation.

6) Control of received goods from outside sources.

a) Convenient packaging.

b) Order quantities.

3. Sequence of events for one sub-system.

1) Central control procedures must be developed.

a) System study of the function.

b) Design of system.

2) New procedures must be implemented.

3) Management of the new system must be established.

a) Removal of responsibility from existing job.

b) Establish responsibility under central control.

4) Professional aspects of the function must be defined.

a) Shift professional personnel to work on these aspects.

b) Adjust professional staff.

SECTION 4

WHO SHALL EMPLOY THE MANAGER - C.S.F. OR SINAI?

This question is really twofold:

1) Which employer is more attractive to a prospective manager?

2) Which arrangement offers the most control over interpersonal relationships between the manager, engineers, administration and departments?

The job description is the same regardless of the employer: a central materiel management system needs to be developed and then managed.

Employment for this job has different attractions with each employer.

The salary and fringes may differ. C.S.F. is probably more flexible in salary than is Sinai. At Sinai, the position will have to integrate into the salary structure of department heads. At C.S.F., the salary can be somewhat unrelated to what our current employees earn. Because this job is unique in our structure, it can demand a unique salary. If the wage demand is higher than Sinai salaries, then C.S.F. could be the employer.

The opportunity for growth differs in the two organizations. Within Sinai, growth would be horizontal through expansion of services by this department, or vertical through promotion to an assistant director level. The only other opportunities would be at another institution. Employment at Sinai would guarantee geographic stability as long as the employment lasted.

At C.S.F., growth would include horizontal expansion of this department at Sinai. It might include some new "contractually managed" services as well. Most likely, growth would involve developing this C.S.F. service in other institutions. This would reduce or eliminate Sinai time by this individual and

vary the geographic location of his work. The change in time at Sinai would be accomplished by phasing in new personnel. In a sense, C.S.F. could offer the growth of going to another institution without a traumatic change in personnel at Sinai.

Each arrangement creates a slightly different set of loyalties among the participants.

Employed by Sinai, the manager would be loyal first to the hospital. He would not be faced with conflicts in making decisions having a bearing on the operational philosophy of the hospital. His relationship with other department heads would be on an equal basis. Some conflicts may develop between C.S.F. engineers and the managers. The number of people involved is less than in the manager-department head association, so this should be easier to control than with a C.S.F. manager. A Sinai manager would bring the hospital's point of view to the operating level, rather than having it interpreted through his C.S.F. supervisor.

This part of the employer decision is more important to the success of the system. The only real benefit of a C.S.F. manager is minimizing his conflicts with the engineers. As this is less important than the relationship with the department heads, the manager should probably be a Sinai employee.

One further point - C.S.F. has not yet provided a line authority service to any institution. If C.S.F. did employ the manager, it would assume this line authority. As this would be our first attempt, Sinai would be acting as a laboratory to C.S.F. for this service.

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