



Management of laboratory inventory from procurement to utilization and condemnation

Authors:

Satyadeo V Dhote, Vandana A Agarwal

Department of Microbiology, Government Medical College, Chandrapur 442401(India)

Corresponding Author

Vandana A Agarwal

Prof. & Head, Department of Microbiology

Government Medical College, Chandrapur 442401(India)

Email: agarwal.gmc@gmail.com, 09890763476

Introduction

Management of laboratory inventory effectively is important for several reasons. It provides a continuous supply of consumables and non-consumables, removing 'nil-stock' periods. It ensures regular maintenance and repair of equipment and instruments and this in turn facilitates quality reporting and in the long run effective condemnation procedure.

Maintenance of records in a systematic manner facilitates proper management of inventory. Having a long association with departmental store,

and experience gained during regular interaction with auditors, prompted us to develop a simple protocol for inventory management in the laboratory with emphasis on record keeping.

1. Demand of the laboratory inventory

Demand should be specific. Justification is required for costly items. Based on demand purchase is made as per institutional purchase policy (centralized, tender, rate contract, quotation or local purchase). The format for demanding inventory is as shown in table 1.

Table 1. Format for demanding inventory

Sr. No	Nomenclature	Specification	Qty Held	Qty required	Remarks

2. Inventory delivery and location

Delivered items after verification are entered in stock ledger. Entry should include order number, order date, specifications, complete address of supplier, bill number, bill date and amount. Certification of invoice of non-consumable items

such as instruments must be done after successful installation.

Delivered items are initially located in the departmental store room. Store room must have adequate space, controlled temperature and humidity, adequate light, ventilation, shelves,

refrigerators, fire extinguisher, provision for pest control.

The store must have Material Safety Data Sheets (MSDS) or equivalent in the workplace for each hazardous chemical ^(1,2).

3. Maintaining the inventory in departmental store room

At least one person of the department should be assigned to take care of the store room, prepare demand, check orders, delivery, distribution of supplies and keep a running inventory. The inventory management system used can take

various forms, including a manual card system, a spreadsheet, or a software system which automates some of the tasks ⁽³⁾. Grouping inventory by frequency of use, expiration date and type creates an organized system that is easy to retrieve from and re-stock.

3a. Receiving and issuing of items

Items for the laboratory are received from the institutional store room through a voucher with signatures. The format for the voucher is as shown in table 2.

Table 2. Format for receive and issue voucher

Issued by:

Voucher No:

Date:

Received by:

Voucher No:

Date:

The following items have been received/ issued from..... vide voucher no.....dated

Sr. No	Nomenclature	Account unit	Qty Issued	Remark

Signature of the issuer

Signature of the receiver

Signature of the Head of the dept.

3b. Taking charge of consumable and non-consumable items

After receiving all consumable and non consumable items from institutional store room,

they are entered in dedicated inventory ledgers which are serially numbered. The format for the inventory ledger for index page and internal page is as shown in table3 and table 4 respectively.

Table 3. Format for index page of inventory ledger

Sr. No	Nomenclature	Page No.	Remark

Table 4. Format for internal page of inventory ledger

Sr. No:

Name of item:

Page no.

Account unit:

Sr. No.	Date	Receive/Issue Voucher no.	Received	Issued	Balance	Signature

3c. Index card at site in store room

Entries in the index card are made at the time of issue and receive. Index card is of the size 10x15 cm. It is tagged at the site of placement of item in

the store room. It allows store viability at a glance. Format for index card is as shown in table 5.

Table 5. Format for Index Card

Name of item:

Account unit:

Address of supplier (Optional):

Sr. No	Date	Qty received	Qty Issued	Balance

4. Maintaining the inventory at in-use or laboratory site

The stock of the consumables at the in-use or laboratory site should be taken at the end of every month and the stock to be deducted from the expense ledger by entering the expense voucher number. The expense voucher and expense ledger

should be signed by head of the department at the end of every month; the stock should be verified at the end of year. The format for index page and internal page of the expense ledger at work bench site is as shown in tables 6 and 7. The format for expense voucher is shown in table 8.

Table 6. Format for index page of expense ledger

Index page

Sr. No	Nomenclature	Page No.	Remark

Table 7. Format for internal page of expense ledger

Sr. No:

page no.

Name of item:

Account unit:

Sr. No.	Date	Receive/Issue Voucher no.	Received	Expensed	Balance	Signature

Table 8. Format for expense voucher

Issued by:

Received by:

Voucher No:

Voucher No:

Date:

Date:

The following consumables have been expensed during the month of for the bonafide use of the patient and the same has been deducted

from the laboratory stock ledger no..... vide voucher no..... dated

Sr. No.	Nomenclature	Account unit	Expense	Signature

4a. Work bench inventory

The work bench inventory in the laboratory is checked daily. The inventory is taken in the evening hours so that all the supplies are available before new specimens are received in the next morning.

5. Certification of each ledger and voucher

Each ledger must be certified by the head of the department before taking into use. The ledger should be serially numbered, mentioning the total page number on certificate and date on which it is taken into use. Without certification of the ledger, it has no legal value.

6. Inventory Audit Schedules

This step goes beyond the weekly, bi-weekly or monthly inventory replenishment counts that are conducted. (4).The departmental audit should be done every year for consumable and non-consumable items. The entire non consumable items should be checked for their presence, maintenance and performance while the consumable items should be checked for their expenses monthly and counts yearly. Audit of consumables should include count of broken glassware and empty containers to check pilferage.

7. Standard operating procedure for the instruments

The laboratory must write Standard Operating Procedures (SOPs) for all laboratory instruments

to ensure their consistency, quality, and integrity of the generated data. Current SOPs must be readily available in the work areas and accessible to operating personnel.

8. Logbook for instruments

Written records should be maintained of all inspection, maintenance, testing, and calibrating and/or qualification / validation operations in the log book ⁽⁵⁾. Written records should be kept of non-routine repairs performed on equipment as a result of failure and malfunction. A log book should accompany the instrument when it is moved. Person responsible for the equipment should maintain the history sheet of the log book as shown in table 9.

Table 9. Format for history sheet

S. No.	Date of Break down	Reason of break down in short	Date of repair	Date of receipt	Name & address of the service firm with telephone no.	Name of the service agent	Costs of repair	Remark

9. Condemnation of non-consumable items

Condemnation of unserviceable and damaged items beyond economic repairs is important. If not done then large scrap accumulates in the store occupying space. Condemnation board should be held every year with designated authority members. Record and documentation in log book (history sheet) is important for condemnation of any instrument.

Final condemnation requires a condemnation certificate from either the manufacturer or a local/State constituted technical committee. Copies of the certificate are eventually pasted on the ledger and log book of the item.

Conclusion

The protocol for recording keeping of inventory described by us has facilitated optimal performance of our store. It has provided an uninterrupted flow of needed material and has assured products are available when they are

needed. It has also facilitated condemnation procedure.

References

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