The author provides an organized and easily implemented approach to the often time-consuming job of logging equipment for an anesthesia department.

Frequently the nurse anesthetist is called upon to be responsible for a departmental function other than the administration of anesthesia. Today, anesthesia departments have more sophisticated equipment and a larger variety of devices to assist the anesthetist in the overall care of the patient than ever before.

While it is the responsibility of each anesthetist to check the equipment before the patient arrives in the operating room, there is usually a person assigned to the ordering, maintenance, and repair of all the equipment. This can be a frustrating and time consuming experience. Let us examine the methodology that one department developed for monitoring equipment.

A departmental system

In 1975, the Department of Anesthesiology of the Hospital of Saint Raphael, New Haven, Connecticut, felt a serious need to devise an organized system of monitoring all the equipment used by the department. An anesthesiologist and a nurse anesthetist were assigned to this area on a permanent basis.

Objectives of this program were as follows:
1. To provide centralization of pertinent information.
2. To provide a current inventory of all equipment.
3. To provide an up-to-date service record.
4. To provide pertinent information for correspondence with the responsible parties for purchasing, servicing, and problems.
5. To provide assistance in departmental budget preparation.
6. To provide a current inventory and performance reference for prospective equipment changes or additions.

A complete inventory (Table 1) was taken of all departmental equipment encompassing the operating room, recovery room, obstetrical suite, urology suite, radiology special procedure area, and the emergency room. Each item was checked for the name of the manufacturer, model description, serial number, and hospital number. Items that did not have a differentiating serial or hospital number were marked with plastic imprinted adhesive tape or coded using a vibrating metal engraver (commonly used in the past to mark operating room surgical instruments).

Index cards were designed based on the Strafoplan system which is found throughout industry. Two five-inch by eight-inch index cards were
### Table 1

**Examples of Pieces of Equipment Logged and Their Respective Categories**

<table>
<thead>
<tr>
<th>Category</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anesthesia</strong></td>
<td>Gas Machine, Gas Vaporizer, Oxygen Analyzer, Gas Concentration Analyzer, Pediatric Anesthesia System</td>
</tr>
<tr>
<td><strong>Cardiovascular</strong></td>
<td>EKG Oscilloscope Display Monitor, EKG Recording Strip Machine, Arterial-Venous Pressure Monitor, Doppler™ Flowmeter-Transducer, Cardiac Output Monitor, Defibrillator, Sphygmomanometer, Blood Warmer</td>
</tr>
<tr>
<td><strong>Respiratory</strong></td>
<td>Mechanical Ventilator, Ventilator Alarm, Wright™ Respiriometer, Inspiratory Force Meter, Tracheal Cuff Pressure Monitor, PEEP Kit, Tracheostomy Adapter Kit, Humidifier, Fiberoptic Laryngoscope, Laryngoscope Handle, Laryngoscope Blade, Ambu Bag</td>
</tr>
<tr>
<td><strong>Miscellaneous</strong></td>
<td>Body Temperature Monitor, Warming-Cooling Blanket, Peripheral Nerve Stimulator</td>
</tr>
</tbody>
</table>

Allotted for each item. They were placed in a kardex-style book for easy access. Each book had space for 50 items. The **Data Base** card was placed in the bottom slot with the **Service Record** card above it in the underside portion of the previous **Data Base** card’s holder.

**The system in use**

The **Data Base** card (Figure 1-2) provides the specific information about the piece of equipment; name and address of the manufacturer, supplier, servicing agent, date of purchase, cost, effective date of servicing agreement or warranty, and protocol for required inspections and servicing.

Some items are under strict control and can be serviced only by their agents. Other items can be checked and repaired by the hospital’s electrical engineering or maintenance departments. Yes or No is written in the appropriate space. The area labeled **Operating Instructions** contains general instructions or serves as a reference where more specific information and literature can be found.

Names, addresses, telephone numbers, or dates subject to change are filled in with pencil. The permanent data is completed in ink.

The reverse side of the **Data Base** card (Figure 1-2) lists the accessory parts and their catalog numbers. **Special Instructions** for the care of the item are noted, such as the recommended methods for cleaning and sterilizing.

The **Service Record** card (Figure 3) is the same on both sides. The date **Instructions** for the care of the item are marked in the bottom **In Service** space. The **action code** is used in the **Action Taken** column. The **Date Out** is when the item left the department and **Date Returned** is when it was received back. These dates may differ from the dates at the bottom of the card.

For example, anesthetic vaporizers are returned to the manufacturer for inspection and recalibration on an annual basis. Upon return to the department, the vaporizer may be placed in a storage area and not put back into service until it is needed to replace another vaporizer that is malfunctioning or is being sent out for annual servicing. The manufacturer places a sticker on the vaporizer noting the date of servicing and when the next inspection is due. Since the item may be in the storage area for a number of weeks, the manufacturer’s due date becomes invalid. To compute the correct time for the next inspection, the **Returned to Service** date in the bottom right corner is used.

Required monthly safety inspections by the electrical engineering department are not noted on the **Service**
Record card as it is impractical to do so. The inspector places a colored sticker on each item checked and submits a monthly report to the anesthesia department. This is placed in a permanent file. If the item is found to be defective and is removed from the department, then it is noted on the Service Record with the code and appropriate date.

Small colored tags are placed with each Data Base card in the bottom edge of the plastic holder when required. A yellow tag means the item is out of the hospital for repair or servicing. A red tag indicates the item is out of the...
anesthesia department but within the hospital. A green tag notes that the item is currently in the anesthesia department's storage area. A blue tag signifies that the item is due for required inspection or servicing that month.

If an item is noted to be out of the department for an unusual length of time, an inquiry is made to the appropriate agent requesting the status of the item. Also, if a particular piece of equipment is found to be repeatedly malfunctioning, then the agent is contacted for definitive correction or replacement of the item.

An essential job description notebook is made available with detailed instructions so that any member of the department can process the equipment if necessary. Examples of the various procedures are described utilizing the appropriate forms and order blanks.

**Long term evaluation**

In December, 1978, an evaluation of the equipment logging system was performed. It was determined that the original objectives of the equipment logging system had been met. No change had to be made in the format of the system or the index cards; it was found that the cards provided the necessary information all of the time. It was also noted that this system could be valuable should a legal problem arise in which equipment function was in question.

There was one minor change made. With the growth of the department upon entry into a newly constructed building, the logging cards were transferred to a metal cabinet with thin, pull-out drawers that maintained the kardex style. The additional new pieces of equipment in number alone would have made the extra book style holders too cumbersome and space consuming.

**Summary**

An organized system of logging equipment instituted by one department of anesthesiology helped to reduce the number of man-hours necessary for the care of equipment and increased the overall department efficiency.

**REFERENCES**

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