MAINTENANCE AND REPAIR OF LABORATORY, DIAGNOSTIC IMAGING AND HOSPITAL EQUIPMENT

Geneva, Switzerland: World Health Organization; 1994; 158 pp, $35.10 US, ISBN 92 4 154463 5, available in English, French and Spanish.

This book is aimed at equipment users in hospitals and labs in developing countries, where most medical equipment is imported and difficult to have maintained by experts. The authors hope that through better awareness of the principals of operation, preventive maintenance and minor repairs, the equipment users can keep instruments operational more of the time. Equipment selection is a minor emphasis of the book.

The book is a useful, practical reference for the equipment user who needs basic operational and maintenance information, but who does not have access to detailed literature from the equipment vendor. It would be an asset to anyone in a medical setting in a developing country or as a general theory of operation book for individuals who need to know about a variety of equipment.

It is a daunting task to address the maintenance of so many different devices in one book, and the depth varies considerably from chapter to chapter. The main areas covered are laboratory, diagnostic, anesthetic and resuscitation, operating room, ultrasound and x-ray diagnostic equipment. The book has an excellent index.

The laboratory section is fairly extensive, providing good coverage of the theory of operation and operator instructions for many instruments (generally true throughout the book) but is a little weak on the actual maintenance of the equipment. The section on anesthetic gases is in the laboratory chapter but belongs in the section on anesthesia equipment.

The information provided in the chapters on diagnostic equipment (laryngoscopes, stethoscopes etc.) and the operating room is basic but accurate. The instructions given to operators and those performing basic maintenance on the maintenance and repair of hospital devices is good. The information concerning operating room equipment is very limited and could be expanded. Some of the concepts presented, such as flammable anesthetics and conductive floors, are less applicable for US readers but important for those in developing countries. The chapter on anesthesia equipment is an impressive review of different types of bellows, flow indicators, anesthetic vaporizers and anesthesia machines, with detailed service and safety information and even a checklist for troubleshooting some equipment.

Ultrasound is well-covered for theory of operation, clearly aimed at those maintaining the x-ray equipment. The x-ray diagnostic equipment chapter includes a lot of information on running an x-ray department with limited staffing. The generally good information on x-ray equipment and maintenance must be sifted out from the department operational discussions. There is no mention of nuclear medicine equipment, which is outside the scope of the book.

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