

The Evolution of Clinical Engineering from Equipment Control to Technology Management: The Local Experience of a Maintenance Department in a Teaching Hospital in Saudi Arabia

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Abstract

Healthcare organizations are faced with scarce budget all over the world. The challenge of the new millennium is to lower healthcare cost yet increase the quality of the patient care. The complexity of modern medical systems led to the evolution of the mission and vision of the maintenance departments in healthcare organizations. The term “Technology Management” became a broad term with many connotations. In addition to conventional equipment control programs, clinical engineering departments are embracing new responsibilities in many healthcare areas. Evaluation of service contracts, analysis of repair and maintenance records, participation in hospital-wide continuous quality improvement and risk management programs, training of equipment users and equipment replacement and pre-purchase evaluation plans became an integrated parts of the clinical engineering departments responsibilities.

This paper explains the history of the biomedical engineering department in a 750-bed teaching hospital in Saudi Arabia and how it evolved to become the focal point of technology management. The local experience on the maintenance strategies adopted to run the department services shall be provided as well as the advantages and disadvantages of the model of services utilized. The plans followed to replace the medical systems over the past 15 years shall also be discussed to shed light on the systems of most concern and priorities.

The local experience in risk management standards, the systemic equipment safety standards and the QA indicators and thresholds as an integral part of the technology management shall be also provided in the paper. Finally, the records keeping for the technology management and its evolution to software packages shall be discussed.