

New Challenges for the Management of a clinical Engineering Department

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INTRODUCTION

Clinical engineering services have been set up to support the health care in technology management. Traditionally clinical engineers have dealt with such tasks as:

- expert advice in equipment purchasing (drafting specifications and
- evaluating tenders)
- actions on equipment safety (verifying conformity to regulations,
- organizing safety checks, clearing up accidents and alerts)
- maintenance (performing and managing in-house maintenance, supervising
- service contracts).

Many different factors are shaping the health care technologically and organizationally. New technologies have increased the rapidity, specificity and sensitivity of diagnostic procedures. Minimally invasive surgical techniques have shortened the length of hospital stay dramatically.

Ubiquitous medical informatics have made it possible to manage patients in hospitals and home care. In many countries health care organizations have undergone major changes in search for productivity and efficiency. With the developing role of technology in health care also clinical engineering services are facing new challenges. Examples of new emerging tasks are given below.

NEW WAYS TO ORGANIZE CLINICAL ENGINEERING SERVICES

In larger hospitals clinical engineering has traditionally been organized within a technical department or as an independent clinical engineering department. A modern trend is to develop cost accounting and internal charging schemes. Ultimately some departments that have a large in-house maintenance capacity are being outsourced and privatized. The purpose here is to increase the quality and cost-effectiveness of services through explicit competition.

QUALITY MANAGEMENT

One of the major trends in health care is the introduction of total quality management (TQM) or continuous quality improvement (CQI) methods. Clinical engineering departments must be able to cope with the quality requirements of their clients in laboratory, X-ray, surgical departments. For this purpose some departments have opted

for a development and certification of a quality system according to the ISO 9000 standards. On the other hand, clinical engineers are in a good position to advise and supervise quality system development in the hospital.

TECHNOLOGY ASSESSMENT

The technologies used in health care will be subject to an ever closer scrutiny. This applies to both new emerging technologies and to those in routine use. Technology assessment denotes the methodology by which the safety, effectiveness, costs and the social and ethical acceptability of technologies are evaluated. Clinical engineers are one important group of professionals needed when for the multidisciplinary assessment teams. In order to manage assessment tasks, clinical engineers must acquire new skills such as know-how of assessment methods and knowledge on how to collect and synthesize assessment data.