

UNIT – I

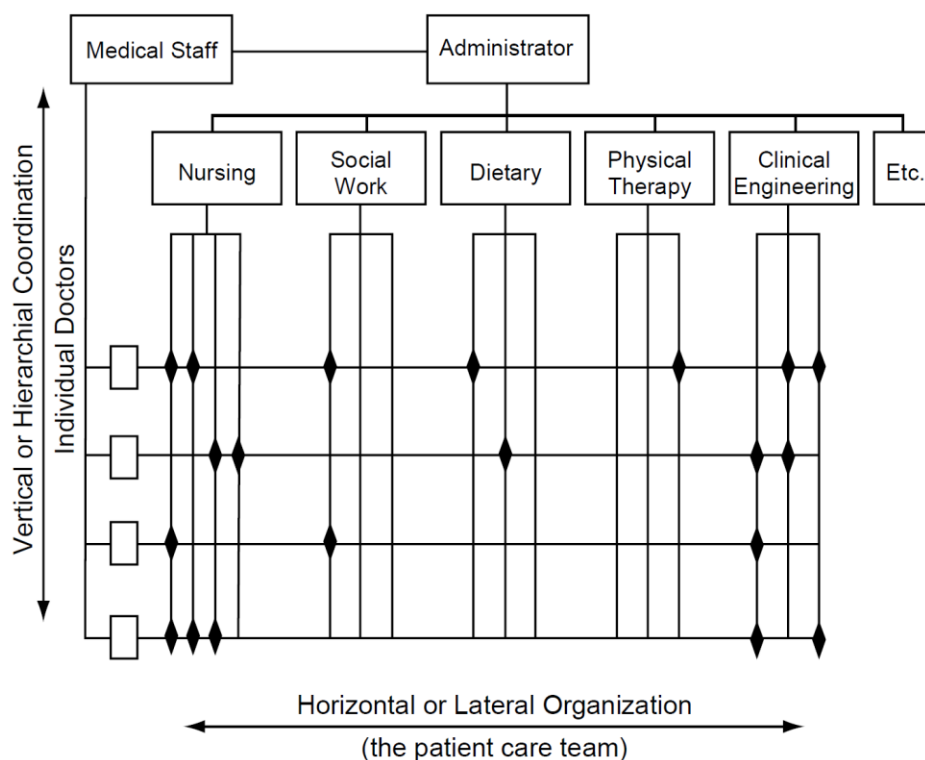
INTRODUCTION

Clinical engineering: Definition, Evolution, Role, Responsibilities, Functional status, History of clinical engineering and Technology in Health Care System, Enhancing patient safety

FUNCTION OF CLINICAL ENGINEERING DEPARTMENT:

For taking care of patients a close working relationship is needed between the clinical engineer and many members of the medical and hospital staff. The team approach is key to the successful operation of any clinical engineering program.

The following figure illustrates the degree of teamwork and interdependence that is required in order to maintain constructive interrelationships.



In this matrix presentation although clinical engineers report hierarchically to their hospital administrator, they also interact with hospital staff to meet patients' requirements.

Directors of clinical engineering departments are usually involved in the following areas:

- Developing, implementing, and directing equipment management programs. Specific tasks include evaluating and selecting new technology, installing new equipment,
- Advising administration and medical and nursing staffs in areas such as safety
- Evaluating and taking appropriate action on incidents like equipment malfunction or misuse.
- Selecting departmental staff and training them to perform their functions in a professional manner

Therefore, the core functions of a clinical engineering department can be summarized as follows:

1. Technology management
2. Risk management
3. Technology assessment
4. Facilities design and project management
5. Quality assurance
6. Training

PROFESSIONAL STATUS OF CLINICAL ENGINEERING

Clinical engineer must be associated with engineering services, a Clinical engineers, must be an individuals who have a minimum of a four-year bachelor's degree in an engineering discipline. They must be well versed in the design, modification, and testing of medical instrumentation.

By linking clinical engineering to the engineering profession, a number of important objectives are achieved.

- It enables hospital administrators to identify qualified individuals to serve as clinical engineers .
- Second, from this foundation, it is possible for the profession of clinical engineering to continue to mature.

One can determine the status of a clinical engineer by:

- (1) the first training school;

- (2) the first university school;
- (3) the first local professional association;
- (4) the first national professional association;
- (5) the first state license law; and
- (6) the first formal code of ethics