Operating Room Management

An essay

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In Anesthesia

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List of Abbreviations

CABG	Coronary Artery Bypass Surgery
CAD	Coronary Artery Disease
DVT	Deep Venous Thrombosis
HIS	Hospital Information System
LDUH	Low Dose Unfractionated Heparin
LMWH	Low Molecular Weight Heparins (LMWH)
MIS	Minimally Invasive Surgery
NPO	Nil Per Os
OR	Operating Room
ORMs	Operating Room Management System
PACU	Post Anesthesia Care Unit
PCI	Percutaneous Coronary Intervention
PMIs	Perioperative myocardial infarctions
RF	Radio-Frequency
SC	Subcutaneous
SCIP	Surgical Care Improvement Project
SSIs	Recommendations for Prevention of Surgical site infections
TPA	Total perioperative automation
VTE	Venous thromboembolism
WHO	World Health Organization

Introduction

Introduction

The operating room (OR) is a major source of revenue for hospitals. Hospital chief executive officers have become more focused on the profitability, that comes out of the OR service, this has led to the rapid growth and development of OR management. Now it is becoming common to have a formal structure for OR management. ***(Bandak A, 2010)***

Primary objectives of effective OR management are:

- Provide best possible patient care and a pleasant workplace, thus improving satisfaction among patients, staff, and surgeons.
- Increase market share, attract new business, and negotiate better contracts, to enhance revenues.
- Decrease costs by efficient OR utilization, and effective staff and materials management. ***(Bandak A, 2010)***

Different groups working in the OR and their concerns:

A surgeon's concerns often center on:

* The ability to perform procedures when desired;

* The use of specialized staff members, such as nurses and anesthesia employees, they want the latest and newest equipment;

* Maximum convenience and service;

* Juggling a surgical schedule, office hours, patient rounds, and teaching responsibilities; and

* Using time efficiently. ***(Bandak A, 2010)***

Anesthesia staff members frequently worry about:

* Case assignment loads;

* Completing or "running" the schedule;

* Using time efficiently;

* Handling duties outside the OR, such as resuscitation of patients, pre-admission testing, and supervising certified registered nurse anesthesiologists; and

* Managing on-call responsibilities.

(Catherine A, 2009)

Hospital administration:

* Wants ORs to have high utilization with the lowest possible cost for personnel and equipment.

The key to a successful OR lies in satisfying these concerns while creating partnerships among the many disciplines working there and elsewhere in the hospital. Reaching this goal means that physician; nurses, administrators, financial managers, and materials managers must review the current balance of surgical demands, resources, and needs. Formalizing the position of the OR medical director will help pull these diverse entities together and address their changing needs. **(Catherine A, 2009).**

CHAPTER I

Operating room location in relation to other integral departments

Chapter I

1) Operating room location in relation to other integral departments

An effective manager must analyze the layout of each operating room individually and as a whole. The mass of new technologies and equipment, such as Endoscopic surgical procedures, in today's operating room is increasing. Crowding may adversely affect the abilities of the surgical team. Managers must act to appropriately modify pre-existing operating room space or by identifying key design issues during the building of new facilities. Larger cases where more materials and instruments are used should be appropriately scheduled into rooms that can accommodate them. ***(Bartkowski, 2005)***

Likewise, the surgical suite ideally is placed in close proximity to support functions such as radiology, pathology, and intensive care for room efficiency and patient safety. ***(Bartkowski et al, 2005)***

Operating room space design

The increasing complexity of procedures and patients has resulted in an increase in the monitoring and support systems required in specialized operating rooms (ORs). Considerations should include: the size of the room, the room orientation (the long axis is the orientation of the operating table, and the short axis is 90° to the

long axis), medical gases needed, number and locations of electrical and medical gas outlets and access to the room. OR room should meet all users' requirements. ***(Bartkowski et al, 2005)***

Access to the room needs to consider the size of the patient bed and any support equipment that may be brought into the room with the patient. Having appropriate support beams in the ceiling to bear the load of ceiling mounted equipment (e.g., fluoroscopy screens; ceiling-mounted supports for microscopes;fluoroscopy lights on articulated arms; booms with medical gases,electrical outlets, suction, and data jacks; etc.) needs to be considered in the programming stage. ***(Bartkowski et al, 2005)***

Anesthetic requirements: The basic setup of any OR includes the anesthesia machine, monitors, anesthesia cart, and scavenging system. In order to maximize safety and efficiency, OR equipment should be strategically situated. There is an increasing trend in the use of booms, which are ceiling-mounted articulating arms that support equipment, gas and electrical outlets, and communication and video displays. This promotes better space utilization, sterility and reduces maintenance and equipment damage. ***(Bartkowski et al, 2005)***

Airway equipment includes positive-pressure ventilation systems, ventilation masks, endotracheal tubes, laryngeal mask airways, oral and nasal airways, and laryngoscopes, with a wide range of

pediatric blades. There is no anesthesia machine specifically developed for pediatric patients; all anesthesia machines should deliver precise volumes and concentration of anesthetic gases. However, use of anesthesia machines with a pressure-control ventilation option is preferable in the pediatric population.

Equipment for intravenous administration of fluids includes intravascular catheters, pediatric volumetric fluid administration systems, and kits for intraosseous access. Space must be available to store a wide variety of sizes of disposable equipment within easy reach of providers. ***(Bartkowski et al, 2005)***

Storage must also be available for other specialized equipment, including:

- Equipment for invasive monitoring of arterial and central venous pressures
- Infusion pumps
- Regional anesthesia equipment for performance of neuraxial and peripheral nerve blocks. ***(Bartkowski et al, 2005)***

CHAPTER II

Operating room Leadership and solving conflicts

Chapter II
2) Operating room Leadership and solving conflicts

Surgical suite leadership

Generally, an institution or private surgery center will have an agreed upon leader, generally dubbed the "Operating Room Manager." A manager may have the business and academic ability to operate a facility, but without the cooperation of staff and practitioners, most reform efforts will be futile. ***(Szokol, 2002)***

Anesthesiologists are good candidates for administrative duties for a variety of reasons. They have a better understanding of the perioperative process. They possess the medical knowledge to make appropriate decisions. Anesthesiologists are more readily available in the OR on a daily basis and can intervene when an urgent situation develops. ***(Szokol, 2002)***

There are challenges for the individual in this position. Much time must be spent, attending meetings, planning projects, and coordinating OR productivity. Additional financial support must come from the hospital to pay for the time spent on medical director functions. The time and energy demands may limit medical directors from advancing within their own

departments, organizations, or academic institutions. In addition, limitations in business training and data processing may require added background building to meet these needs. ***(Szokol, 2002)***

Some characteristics of the medical director

- Experienced individuals, usually in the middle of their careers.
- Respected for clinical skills.
- Strong interpersonal skills.
- Integrity and trust by all groups.
- Perceived neutrality and balanced views on issues.
- Leadership style.
- Strong analytical and problem-solving skills.
- Ability to commit significant time and focus to operating room.
- Appreciation of hospital's goals. (***Szokol, 2002***)

Interpersonal conflicts amongst the operating team

The potential for interpersonal conflict is especially heightened in the OR, where a broad range of professionals (physicians, nurses, technicians) have overlapping. It is not surprising that conflict occurs during the management of 50%