Operating Room Management

An essay
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Introduction

The operating room (OR) is a major source of revenue for hospitals. However, these same ORs are also responsible for some of the hospital's greatest expenses. Hospital chief executive officers have become more focused on the profitability, that comes out of the OR service, and this change in emphasis has led to the rapid growth and development of OR management. Previously, there were ill-defined structures for OR decision making, but now it is becoming common to have a formal structure for OR management. *(Macario, et al, 1995).*

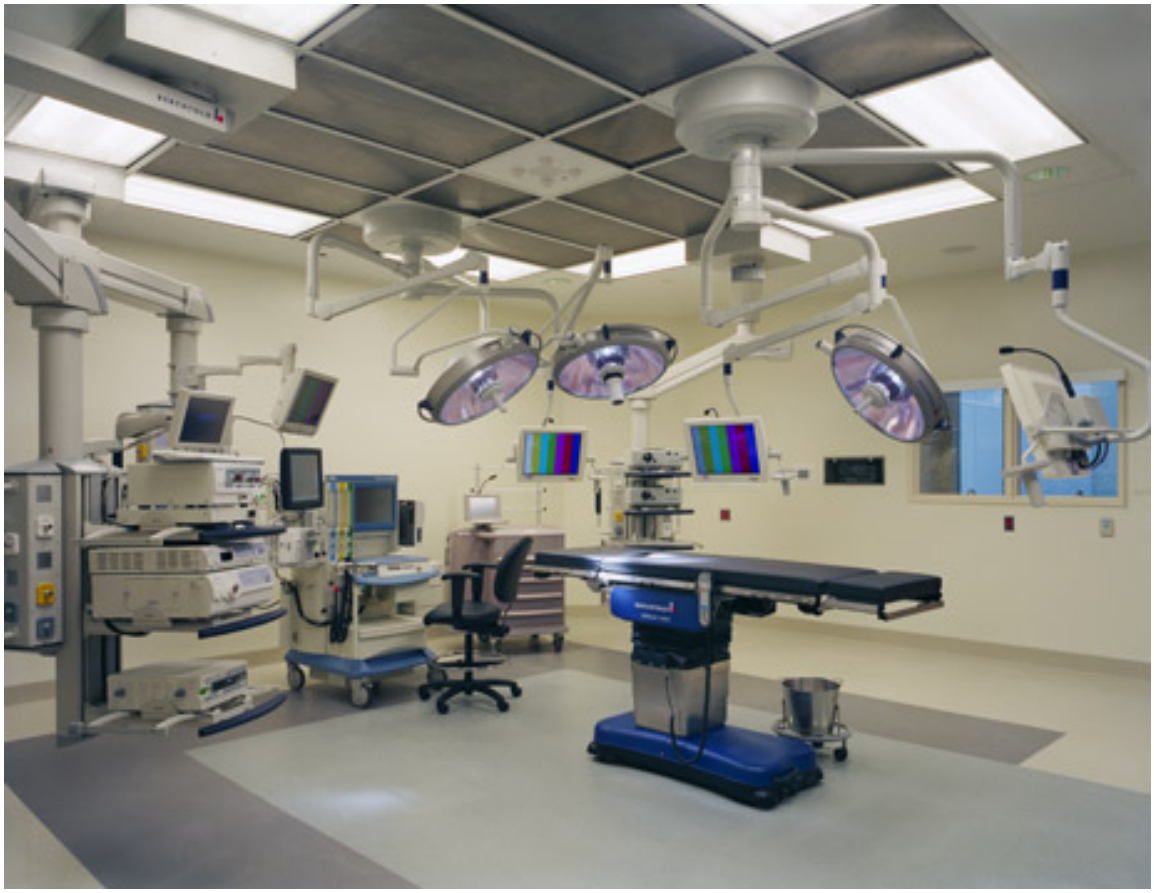

Fig (1) OR

Primary objectives of effective OR management are three-fold: *(Mazzei, 1999).*

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

From a historical point of view, the OR has undergone an evolution in its role within the hospital. The organized structure and daily management of the OR are markedly different today than it was 20 to 30 years ago. In the past, ORs generated large profits. The priority during this era was to maximize convenience for surgeons and attract a greater market share. Controlling costs was of low importance because it was assumed that any new investment in the OR would lead to increased revenue. During this period, revenue for the hospital was plentiful, so when new equipment or expanded ORs were desired, they were provided. Surgical procedures were scheduled at the desire of the surgeon, usually on a first-come-first-served basis. In this era, the authority for OR management was dispersed between hospital administrators and the OR nursing leaders. Usually, a hospital administrator, often with little direct OR experience, had authority for the OR as well as several other areas of the hospital. This hospital administrator left daily control of OR functions to the OR head nurse, who became the leader of the unit. OR nurse managers were expected to manage all the complex

activities in making the OR run. Physicians often had a limited role in directing OR function. *(Kondrat, 2001).*

As surgical procedures became more complex and competition for available OR time increased, surgeons began to become dissatisfied with the hospital administrator's control of OR management. OR committees were formed to allow physicians to voice their thoughts to hospital leadership. The hospital and OR committees created rules and policies governing OR function. Dedicated rooms for complex procedures and increasing scheduling demands led to the development of guaranteed reserved OR times called "blocks." These blocks allow better predictability for surgeons to perform their procedures, as well as to allow the hospitals to provide the necessary support for the cases. The authority for daily OR management still resided primarily with nursing. *(Kondrat, 2001).*

Hospital administrators also noted that ORs were very expensive to furnish and run. The overall hospital operating profit began to shrink, going from 6.3% in 1997 to 2.7% in 1999. Such losses forced hospital leaders to rethink how they ran their ORs. If the ORs consumed 9% to 10% of the institution's annual budget, these costs needed to be analyzed and controlled. Hospitals reduced inpatients beds and limited OR growth. The net effect of these changes was that frustration with OR function and management increased. *(Not for profit health care, 2000).*

Hospitals set targets for performance, and regulatory organizations set quality measures for the OR. Surgical demand began to increase faster than the OR infrastructure, OR nursing, and anesthesia services could match. Shortages of hospital beds, intensive care units (ICUs), and personnel to staff ORs have now led to increased pressure to manage ORs with maximum efficiency while at the same time

controlling costs. The hospitals expected all these OR changes to occur simultaneously while maintaining high OR customer and patient satisfaction. Hospital administrators began to realize that they needed more direct physician leadership in these complex OR matters. In some hospitals, medical directors were appointed and more voice and authority were given to physicians in OR leadership roles.

The complexity and demands of organizing a modern operating suite will no longer allow the comparatively casual approach seen in some institutions in the past, in which things were taken care of in reasonable time, but with little attention paid to whether the first case of the day started at 7:30 A.M. or 7:50 A.M., how long it took to assemble the special instruments, or whether there was a brief delay in transporting a patient from the preoperative staging area so that the appropriate paperwork could be completed by the one overworked nurse. *(Mazzei, 1999).*

The current urgent drive for efficiency, cost control, and cost reduction clearly will not tolerate obvious inefficiency and wastefulness. A cooperative approach to these issues by all involved clearly is desirable. However, it has been demonstrated in real life and taught in management courses that strong leadership is necessary in the efforts to achieve maximum efficiency and cost reduction. The diverse groups working within the OR (nursing, surgery, anesthesiology) had different incentives and goals, which at times created a battle zone atmosphere. The concept of appointing a medical director in the OR came about in an attempt to align the forces working in the OR. There are many advantages to this structure. By centralizing authority in one knowledgeable individual with control and authority for global OR matters, an organization can

more effectively adapt to changing needs and make critical improvements. The original concept was to create an "OR czar"; however, this implies a ruling style by force or a dictatorship. Neither of these characteristics will prove to be successful in actual practice. *(Udelsman, 2003).*

The age-old question ***"Who is in charge of the Operating Room?"*** still confronts most hospitals /institutions. Sometimes there can be no real answer to "Who's in charge?" because of the complexity of the interpersonal relationships in the OR. Some institutions have a professional manager whose sole job is to organize and run the OR. This individual may be vested with enough authority to be recognized by all as the person in charge. Other institutions ostensibly have a "medical director of the OR." However, the implications to the surgeons that an anesthesiologist is in charge, or vice versa, have caused many institutions to abandon the title or retain the position but assign no authority to it. If there is no medical director with authority to make decisions stick, central authority usually resides with the Operating Room Committee, most often populated by physicians, senior nurses, and administrators. The impact of such an OR committee varies widely among institutions. Despite the constantly changing dynamics of the OR management and the frequent major frustrations, anesthesiologists should pursue a greater role in day-to-day management in every possible applicable practice setting. An anesthesiologist who is capable of facilitating the start of cases with minimal delays and solving problems "on the fly" as they arise will be in an excellent position to serve his or her department. Succeeding in this role will have a dramatic positive impact on all the OR constituents. The surgeons will be less concerned about "Who's in charge?" because their cases are getting

done. The OR Committee (or whatever system for dispute resolution is in place) is still functional and will be thankful for the absence of disputes needing resolution. *(Udelsman, 2003).*

Different groups working in the OR:

Operating rooms have four distinct groups that have a key role in its function: surgeons, anesthesiologists, nurses, and hospital administrators. While these staff members must orchestrate their efforts to perform sensitive and stressful tasks, their diverging needs can raise conflicts. Each may see the OR's process and its outcomes differently. *(Lingard, et al, 2004).*

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. (On-time starts, short turnover time).

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.

Nurses, meanwhile, often cite these concerns surrounding their OR roles:

* Supplying appropriate staff members, especially when considering the nursing shortage;
* Matching case needs and surgeon preferences with available resources;
* Having the proper mix of skills, such as registered nurses (RNs) and OR technicians;
* Deciding between generalist versus specialist employee training;
* Determining cost-effective use of staff members.
* Nursing wants predictable hours.

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 physicians, 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.

The best way to ensure success is not by fighting over how big one's slice of pie is but rather by growing the pie so that there is enough for all to have a good-sized piece. A successful OR must change its thinking from a win-lose perspective to a win-win one.

LIST OF ABBREVIATIONS

APACU	Arrival in Post Anesthesia Care Unit.
AS	Anesthesia Start.
ASA	American Society of Anesthesiology.
ASU	Adjusted-percent Service Utilization.
AACD	Association of Anesthesia Clinical Directors.
A/V	Audio/Video.
CABG	Coronary Artery Bypass Graft.
CAD	Coronary Artery Disease.
CDC	Centers for Disease Control.
CT	Case Time.
DPACU	Discharge from Post Anesthesia Care Unit.
DVT	Deep Venous Thrombosis.
EPA	Environmental Protection Agency.
HIS	Hospital Information System.
ICU	Intensive Care Unit.
INR	International Normalized Ratio.
IT	Information Technology.
IV	Intravenous.
JCAHO	Joint Commission on Accreditation of Healthcare Organizations.
LAN	Local Area Network.
LDUH	Low Dose Unfractionated Heparin.
LMWH	Low Molecular Weight Heparin.
MIS	Minimally Invasive Surgery.
Mtb	Mycobacterium tuberculosis.
NPO	Nil Per Os.
OLAP	Online Analytical Processing.
OR	Operating Room.
ORMS	Operating Room Management System.
PACS	Picture Archiving and Communication System.
PACU	Post Anesthesia Care Unit.
PCI	Percutaneous Coronary Intervention.
PCMX	Para-Chloro-Meta-Xylenol.

PCs	Personal Computers.
PE	Pulmonary Embolism.
PF	Procedure Finish.
PIR	Patient In Room.
PMI	Perioperative Myocardial Infarction.
POR	Patient Out of Room.
PST	Procedure Start Time.
RNs	Registered Nurses.
RR	Room Ready.
RU	Raw Utilization.
S.aureus	Staphylococcus aureus.
SC	Subcutaneous.
SCIP	Surgical Care Improvement Project.
SKU	Stock Keeping Unit.
SSIs	Surgical Site Infections.
ST	Start Time.
THRIFT	Thromboembolic Risk Factors.
TOT	Turn Over Time.
TPA	Total Perioperative Automation.
VTE	Venous Thromboembolism.

List of Contents