JOURNAL of ANESTHESIA and PERIOPERATIVE MEDICINE

Opinion

Introducing "4 Steps-to-Team" — An Innovative Educational Concept for Teambuilding in The Operating Room

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The operating room (OR) with its isolated, fast paced and intense environment represents a very essential, unique and stressful part of any hospital (1). At the same time, it generates on average over 60% of hospital revenue (2). Therefore, OR mismanagement may create multiple administrative, psychological and clinical problems which eventually may cause financial instability for the entire hospital.

Even though OR management is a very complex task with many daily activities, it is still based mostly on "best knowledge" and personal experience of random members of staff rather than on science and formal training. The outcome of this form of management is far from positive and in many cases, may even require involvement of outside help in the form of "consultants" who may have business background but lack clinical knowledge and experience (3).

Surgeons and anesthesiologists are two groups of practitioners naturally positioned for managerial and leadership roles in the operating room. However, most have had no formal training to acquire these skills. As a result, competition over leadership position among surgeons and anesthesiologists causes nothing but unnecessary tension (4).

Team building exercises, which were developed to solve this problem, have one common feature — they are limited mainly to behavioral aspects of the team in certain critical scenarios. Most of them are based on a "vertical" type of leadership — the only best option for the specific task or environment. This type of leadership requires the presence of a designated "Leader", equipped with a certain set of knowledge and training that allows him/her to utilize an autocratic style of leadership.

While being a very effective tool in military or aviation settings they however appear less than effective in changing the competitive culture of the operating room and fail to fully cover the wide variety of situations associated with its function.

The main reason for this failure is that the operating room has a completely different setup, goals and objectives.

The healthcare industry in general and the operating room in particular lack the hierarchy and simple chain of command of the military (5). The main players in the OR are physicians with equal levels of education, knowledge, training and expertise in their specific field. This narrow expertise may complement and support the function of other members of the team, but has significant limitations, which often makes crossing a specialty-related barrier very uncomfortable.

All the above makes an "autocratic" style of leadership with its "do what I tell you" approach the most ineffective and potentially disruptive in the operating room environment.

A "Horizontal" type of leadership on the contrary, allows for the distribution of a leading role between all members of the team, depending on a particular situation. This type of leadership is much more flexible in terms of associated styles and more appropriate for the operating room settings.

Trained and functioning as "perioperative care" specialists, anesthesiologists have much a broader view of many aspects of OR activities — clinical, administrative and psychological. This experience puts our specialty on the frontline of the teambuilding process in the operating room. However, surgeons have their own view of and approach to the managerial process which can't be simply ignored. This is why communication, cooperation and coordination of all activities are the main goals of the OR management.

There are several ways to

achieve these goals:

1. View teambuilding not as an isolated process, but rather as an integrated part of OR management requiring full and equal participation from not only every member of the immediate OR team, but every related service and administration;

2. Educate members of the OR team on the psychology of teambuilding and leadership;

3. Make horizontal (shared) type of leadership a base for any teambuilding activities in the operating room;

4. Make formal education in OR management an integrated part of the training for residents and fellows in the field of anesthesia and surgery;

5. Focus on cross- training members of the OR team as a way to improve communication and teamwork.

The teambuilding process should start as early as possible in the course of medical education and should focus primarily on developing and utilizing mechanisms specifically designed to improve relationships between the anesthesiology and surgical staff and to facilitate interpersonal communication and professional interaction among different disciplines during the early stages of subspecialty training.

At the Department of Anesthesiology at Montefiore Medical Center this has been achieved by an innovative "4 Steps-To-Team" (4STT) educational concept (Figure).

The first step focuses on the importance of the interplay between anesthesiologists and surgeons. During the orientation period of the first clinical year, residents from the departments of anesthesiology and surgery attend a joint educational session which introduces concepts of teamwork, leadership and professionalism in the perioperative environment.

The second step is "cross- departmental non- simulation based" training of surgical (PGY 2) residents who are offered a 30- day elective rotation within the Department of Anesthesiology. This step serves as an opportunity for the practical application of the principles introduced during the first step. During the rotation, an attending anesthesiologist is assigned to each resident to coordinate the entire educational process with CA3 residents functioning as preceptors. The curriculum is designed with emphasis on:

1. Team- building, leadership and communication skills;

2. Team work in unexpected clinical situations;

3. Knowledge of anesthesia basics - Pre- anesthesia assessment, anatomy, physiology and pharmacology of anesthetics, fluid management and blood transfusion;

4. Manual skills.

The third step is currently designed for the senior anesthesia residents. During a one- month rotation, residents were involved in management of the operating room under the guidance and supervision of the senior anesthesiologist or clinical anesthesia site director. The rotation curriculum focused on:

1. OR leadership skills — Communication, problem solving and conflict resolution;

2. Basics of management — Practice Improvement Methodologies;

3. Basics of personnel and material management;

4. Basics of case scheduling;

5. Basics of billing;

6. Basics of legal aspects of management.

The fourth step is the OR/Perioperative management fellowship. The process is divided into two stages. The first stage starts after graduation of residency and involves enrollment in an MBA program of the participant' s choice.

The second stage will combine the continuation of business school and participation in the OR management as a faculty member. The fellowship curriculum involves advanced training in the administration of the OR/Perioperative process:

A. General aspects of healthcare management;

B. Management of the operating room and perioperative services;

1. Behavioral management - leadership, team- building, problem solving, conflict resolution and communication;

2. Methodologies of business management: PDCA (Plan, Do, Control, Act), CMM (Capability Maturity Model), LEAN, 6Sigma;

3. Resource management - budgeting, scheduling, personnel, supplies and equipment;

4. Billing and compliance;

5. Policy-making process;

6. Quality Assurance/Quality Improvement;

7. Legal aspects of OR and perioperative management.

C. Management of the Anesthesiology Practice;

1. Hospital vs. ambulatory surgical center (ASC) OR management;

2. Operating room vs. non-operating room anesthesia (NORA)

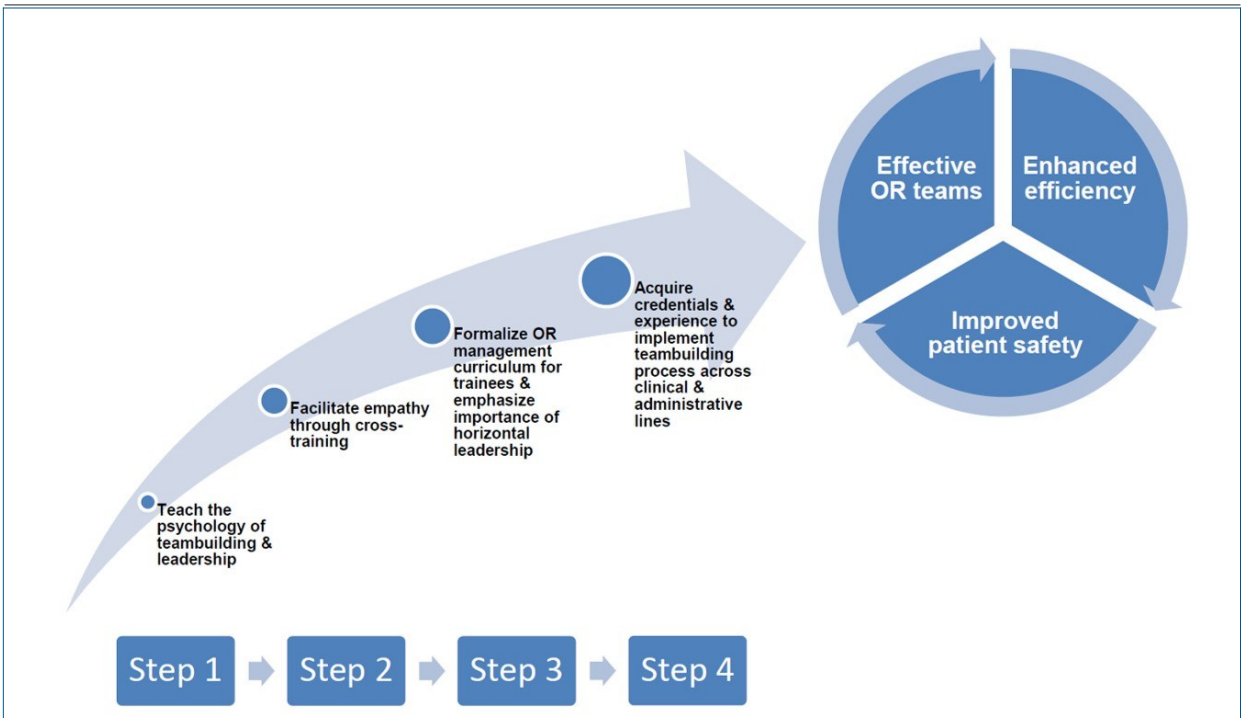

Figure. "4 Steps-to-Team" Process: Elements and Goals.

management;

3. Academic vs. private practice management.

D. Business development/marketing.

The OR/Perioperative management fellowship is offered to both anesthesiologists and surgeons. Each step of our approach was designed with an emphasis on important aspects of OR management.

The First step introduces a teambuilding model based on the concept of shared leadership, one of the features of which is flexibility in the distribution of the leadership role based on the dynamics of the clinical situation.

The Second step is based on assumption that:

1. By creating a greater understanding of the anesthetic perspective on perioperative patient risk factors, the surgical staff may participate more fully in adequate preoperative evaluation and optimization of the surgical patient which should reduce the number of case cancellations and delays resulting in better OR efficiency.

2. Improved relationships between the anesthesiology and surgical staff will facilitate interpersonal communication and professional interaction through a structured educational mentorship program in which surgical residents acquire general and surgical subspecialty-related anesthesia knowledge through both didactic and practice- based learning opportunities while gaining an appreciation for the role of teamwork within a perioperative care system with the ultimate goal of enhancing patient care, safety, and satisfaction.

3. Knowledgeable surgical resident colleagues will be capable and willing to assist anesthesiology staff members during intraoperative crises and near-misses.

In addition, this program provided great teaching opportunities for the anesthesia residents who served as mentors during the general portion of the rotation. They were provided with 360-degree evaluations by the rotators.

The Third step allows residents to receive a hands-on experience in managing daily activities in the operating room while coordinating various aspects of the process. In its current form, it was specifically tailored for senior anesthesia residents at the end of the training. The empha-

sis was on building confidence, ability to withhold stress, effectively coordinate the perioperative process and communicate orders at every level in a stressful fast-paced OR environment. The initiation period was closely supervised and guided by the Senior OR manager. Later in the process, residents were given more functional independence.

The Fourth step represents a combination of clinical, psychological, legal and business aspects for OR/Perioperative management, underlining:

1. Practice-based on the team, not an individual leader approach;
2. Switching from the "Vertical" or a single leader approach of leadership and management to a team-based "shared" leadership;
3. Switching from a random "experience-based" management to a "science-based" approach;
4. Team-building based on close communication and coordination of daily activities at all levels for all stakeholders;
5. Coordination between efficiency, profit and patient safety.

The presented concept is still a work in progress and has been implemented in a single hospital.

From the date of implementation in 2014, a total of 60 residents participated in the program, 24 from the Department of Surgery and 36 from the Department of Anesthesiology. Due to small number of participants it is impossible at this point to make a conclusion of its effectiveness. However, preliminary analysis shows obvious positive trend in inter-personal communication between members of both Departments, better understanding of the concept of leadership, communication and teamwork.

Clinical competence is not enough to allow a contemporary operating room to function effectively. Complexity of the tasks, lack of time, low tolerance for mistakes and corresponding high level of stress make it challenging for even a highly skilled physician to perform safely at his/her full capacity. However, current medical training is focused primarily on acquiring specialty-related knowledge and practical skills that are related to a single specialty. This makes it very difficult for the specialists to cross subspecialty barriers in the case of emergencies and to allow the operating rooms to function at a high level. Our multi-step team-building approach is an attempt to reverse this trend by teaching residents basic cross-specialty skills at the beginning of professional training. Acquiring cross-specialty skills and knowledge helps residents improve their interpersonal and communication skills, professional behavior and confidence which eventually will be reflected in enhanced quality of patient care and clinical outcome.

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The authors have no conflicts about this work.
Citation: Mikhail Chernov, Angela Vick, Sujatha Ramachandran, Ellise Delphin. Introducing "4 Steps-to-Team" — An Innovative Educational Concept for Teambuilding in The Operating Room. *J Anesth Perioper Med* 2017; 4: 293-6. doi:10.24015/JAPM.2017.0080

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