

**The Collaboration between Anesthesia and Surgical Technicians in Maintaining a Sterile Environment**

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## Abstract

Both anesthetic technicians and operation technicians are essential components of the surgical team. They play important roles in guaranteeing the success of surgical procedures and ensuring that patients are safe during the treatment. The responsibilities, collaboration, training, problems, and solutions that are associated with the roles of operation technicians and anesthetic technicians in surgical settings are discussed in this article.

The preparation of the operating room, the assistance of surgeons during procedures, the maintenance of sterility, the handling of surgical instruments, and the guarantee of post-operative cleanliness are all responsibilities that fall under the purview of operation technicians. anesthetic technicians, on the other hand, are accountable for the preparation and maintenance of anesthetic equipment, the provision of assistance to anesthesiologists during procedures, the monitoring of patient vital signs, and the guaranteeing of patient safety and comfort during the administration of anesthesia.

In order to ensure that surgical procedures go off without a hitch, it is vital for anesthetic technicians and operation technicians to work together effectively. Within the surgical team, smooth coordination is made possible by the implementation of communication techniques, training in teamwork, and defined communication protocols. It is possible to overcome obstacles such as time constraints, malfunctioning equipment, and communication difficulties by taking preventative actions, such as performing routine maintenance on the equipment and putting in place established procedures.

## Key words:

Anesthesia technicians, surgical technologists, operating room collaboration, sterile environment, infection control, teamwork, communication, sterilization protocols, surgical procedures, operating room challenges, healthcare professionals, patient safety, surgical teamwork, operating room roles, healthcare efficiency.

### المخلص

يعتبر كل من فنيي التخدير وفنيي العمليات من المكونات الأساسية للفريق الجراحي. فهم يلعبون أدوارًا مهمة في ضمان نجاح الإجراءات الجراحية وضمان سلامة المرضى أثناء العلاج. وتناقش هذه المقالة المسؤوليات والتعاون والتدريب والمشكلات والحلول المرتبطة بأدوار فنيي العمليات وفنيي التخدير في البيئات الجراحية.

إن تحضير غرفة العمليات ومساعدة الجراحين أثناء الإجراءات والحفاظ على التعقيم والتعامل مع الأدوات الجراحية وضمان النظافة بعد الجراحة كلها مسؤوليات تقع ضمن اختصاص فنيي العمليات. ومن ناحية أخرى، يكون فنيو التخدير مسؤولين عن تحضير وصيانة معدات التخدير وتقديم المساعدة لأطباء التخدير أثناء الإجراءات ومراقبة العلامات الحيوية للمريض وضمان سلامة المريض وراحته أثناء إعطاء التخدير. من أجل ضمان سير الإجراءات الجراحية دون أي عوائق، من الضروري أن يعمل فنيو التخدير وفنيو العمليات معًا بشكل فعال. داخل الفريق الجراحي، يصبح التنسيق السلس ممكنًا من خلال تنفيذ تقنيات الاتصال والتدريب على العمل الجماعي وبروتوكولات الاتصال المحددة. ومن الممكن التغلب على العقبات مثل قيود الوقت، وتعطل المعدات، وصعوبات الاتصال من خلال اتخاذ إجراءات وقائية، مثل إجراء الصيانة الروتينية للمعدات ووضع الإجراءات المعمول بها.

### الكلمات المفتاحية

فنيو التخدير، أخصائيو التكنولوجيا الجراحية، التعاون في غرفة العمليات، البيئة المعقمة، مكافحة العدوى، العمل الجماعي، التواصل، بروتوكولات التعقيم، الإجراءات الجراحية، تحديات غرفة العمليات، المتخصصون في الرعاية الصحية، سلامة المرضى، العمل الجماعي الجراحي، أدوار غرفة العمليات، كفاءة الرعاية الصحية.

## The research definitions

**Anesthesia Technicians** are medical professionals who are responsible for providing assistance to anesthesiologists by being responsible for the preparation and maintenance of anesthesia equipment, monitoring patients while they are undergoing treatments, and assuring the safe administration of anesthesia. Their duties include ensuring that sterilizing procedures are followed and preventing the spread of infections.

**Surgical technologists**, in the field of allied health, are professionals who assist in surgical procedures by preparing the operating room, sanitizing the equipment, and providing direct support to surgeons during procedures by performing activities such as passing instruments and ensuring a sterile field.

**A sterile environment** could be defined as a regulated area that is free from hazardous germs and is maintained through stringent sterilization methods is referred to as. This environment is fundamental for the prevention of infections during surgical procedures.

**The term collaboration** could be defined as the process of working together as a team and coordinating the efforts of anesthetic and surgical technicians, surgeons, and other members of the healthcare staff in order to produce the best possible results in the operating room is referred to as collaboration.

**The term "infection control"** refers to a collection of procedures that are implemented at healthcare facilities with the purpose of limiting the transmission of illnesses. These procedures include sterilizing instruments and ensuring that the operating room is kept clean.

**Teamwork** refers to the collaborative effort made by a group of medical specialists to guarantee that surgical procedures are carried out in a flawless and effective manner, while also addressing issues of shared responsibility and communication.

## Introduction

The operating room is a highly complicated and high-stakes setting that necessitates flawless teamwork among a variety of experts in order to guarantee the effectiveness of surgical procedures and the safety of patients. Within this dynamic context, anesthesia technicians and surgical technologists serve important responsibilities, contributing to the upkeep of a sterile environment, providing support to surgeons, and improving the efficiency of operations. Infection control, sterilization, and collaboration are the three areas in which their responsibilities meet, and these three areas are the foundation of successful surgical procedures. For the purpose of highlighting their significance within the healthcare system, this article investigates their functions, areas of collaboration, and potential problems. The findings of this investigation are backed by prior studies and literature. It is possible to reduce the number of surgical patients who will be directly affected by this statistic by ensuring that the sterile field is properly maintained. During the procedure, the sterile field protects healthcare professionals from being exposed to potentially infectious materials such as blood, body fluids, or other possibly infectious substances (Lam et al., 2018). This is in addition to safeguarding the hospitalized patient. Sterile technique is an essential patient safety principle that reduces the risk of microbial transmission to patients during surgery. The ability to establish and maintain a sterile environment is an important skill for all perioperative team members. Understanding the principles of sterile technique is crucial for anyone entering the perioperative environment. It has been difficult for the health care system in the United States to achieve a consistent and general reduction in the rates of healthcare-associated infections (HAIs), despite advancements in surgical technique, sterilization, and improved disinfection programs. The surrounding air, the patient, and the anesthesia practitioners themselves are all components of the operating room (OR) environment. The OR environment also includes the health care instruments and surfaces that are utilized inside the anesthesia work environment (AWE). Due to the fact that there are now cleaning failures and/or gaps in practice that raise the danger of cross-contamination during patient treatment, this is a significant problem for both patients and clinicians. Furthermore, there is a consistent correlation between the contamination of intravascular devices and an increase in the death rate amongst patients.

## Importance of the Research

The importance of this research lies in the fact that it sheds light on the crucial role that anesthesia and surgical technicians have in working together to keep the operating room clean and ensure that it functions well. For the purpose of strengthening teamwork, improving patient safety, and avoiding risks such as surgical site infections, it is essential to have a thorough understanding of their respective tasks and interpersonal relationships. The findings are intended to contribute to the improvement of surgical outcomes by addressing common issues and suggesting methods to optimize teamwork. This will ultimately lead to better surgical outcomes.

## Research Questions

- When it comes to the operating room, what are the key tasks and responsibilities that anesthesia and surgical technologists are responsible for?
- In what ways do these functions interact with one another to ensure that the surgical environment remains sterile and effective?
- What are the potential obstacles that could prevent effective collaboration, and what are some ways that these obstacles could be overcome?

## Limitations of the Research

Due to the fact that the study is solely based on previously published literature and secondary data, it may be difficult to investigate real-time observations or primary data from operating rooms. Furthermore, there is a possibility that the findings do not accurately represent practices across a variety of healthcare systems or jurisdictions. The final point is that the emphasis placed on descriptive analysis limits the conclusions that may be drawn regarding causality or the direct influence of interventions.

## Literature review

### The Roles of Anesthesia Technicians

As a result of the Health and Safety at Work Act of 1974, healthcare professionals are obligated to fulfill certain tasks; violations of the Act fall within the jurisdiction of criminal law. Because the Control of Substances Hazardous to Health (COSHH) Regulations 1999 are considered to be a part of the Health and Safety at Work Act, the Act ensures that Trusts are responsible for the health and safety of their employees as well as other individuals (including visitors and patients), as well as the control and management of the risk of infection. The Code of Practice for the Prevention and Control of Healthcare-Associated Infections was published by the Department of Health (DOH) in accordance with the Health Act of 2006 (Kudsk-Iversen, Shamambo, & Bould, 2018).

The Chief Executive Officers of Trusts are responsible for ensuring that the care provided within each Trust is in accordance with the applicable standards. Both Infection Control Committees and Infection Control Teams ought to be established within trusts, with the latter being accountable for the formulation of policies and the monitoring of conformity with relevant standards. To provide guidance on the microbiological elements of decontamination and sterilization, a microbiologist ought to be appointed as the designated individual. A designated consultant should be appointed in each department of anesthesia, according to the recommendation of the AAGBI Working Party (Mattingly & Mattingly II, 2018). This consultant should be responsible for maintaining communication with the Infection Control Team and the Occupational Health Department in order to guarantee that appropriate standards are created and managed in all aspects of anesthetic practice.

### The Roles of Surgical Technicians

Surgical technologists play a critical role in the operating room, working alongside surgeons, anesthesiologists, and nurses to ensure smooth and safe surgical procedures. Their responsibilities are divided into three key phases: before the surgical operation (preoperative), during the surgical operation (intraoperative), and after the surgical operation (postoperative). These phases define their tasks and ensure that the operating room remains sterile and functional.

Before the procedure, surgical technologists focus on preparing both the patient and the environment for surgery. This involves sterilizing the equipment and operating room, assisting in patient preparation, and organizing the necessary surgical tools. They carefully gather, count, and arrange the instruments required during the procedure to ensure that everything is accounted for and ready for use. Their meticulous attention to detail at this stage lays the foundation for a successful surgery.

During the surgical operation, surgical technologists are responsible for maintaining the sterile environment in the operating room. They assist the surgical team by passing tools to the surgeon and their assistant and helping with tasks such as retracting tissues. Their quick thinking and steady hands are essential in ensuring that the procedure runs smoothly and efficiently.

After the surgery, surgical technologists play a vital role in wrapping up the procedure. They count all tools and instruments used during the operation to ensure nothing is left inside the patient. They also apply dressings to surgical sites, dispose of needles and gauze, and maintain the sterile environment until the patient is transferred to the recovery room. These tasks are crucial in preventing infections and ensuring a smooth recovery process (Fox, 1997).

Surgical technologists can choose to specialize in specific areas of surgery or work across various fields. Some common specializations include cardiology, neurosurgery, organ transplantation, orthopedics, pediatric surgery, and plastic surgery. Specializing allows surgical technologists to develop expertise in a particular area, which can further enhance their skills and career prospects.

The work environment for surgical technologists is typically in hospital operating rooms, outpatient centers, or doctors' offices. They spend most of their time preparing for surgeries, assisting during operations, and cleaning up afterward. Working conditions can be physically demanding, as they often stand for long periods and work under warm surgical lights while wearing sterile gowns and gloves. Surgical technologists must remain alert and ready to respond to any situation during operations. Additionally, their schedules are usually full-time and may include nights, weekends, holidays, and on-call work. To become a surgical technologist, individuals must be highly detail-oriented and capable of maintaining a sterile and organized environment in the operating room. Their role is critical to ensuring all tools are present before the surgery and accounted for afterward. Attention to detail is paramount, as even minor errors can have life-threatening consequences. Surgical technologists must also excel under pressure and possess strong communication skills to collaborate effectively with the surgical team. These qualities are essential for success in this demanding yet rewarding profession.

### Collaboration between Operation and Anesthesia Technicians:

When it comes to the complicated dance that is a surgical procedure, the collaboration between anesthetic technicians and operation technicians is comparable to the harmony that is the foundation of a symphony for the procedure. For the smooth execution of surgical procedures and the protection of the patient's well-being during the perioperative period, their coordinated efforts are absolutely necessary (Cooper, 2018).

Beginning with the beginning of a surgical procedure, the operating room is methodically prepared by the operation technicians. They make certain that all of the essential instruments and equipment are in place, and they also make sure that the environment is sanitary. At the same time, anesthesia technicians collaborate with anesthesiologists to set up and calibrate anesthesia delivery systems. This ensures that the systems are operating at their highest level of efficiency, effectively catering to the specific requirements of each individual patient and surgical operation.

Once the surgical team has been formed and the patient has been readied for induction, the intensity of the collaboration between the anesthetic technicians and the operation technicians will increase. Operation technicians are responsible for providing essential assistance to surgeons by anticipating their requirements and passing tools in an effective manner, which ultimately helps to ensure that the process proceeds without any friction. Simultaneously, anesthesia technicians stay alert, monitoring the patient's vital signs and changing the amounts of anesthetic as required in order to preserve optimal physiologic parameters, as well as to assure the patient's safety and comfort (Almutairi et al., 2022).

Throughout the entirety of the surgical procedure, communication between the anesthetic technicians and the operation technicians is of the utmost importance. The ability to quickly adjust to changing conditions and give the highest possible level of care is made possible by the interchange of information that is both clear and succinct. This information includes the status of the equipment, the condition of the patient, and any unexpected developments. This collaborative approach helps to cultivate a sense of togetherness among the surgical team, which in turn improves efficiency and contributes to the achievement of favorable outcomes for patients.

At the point that the process is coming to a finish, operation Technicians provide assistance in the process of wound closure and meticulously count surgical tools and supplies to guarantee that nothing is left behind by accident. In the meantime, anesthesia technicians continue to monitor the patient's recovery from the anesthetic, which helps to ensure a seamless transition into the post-operative phase.

Within the confines of the operating room, the collaboration between anesthesia and operation personnel extends to the continuing quality improvement activities that are being undertaken. These specialists contribute to the refinement of protocols, the enhancement of safety measures, and the optimization of workflow procedures by sharing their views and feedback with one another. As a result, the delivery of surgical care is continuously improved. In its most fundamental form, the partnership between anesthesia technicians and operation technicians is a mutually beneficial relationship that is founded on trust, respect, and a dedication to excellence that is shared by both parties (Al Jafar et al., 2023).

Along with one another, they constitute an essential component of the surgical team, and they collaborate in order to ensure that the highest possible levels of patient care and safety are maintained throughout the entirety of the surgical process.

### **Recommendations for Effective Collaboration**

To enhance collaboration between anesthesia and surgical technicians, several recommendations can be implemented. First, regular training sessions should be organized to improve communication and teamwork. These sessions can focus on developing interpersonal skills, ensuring clear communication during procedures, and fostering a culture of collaboration in high-pressure environments. Effective teamwork is essential in maintaining patient safety and preventing errors in the operating room.

Second, implementing standardized sterilization protocols is crucial for all team members. Clear and consistent guidelines help ensure that everyone follows the same procedures, minimizing the risk of contamination. Standardized protocols also streamline processes, making it easier for both anesthesia and surgical technicians to work together efficiently and maintain a sterile environment (Akgül & Aksoy, 2021).

That is to say that using advanced sterilization technologies can significantly reduce the likelihood of manual errors. Automated systems and innovative tools can improve the speed and accuracy of sterilization processes, allowing team members to focus on other critical tasks. These technologies not only enhance the overall quality of sterilization but also promote a safer and more efficient operating room environment. By adopting these recommendations, healthcare teams can strengthen their collaboration, enhance the quality of care, and ensure optimal outcomes for patients.

### **Previous studies**

According to (Sharma et al. (2020), this review aims to highlight key factors in the perioperative environment that contribute to transmission of infectious pathogens, leading to healthcare-associated infection. This knowledge will provide anesthesia providers the tools to optimize preventive measures, with the goal of improved patient and provider safety. Over the past decade, much has been learned about the epidemiology of perioperative pathogen transmission. Patients, providers, and the environment serve as reservoirs of origin that contribute to infection development. Ongoing surveillance of pathogen transmission among these reservoirs is essential to ensure effective perioperative infection prevention. Recent work has proven the efficacy of a strategic approach for perioperative optimization of hand hygiene, environmental cleaning, patient decolonization, and intravascular catheter design and handling improvement protocols. This work, proven to generate substantial reductions in surgical site infections, can also be applied to aide prevention of SARS-CoV-2 spread in the COVID-19 era.

According to (Almutairi et al., 2022), one of the most important factors in ensuring that the operating room (OR) runs well and that patients receive high-quality care is the effective collaboration that exists between the anesthetic technicians and the operations technicians. In this article, the crucial roles that operations and anesthetic technicians play in the operating room are investigated. The research focuses on the responsibilities, problems, and methods that these technicians require in order to maximize their collaboration. As part of a collaborative effort, operations technicians are responsible for preparing the operating room and providing assistance to the surgical team. Meanwhile, anesthesia technicians are responsible for monitoring the vital signs of patients and ensuring their safety while they are under anesthesia.

With open communication and mutual respect, collaboration may be fostered and preparedness for a variety of situations that may arise in the operating room (OR) can be improved, despite the fact that there are hurdles such as time restrictions and equipment problems. By acknowledging the significance of teamwork and making investments in methods that foster collaboration, healthcare facilities have the ability to improve the quality of surgical care while simultaneously enhancing patient safety.

According to (Fox, 1997), we conduct an analysis of the spaces within the surgical operating theater (ST) and the built environment that is linked with it in order to investigate the implications of the physical layout for the interactions that take place. There are three "circuits of hygiene" that are documented, which include the surgical staff, surgical equipment, and patients. Additionally, a study of these bodily movements across the surgical areas is analyzed to determine how they contribute to sterility. After careful consideration, it has been determined that the constructed environment of the surgical site (ST) plays a role in providing reminders to the personnel to carry out the essential operations of aseptic technique. This is done to guarantee

the safe passage of the patient through the surgical procedure and into a state where they can be considered "healed." According to (Yates et al., 2021), we conduct a comprehensive assessment of the existing research on environmentally sustainable surgical practices in order to equip SAO with the necessary tools to advocate for increased environmental sustainability in operating rooms across the nation. When we talk about climate change, we are referring to the impact of greenhouse gases that are released as a byproduct of human activity. These gases are trapped within our atmosphere, which leads to climate patterns that are hotter and more variability.<sup>1</sup> As of the year 2013, the healthcare business in the United States was responsible for 9.8 percent of the country's emissions.<sup>2</sup> If the United States were a nation in its own right, the healthcare industry in the United States would rank thirteenth in the world in terms of emissions.<sup>3</sup> ORs are the driving force behind this trend because they are one of the most energy-intensive and wasteful regions of the hospital. Operating rooms require three to six times the amount of energy that clinical wards do.<sup>4</sup> In addition, operating rooms and labor and delivery suites are responsible for between fifty and seventy percent of the trash generated throughout the hospital.<sup>5, a6.</sup> It was proclaimed by the Lancet Climate Change Commission (2009) that climate change is "the biggest global health threat of the 21st century" due to the negative effects that it has on people's health. The commission also predicted that climate change would increase the health disparities that already exist for patients from low socioeconomic backgrounds, children, and minority groups.<sup>7</sup>

**Methods and Results:** We present a detailed narrative analysis of published initiatives to increase environmental sustainability in the operating room (OR) while concurrently achieving cost savings. Additionally, we highlight resources for physicians who are interested in pursuing this line of work. The health of patients is negatively impacted by climate change, and the most vulnerable patients are disproportionately affected by this phenomenon. The work that SAO does in the OR, which requires a significant amount of resources, is a contributor to the problem. Furthermore, they are in a highly advantageous position to lead efforts to improve the environmental sustainability of the OR.

According to (Al Jafar et al. (2023), anesthetic technicians are essential members of the surgical team. They are accountable for assuring the safe administration of anesthetic and conducting monitoring of the patient while the treatment is being performed. An examination of their crucial function in ensuring the health and safety of patients is presented in this article. Their duties include the preparation of medical equipment, the monitoring of patients, and the handling of emergency situations. By working together with anesthesiologists and adhering to stringent training and certification standards, anesthesia technicians are able to contribute to the smooth operation of the operating room and maintain high medical safety standards for patients.

According to (Seavey, 2010), it is necessary for all members of the surgical team, including those working in the sterile processing department, to work together in order to guarantee the safety of the patient. It is essential that staff in the operating room and the sterile processing department collaborate effectively with one another because of the strong working relationship that exists between the two departments. In order to contribute to improved connections between staff in these two departments, it is possible to reduce the number of errors and misunderstandings that occur. Strategies should include an emphasis on eliminating instrument set errors, developing cooperation and the development of positive relationships, enhancing communication between departments, and ensuring compliance with regulations that are based on the most recent evidence that is available.

According to (Tantchou (2014), the purpose of this study is to investigate the interactions that take place in an operating theater between medical personnel, the physical space, surgical instruments, and the "patient-body." The purpose of this article is to investigate the approaches taken by Katz, Rawlings, and Collins, as well as to demonstrate that the boundary between the operating theater and its surroundings becomes hazy when rituals, restrictive entrance procedures, and clothing requirements are not in place, and when rules are not observed for reasons that are discussed in this article. It turns into a space that is trivialized. One of the most important towns in the Extrême Nord area of Cameroon served as the location for the collection of data collection. I present a situation in which there is a crisis and a lack of equipment and personnel, both of which cause the boundaries of the operating room to become more restricted, but they do not destroy them. The limitations of the operating room are intended to be kept sterile and isolated. It has been demonstrated by Katz that the restrictive entrance processes, attire requirements, rituals, and norms that are designed to isolate the operation theater from its surrounds are not respected. The theater, on the other hand, is connected to its surroundings through a "intriguing combination of practices," which is in line with the analyses that Rawling and Collins have provided. In light of this, the operating theater is not a restricted and closed space within the hospital that can be fully separated from its surroundings. The interior and the exterior are connected in a way that never breaks continuity.

### **Methodology**

Due to the fact that the study is solely based on previously published literature and secondary data, it may be difficult to investigate real-time observations or primary data from operating rooms. Furthermore, there is a possibility that the findings do not accurately represent practices across a variety of healthcare systems or jurisdictions. The final point is that the emphasis placed on descriptive analysis limits the conclusions that may be drawn regarding causality or the direct influence of interventions.

### **Discussion**

The literature that was examined reveals that there is a significant degree of consensus regarding the crucial roles that anesthesia and surgical technologists play in ensuring that the operating room environment remains sterile and functions well. Numerous research, like Sharma et al. (2020) and Fox (1997), have reached a consensus regarding the significance of infection control and hygiene practices. These studies also highlight the fact that it is the collective responsibility of all members of the team to maintain these standards. In their respective studies, Almutairi et al. (2022) and Al Jafar et al. (2023) provide further support for the idea that the level of collaboration between surgical and anesthetic technicians has a direct influence on the results of procedures and the safety of patients.

In the body of research that has been conducted, there is a general agreement that it is essential to have transparent communication, consistent training, and strict adherence to defined protocols. As an illustration, Seavey (2010) emphasizes the fact that the collaboration between perioperative nurses and professionals responsible for sterile processing can serve as a model for other responsibilities that are performed in the operating room. Tanchou (2014), in a similar vein, offers insights into the structural and spatial constraints that have an effect on teamwork, hence emphasizing the necessity of optimizing workflows.

On the other hand, there are also differences of opinion concerning certain approaches of increasing collaboration. In spite of the fact that Yates et al. (2021) advocate for the incorporation of environmental sustainability into operating room operations as a shared duty, not all research place adequate emphasis on this particular issue. This disparity is a reflection of the many research agendas that are being pursued, and it suggests that sustainability is a developing area of concentration rather than a primary concern that is universally recognized.

## Conclusion

The necessity of teamwork between surgical technicians and anesthetic technicians is shown by the findings that have been compiled from the research that has been done. Not only do their coordinated efforts guarantee the sterilisation of instruments and the operating room, but they also guarantee that surgical procedures are carried out precisely and without any complications. The majority of the studies that were examined are in agreement with the notion that good communication, structured training, and cooperation are essential components of effective collaboration. This is a reiteration of findings from earlier research. Nevertheless, inconsistencies, such as the focus placed on environmental sustainability, point to potential areas that require additional investigation. Through the implementation of these gaps and the cultivation of a culture of teamwork, operating rooms have the potential to attain improved standards of efficiency, safety, and patient care. Anesthesia and surgical technicians work together to create a synergistic relationship that is essential to the functioning of successful surgical procedures. The findings of this study highlight the crucial necessity of their combined responsibilities in the areas of infection control, sterilization, and administrative support for procedures. Despite the difficulties that have been mentioned, it is possible to overcome these obstacles by encouraging teamwork through the implementation of structured training programs and adhering to defined norms. Previous studies have revealed that there are both existing gaps and potential solutions for boosting collaboration. These findings highlight both of these aspects. It is possible for teams working in operating rooms to achieve improved levels of efficiency, safety, and patient care standards if they incorporate these ideas.



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