

## Effective communication in the operating room to reinforce surgical safety and quality

Comunicación eficaz en el quirófano para reforzar la seguridad y calidad quirúrgica

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### ABSTRACT

**Introduction:** The research focuses on analyzing the dynamics of communication in the surgical environment, recognizing its critical importance for safety and efficiency in medical procedures. **Objective:** Identify interprofessional communication in the operating room. It seeks to provide practical dynamics to strengthen collaboration between health professionals and improve patient participation in decision-making related to their medical care. **Method:** Quantitative approach using the Interprofessional Team Collaboration Assessment Scale (AITCS), a diagnostic instrument designed to assess the degree of interprofessional collaboration in various healthcare teams for health professionals involved in surgery settings. The scale explores the participants' perception of various aspects of communication, including the inclusion of patients, coordination between professionals. **Results:** Approximately 45% of respondents indicate that patients are "Never" included in establishing goals for their care. Furthermore, variability is observed in cooperation and coordination between health professionals, and areas of difficulties are identified, such as mutual respect and trust. These findings highlight the need for strategies to improve communication in the surgical setting to ensure safe, patient-centered practices.

**Keywords:** Health Communication, Operating rooms, Patient Safety, Patient Care Team.

### RESUMEN

**Introducción:** La investigación se centra en analizar la dinámica de la comunicación en el entorno quirúrgico, reconociendo su importancia crítica para la seguridad y eficiencia en los procedimientos médicos. **Objetivo:** Identificar la comunicación interprofesional en el quirófano. Se busca proporcionar dinámicas prácticas para fortalecer la colaboración entre profesionales de la salud y mejorar la participación de los pacientes en la toma de decisiones relacionadas con su atención médica. **Método:** Enfoque cuantitativo mediante la Escala de Evaluación de la Colaboración entre Equipos Interprofesionales (AITCS), un instrumento de diagnóstico diseñado para evaluar el grado de colaboración interprofesional en diversos equipos de atención médica a profesionales de la salud involucrados en entornos quirúrgicos. La escala explora la percepción de los participantes sobre diversos aspectos de la comunicación, incluyendo la inclusión de pacientes, la coordinación entre profesionales. **Resultados:** Aproximadamente el 45% de los encuestados señala que "Nunca" se incluye a los pacientes en el establecimiento de objetivos para su atención. Además, se observa variabilidad en la cooperación y coordinación entre profesionales de la salud, y se identifican áreas de dificultad, como el respeto mutuo y la confianza. Estos hallazgos resaltan la necesidad de estrategias para mejorar la comunicación en el entorno quirúrgico, con el fin de garantizar prácticas seguras y centradas en el paciente.

**Palabras clave:** Comunicación en Salud, Quirófanos, Seguridad del Paciente, Equipo de Atención al Paciente.

## INTRODUCTION

In recent years, public outcry about the unacceptable incidence of medical errors has been alarming. The National Academy of Medicine (NAM) and other organizations have reported that levels of preventable patient harm remain unacceptably high. Given this, findings from the National Patient Safety Foundation (NPSF) suggest that patient safety initiatives are only successful through ongoing systemic changes focused on patient engagement, culture, and teamwork (Etherington et al., 2021).

Collaboration is a process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating norms and structures that govern their relationships and ways of acting or deciding on the issues that have brought them together; it is a process that involves shared norms and mutually beneficial interactions (Fuentes-Colmenero, 2019).

The concept of practice in healthcare has been identified as the socially acceptable and institutionalized enactment of professional roles. The complexity of interprofessional collaborative practice (IPP) results from the negotiations that take place within the social construction of practice. The social construction of practice is negotiated between professions, exists within and across professional cultures, and is influenced by both current circumstances and historical tensions (Thoring et al., 2019).

One of the patient care settings where errors are known to occur is the intraoperative setting. Internationally, more than 4,000 malpractice claims arising from intraoperative adverse events (IACEs) are paid out each year in the United States, at an estimated cost of more than \$65 million. Root cause analyses indicate that more than half of IACEs were directly preventable through effective interprofessional communication (Lee et al., 2019). An IACE is defined as any deviation or injury caused by the provision of surgical healthcare rather than by an underlying medical condition. These events encompass a wide range of care deviations and range in severity from those requiring no further intervention or treatment to those resulting in patient death (Laborde et al., 2019).

Examples of adverse events include incidents such as anaphylactic reactions, electrocautery injuries, episodes of decreased patient safety, laparoscopic conversion to open procedure, procedural delays, unintentional bleeding, unintentional dissection or resection, cardiac arrhythmia, among others. Additionally, undesirable patient outcomes of AIE include failure to wean from the ventilator, perioperative transfusions, pneumonia, return to surgery, surgical site infection, systemic sepsis, prolonged hospital stay or hospital readmission, and mortality (Guerrero, 2022).

Given this, adverse events were determined to be such a widespread problem that the World Health Organization (WHO) developed a global surgical safety checklist to ensure the minimum communication necessary for patient safety immediately before, during, and immediately after surgical procedures. These surgical safety checklists facilitate communication between surgical team members by preventing active and latent process failures and have been shown to increase safety compliance, improve teamwork behaviors, and reduce morbidity and mortality (Arias A, 2023).

Of note, the WHO surgical safety checklist includes pre-procedure verification of patient identity using two identifiers, description of the consented procedure(s), identification of the surgical site with laterality marked, disclosure of any known patient allergies, description of any anesthesia-related issues, confirmation of viewing of relevant patient images, administration of antibiotics, explanation of anticipated blood loss, anticipation of any critical events, and introduction of all surgical team members by name and role (Sillero & Buil, 2021).

However, although the implementation of the surgical safety checklist has reduced reported surgical complications from 11% to 7% and surgical patient mortality from 1.5% to 0.8%, the structure provided by the checklist does not account for the communicative complexity inherent in the provision of intraoperative care. The unique physical and cultural constraints of the intraoperative environment influence the social construction of interprofessional practice and intraoperative communication. The physical constraints of the environment are related to the interdependent and "overlapping" use of time and space as surgical team members from different professions attempt to perform tasks simultaneously in a confined physical space (Raquel, 2020).

Furthermore, a lack of commitment or cynicism in the application of the surgical safety checklist is frequently reported, which can be counterproductive to team communication efforts. And although specific critical event checklists have been developed for use during surgery, they are not widely used and only provide users with relatively basic prompts to assist the surgical team in navigating critical events (Crespo et al., 2023).

Some national research even suggests that the most significant improvements from surgical safety checklist implementation occur primarily in developing countries, and that the rather inconsistent results reported in developing countries are possibly the result of temporary changes, such as improved attitudes and teamwork behaviors, rather than checklist implementation (Etherington et al., 2019).

Therefore, education and reinforcement of schematic behaviors, such as structured communication driven by the surgical safety checklist, can improve patient outcomes, but effectively addressing adverse effects, such as unforeseen and emergent surgical deviations or changes in patient status during the procedure, requires effective unstructured intraoperative communication (Morán et al., 2020).

Studies have determined that unstructured intraoperative communication is ineffective in up to 30% of cases due to information loss or communication failures. Ineffective communication may result from the exclusion of relevant team members, the inclusion of inaccurate content, a delay in transmitting necessary information, or an ambiguity of purpose (Laflamme et al., 2019).

Ineffective communication includes failures in purpose, timing, content, or audience, and often results in procedural delays or errors, team inefficiency or strain, medication errors, equipment problems, workarounds, and wasted resources. One study described the most common communication errors related to surgical progress, equipment issues, medication, procedural changes, policy issues, environmental concerns, and staff changes (Shi et al., 2021).

Barriers to effective intraoperative communication can include interruptions, miscommunication, multitasking, and time constraints. Research also identifies ineffective interprofessional communication and organizational structure issues as common factors in adverse events. Improving intraoperative communication potentially requires a deliberate cultural shift with increased disclosure, transparency, and accountability. Culture change interventions using interprofessional communication-focused training have demonstrated benefits including improved organizational outcomes, increased teamwork behaviors, and improved patient outcomes; unfortunately, these improvements tend to deteriorate over time (Arad et al., 2022).

Likewise, interprofessional communication in the intraoperative setting has been minimally facilitated through the implementation of surgical safety checklists and temporarily improved through communication training interventions. Although surgical safety checklists and training interventions often directly address the necessary content of interprofessional communication, they frequently fail to address the relevant context of healthcare culture (Ivarsson et al., 2020).

Within interprofessional collaborative practice, establishing and maintaining effective communication is often hampered by professional boundaries and cultural constraints traditionally inherent in healthcare delivery. These boundaries and constraints are influenced by behavioral expectations, personal conduct, gender, and professional socialization (Raveendran et al., 2022).

Against this background, the purpose of this study is to explore interprofessional communication around potential ACEs in the operating room. Therefore, in the intraoperative setting, it would allow for more effective interprofessional communication interventions and focused education, potentially further reducing ACEs and directly impacting patient safety and satisfaction. (A) For the purpose of this investigation, interprofessional communication within the intraoperative setting was considered to be a series of inherently complex social interactions between surgical team members operating from and within different perspectives, positions, perceived power, and roles.

## METHODOLOGY

The study adopts a quantitative approach with a non-experimental design, descriptive in scope, and cross-sectional in nature. The research was conducted in the surgical department of a hospital, a critical environment where interprofessional communication plays an essential role in patient care. This approach allows for the analysis of communication between different healthcare professionals in the operating room and its relationship to patient safety.

The fundamental objective of this study is to identify the challenges and opportunities in interprofessional communication in the operating room, with the goal of improving patient safety and the quality of medical care in a critical area of medicine. Through this research, we seek to contribute knowledge that will contribute to the improvement of processes and decision-making in the operating room, thus promoting a safer environment for patients undergoing surgical procedures.

The population of interest in this study is limited to nursing staff working in hospital surgical settings. This includes surgical nurses, scrub nurses, circulating nurses, and other nursing team members involved in patient care in the operating room.

*The inclusion criteria include*

Professional Qualifications: Include nurses licensed and certified to practice in the surgical setting. This ensures that participants have the necessary training and qualifications to understand and assess communication in this specific context.

**Work Experience:** Consider nurses with a variety of surgical experience levels, from recent graduates to seasoned professionals. This provides a more complete view of how communication is perceived throughout different career stages.

**Work Environment:** Limit the sample to those who work or have worked in surgical settings, such as operating rooms and surgical suites. This ensures that participants have direct experience in the area being assessed.

**Voluntary Consent:** Require participants to provide voluntary consent to participate in the study, ensuring that they are willing to share their perceptions of intraprofessional communication in the operating room.

For data collection, the Assessment of Interprofessional Team Collaboration Scale (AITCS) was used, a diagnostic instrument designed to assess the degree of interprofessional collaboration across diverse healthcare teams. This tool specifically focuses on measuring partnership, cooperation, and coordination through a 37-item self-report questionnaire. The results sought to provide a detailed view of the strengths and weaknesses of interprofessional teams across a wide range of settings. The scale follows a 5-point Likert-type format, with participants rating responses on a scale ranging from "always" (5) to "never" (1) (20).

Analyzing the scale's reliability is essential to ensure measurement accuracy. Subscale scores were obtained by averaging the three items comprising each subscale, and the total score was determined from the average of the three subscales. Importantly, the scale demonstrated remarkable reliability. Score reliability was assessed using internal consistency, measured by Cronbach's alpha coefficient. The results indicated high internal reliability for both the overall measure (Cronbach's alpha coefficient = 0.98) and the three individual factors (Cronbach's alpha coefficient = 0.8–0.97) (20).

Data processing in our study, which focused on effective communication among nurses in the surgical setting, was carried out using SPSS statistical software, version 23. The collected data were subjected to descriptive analysis to assess and summarize nursing staff perceptions regarding communication in this clinical setting.

## RESULTS

The results suggest that including patients in decision-making about their goals of care and listening to their wishes in the care process chosen by the team are practices that do not occur with the desired frequency. Specifically, approximately 45% of respondents indicated that patients are "never" included in establishing goals for their care, and 31% stated that they "never" listen to their wishes in determining the care process. These findings are significant, as involving patients in decision-making is fundamental to patient-centered care and can influence patient satisfaction and quality of care.

Furthermore, the coordination of health and social services according to patient needs and the use of consistent communication to discuss patient care were also found to occur "Rarely" or "Never." Effective coordination of services and consistent communication are essential aspects of interprofessional collaboration in a healthcare setting, and these results suggest that there is room for improvement in these aspects in clinical practice.

On the other hand, it is observed that working together with patients and their families to adjust care plans is a practice that occurs more frequently, with 37.9% of respondents indicating that this occurs "Occasionally." This is a positive aspect, as it implies greater participation of patients and their families in the care process.

The second item on the AITCS questionnaire addresses "Cooperation," an essential element of interprofessional collaboration in healthcare. The results of this section provide interesting insight into the collaborative dynamics within the healthcare team assessed.

First, it is noteworthy that a significant portion of respondents indicated that "Cooperation" always occurs in several key areas. For example, approximately 34.5% of participants indicated that power is "always" shared. This finding is encouraging, as power sharing is essential for shared decision-making and active participation of team members in patient care. Similarly, 41.4% stated that changes to team functioning are "always" made based on reflective reviews. This reflects a receptive approach to continuous improvement and adaptation to changing patient needs.

However, variability in cooperation is also observed in other areas. For example, mutual respect and trust can improve communication and collaborative decision-making, but approximately 20.7% of respondents indicated that this occurs "Rarely." Furthermore, in the effort to find mutually satisfactory solutions to differences of opinion, 34.5% of respondents indicated that this occurs "Rarely." These results suggest that there is room for improvement in mutual trust and the ability to resolve conflicts cooperatively within the healthcare team.

Tabla 1. Results

Include patients in setting goals for their care		
	Frequency	Percentage
Never	13	44.8
Seldom	4	13.8
Occasionally	12	41.4
Total	29	100.0
Listen to the wishes of your patients when determining the care process chosen by the team		
	Frequency	Percentage
Never	9	31.0
Seldom	11	37.9
Occasionally	9	31.0
Total	29	100.0
Meets and discusses patient care regularly		
	Frequency	Percentage
Never	9	31.0
Seldom	11	37.9
Occasionally	9	31.0
Total	29	100.0
Coordinates health and social services (e.g., financial, occupational, housing, community connections, spiritual) based on the patient's care needs		
	Frequency	Percentage
Never	8	27.6
Seldom	12	41.4
Occasionally	9	31.0
Total	29	100.0
Use consistent communication to discuss patient care		
	Frequency	Percentage
Never	7	24.1
Seldom	15	51.7
Occasionally	7	24.1
Total	29	100.0
Participate in setting goals for each patient		
	Frequency	Percentage
Never	7	24.1
Seldom	12	41.4
Occasionally	10	34.5
Total	29	100.0
They encourage each other and patients and their families to use the knowledge and skills that each can contribute in developing care plans.		
	Frequency	Percentage
Never	13	44.8
Seldom	7	24.1
Occasionally	9	31.0
Total	29	100.0
They work with the patient and their family members in adjusting care plans		
	Frequency	Percentage
Never	8	27.6
Seldom	10	34.5
Occasionally	11	37.9
Total	29	100.0
They share the power		
	Frequency	Percentage
Seldom	6	20.7
Occasionally	7	24.1
Most of the time	6	20.7
Always	10	34.5
Total	29	100.0
They respect and trust each other		
	Frequency	Percentage
Seldom	6	20.7
Occasionally	10	34.5
Most of the time	7	24.1
Always	6	20.7
Total	29	100.0
They are open and honest with each other		
	Frequency	Percentage
Seldom	5	17.2
Occasionally	9	31.0
Most of the time	10	34.5
Always	5	17.2
Total	29	100.0
They introduce changes to the functioning of their team based on reflective reviews		
	Frequency	Percentage
Seldom	6	20.7
Occasionally	7	24.1
Most of the time	4	13.8
Always	12	41.4
Total	29	100.0
They strive to find mutually satisfactory solutions to differences of opinion		
	Frequency	Percentage
Seldom	10	34.5
Occasionally	5	17.2
Most of the time	3	10.3
Always	11	37.9
Total	29	100.0
They understand the limits of what each one can do		
	Frequency	Percentage
Seldom	9	31.0

Occasionally	9	31.0
Most of the time	7	24.1
Always	4	13.8
Total	29	100.0
<b>They understand that there is shared knowledge and skills among the</b>		
	<b>Frequency</b>	<b>Percentage</b>
Seldom	8	27.6
Occasionally	7	24.1
Most of the time	6	20.7
Always	8	27.6
Total	29	100.0
<b>Applies a unique definition of interprofessional collaborative practice to the practice setting</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	7	24.1
Seldom	6	20.7
Occasionally	10	34.5
Most of the time	3	10.3
Always	3	10.3
Total	29	100.0
<b>Distribute the agreed objectives equitably among the team</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	9	31.0
Seldom	5	17.2
Occasionally	9	31.0
Most of the time	3	10.3
Always	3	10.3
Total	29	100.0
<b>Encourages and supports open communication, including patients and their families during team meetings</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	11	37.9
Occasionally	4	13.8
Most of the time	4	13.8
Always	10	34.5
Total	29	100.0
<b>Use an agreed-upon process to resolve conflicts</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	6	20.7
Seldom	8	27.6
Occasionally	6	20.7
Most of the time	4	13.8
Always	5	17.2
Total	29	100.0
<b>Supports the team leader based on the needs of our patients</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	6	20.7
Seldom	4	13.8
Occasionally	9	31.0
Most of the time	5	17.2
Always	5	17.2
Total	29	100.0
<b>Choose together the leader of our team</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	8	27.6
Seldom	5	17.2
Occasionally	2	6.9
Most of the time	7	24.1
Always	7	24.1
Total	29	100.0
<b>Openly supports patient inclusion in team meetings</b>		
	<b>Frequency</b>	<b>Percentage</b>
Never	7	24.1
Seldom	5	17.2
Occasionally	5	17.2
Most of the time	6	20.7
Always	6	20.7
Total	29	100.0

Source: the authors.

Areas are also identified where cooperation may fall somewhere in between. For example, regarding openness and honesty among team members, 34.5% of respondents indicated that this occurs "Most of the time." In terms of understanding the limits of what each team member can do, 31.0% of participants indicated that this occurs "Occasionally." These areas may be potential targets for improvement interventions, as they suggest that a basis for cooperation exists, but there is room to strengthen it further.

The third item on the AITCS questionnaire focuses on "Coordination," another key aspect of interprofessional collaboration in healthcare. The results of this section provide valuable insight into coordination within the healthcare team and the inclusion of patients in this process.

First, it is worth highlighting the fact that there is variability in coordination within the assessed team. For example, regarding "Applying a single definition of interprofessional collaborative practice to the practice setting," 34.5% of respondents indicated that this occurs "Occasionally." This variability may indicate that the definition and understanding of

interprofessional collaborative practice may not be fully aligned within the team.

Regarding "Equitable distribution of agreed-upon goals among the team," 31.0% of respondents indicated that this occurs "Never." This suggests that equitable distribution of responsibilities and goals can be an area for improvement to ensure all team members are fairly involved in the care process.

On the other hand, "Promoting and supporting open communication, including patients and their families during team meetings" is considered a positive area of coordination. Approximately 34.5% of respondents indicated that this occurs "Always." This reflects a proactive approach to involving patients and their families in the care process and fostering open communication within the team.

Regarding "Using an agreed-upon process to resolve conflicts," approximately 27.6% of respondents indicated that this occurs "Rarely." Effective conflict management is essential to maintaining healthy collaboration within the care team, and these results suggest that establishing clear processes for addressing disagreements constructively may be necessary.

In terms of "Supporting the team leader based on patient needs" and "Jointly choosing the team leader," there was variability in responses, which may reflect different approaches to leadership and team participation.

Finally, regarding "Openness to patient inclusion in team meetings," approximately 20.7% of respondents indicated that this occurs "Always." This indicates a willingness to include patients in the decision-making and communication process within the care team.

Taken together, the results of the three AITCS questionnaire items provide a comprehensive view of interprofessional collaboration in the assessed healthcare setting. The first item highlighted the need to improve patient inclusion in decision-making and consistent communication within the team. The second item noted areas of strength in cooperation, along with opportunities for improvement in mutual trust and conflict resolution. The third item revealed variability in coordination, with strengths in patient inclusion in communication, but also a need to establish clear processes for conflict management. These findings underscore the importance of a balanced approach that promotes interprofessional collaboration, cooperation, and coordination to ensure high-quality, patient-centered care in the assessed healthcare setting.

## **DISCUSSION**

### **Elements of communication in the operating room**

The survey results highlight the importance of communication in healthcare. In particular, it was highlighted that approximately 45% of respondents stated that patients were "not involved at all" in setting goals for their care, highlighting the need for greater patient involvement in decision-making about their care.

Comparing these results with those of other authors, there is agreement that effective communication in the operating room is essential for the success of the practice and patient outcomes. Both results support the idea that accurate and clear communication between team members and patient participation in decision-making are essential elements for achieving shared goals and improving the quality of care (1,4).

It is important to note that our study focuses on the lack of patient participation in goal setting, while other authors take a broader perspective by emphasizing the importance of communication in general, including verbal and nonverbal elements. This broader perspective allows us to understand that communication goes beyond the doctor-patient relationship and encompasses the interdisciplinary dynamics in the operating room.

In this regard, our study and others reinforce the assumption that without effective communication, essential components of teamwork in the operating room, such as mutual performance monitoring, team leadership, adaptability, and team orientation, are unlikely to be fully achieved. There is consensus that teamwork in the operating room is unlikely to be sufficiently achieved. This consensus underscores the importance of addressing communication deficiencies to ensure safe and effective practice in the operating room environment (3,6,8).

### **Communication problems**

In our study, we found variations in cooperation and collaboration, especially in situations of stress and time pressure. Around 20.7% of respondents stated that this occurred "rarely," suggesting that difficulties may arise with certain aspects of communication, such as mutual respect and trust.

Comparison of these results with studies by other authors confirms the existence of communication difficulties in the

business environment. Other authors highlight the complexity of the communication process under extreme stress and time conditions, with significant communication deficiencies that negatively affected the surgical procedure in 90% of cases where errors occurred (9).

Both results lead to the conclusion that communication errors are common in the operating room and can directly impact the safety and effectiveness of medical procedures. The differences in collaboration and coordination discovered in our study complement the more general opinion of other authors and underscore the need to address these challenges to improve the quality of healthcare.

Both our results and those of other authors demonstrate the existence of communication difficulties in surgery. This shared finding underscores the urgency of implementing strategies and protocols that specifically address communication barriers to ensure safe and effective practice in the operating room.

### **Strategies to Improve Communication**

Our study does not identify specific strategies to improve communication. However, by comparing these results with those of other authors' research, we can identify key strategies that could be applied in surgical settings.

Other authors emphasize the importance of structuring and standardizing communication as an effective strategy. Specifically, they point out that structured and standardized communication increases accuracy and understanding among team members. They emphasize that standardized communication protocols, such as those used in the aerospace industry, are necessary to bridge differences in communication styles among different professional groups and provide clarity in critical situations (10-12).

The importance of interprofessional team dynamics and equal participation in facilitating effective communication is also emphasized. Team integration, equal participation, and shared goals are presented as important elements for improving communication among healthcare professionals (10,13).

Other strategies mentioned by other authors include communication and teamwork training. These trainings provide team members with the skills needed to initiate briefings or pre-meetings, convey important and relevant information, and improve the perceived quality of communication among team members (Arad, 2022).

Although our research does not prescribe strategies, the findings of other authors suggest practical approaches to improving communication in the surgical setting. Standardized protocols, encouraging equal participation, and specific training in communication and teamwork may be important factors in addressing the communication difficulties identified in our study.

### **Limitations of the study**

Our research presents some limitations that should be considered when interpreting the results. First, data collection was based on self-reported responses from participants, which could introduce potential biases related to individual interpretation of the questions. The inherent subjectivity of the responses could influence the accuracy of perceptions about communication in the surgical setting.

Furthermore, the study focused on a specific healthcare setting, which limits the generalizability of the results to other clinical settings. Communication dynamics can vary considerably across medical specialties or hospitals, and therefore, the results may not be fully representative of the diversity in healthcare.

The survey methodology used may also have limited the depth of understanding of communication dynamics. Surveys, by nature, simplify responses and do not allow for a thorough exploration of the complexities of interactions in the operating room.

To address these limitations and advance our understanding of communication in surgical settings, future research could consider incorporating mixed methods, combining surveys with interviews or focus groups. This would provide a richer and more contextualized perspective on healthcare professionals' experiences and perceptions of communication.

Furthermore, expanding the research to multiple medical institutions and specialties could provide a more complete view of variations in communication practices. Understanding the differences and similarities across various clinical settings would contribute to the generalizability of the results and provide more specific recommendations for improving communication in healthcare.

It is also suggested that the effectiveness of specific interventions to improve communication be explored, such as



the implementation of structured protocols or team training programs. Evaluating the impact of these interventions could provide valuable information on best practices for fostering effective communication in the operating room.

## CONCLUSION

Effective communication among operating room team members is essential for surgical patient safety, but it faces many challenges due to the complex and dynamic nature of the intraoperative environment. The study identified several barriers and facilitators to effective communication. The perioperative community should be encouraged to implement existing effective solutions to improve communication and to research creative solutions to the identified barriers. Improved data collection methods are needed to improve the quality of evidence, increase understanding of the barriers and facilitators of communication, and identify the best strategy to advance practice.

Furthermore, communication in the surgical setting presents significant challenges, according to our research findings and a review by other authors. The lack of patient inclusion in goal setting, the variability in cooperation between healthcare professionals, and difficulties in key elements such as mutual respect and trust highlight the pressing need to address communication deficiencies in this context. Effective communication is not only essential for the safety and efficiency of medical procedures, but also for the quality of care and patient satisfaction.

Specific strategies, such as standardizing communication, promoting equal participation, and training in communication and teamwork, could be key to improving communication in the surgical setting. The results of other authors offer practical and applicable insights to address the difficulties identified in our research. The implementation of structured interventions and specific protocols could help overcome communication challenges, thereby improving coordination and collaboration among healthcare professionals in the operating room.

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