

# Management Strategies to Improve Medical Personnel Collaboration Skills (Qualitative Study at Arafah Anwar Medika Hospital)

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Collaboration among medical personnel is a crucial component in improving the quality of care and patient safety in healthcare facilities. This study aims to analyze management strategies that can enhance the collaborative capabilities of medical personnel at Arafah Anwar Medika Hospital. The study used a descriptive qualitative method through semi-structured interviews with seven informants from various medical professions and structures. The data were analyzed using a thematic analysis approach through coding, categorization, and identification of key themes. The results show that collaboration in the hospital has taken various forms, such as cross-unit coordination, communication through digital media, and regular meetings. However, the effectiveness of collaboration is still hampered by limited human resources, differences in perceptions between professions, high workloads, and variations in communication patterns. Management has implemented several strategies, such as excellent communication training, in-house training, and strengthening a patient-oriented culture, but their implementation has not been integrated into the formal collaboration system. Recommended strategies include strengthening cross-professional communication forums, team building activities, interprofessional collaboration training, employee rotation, and the development of collaboration evaluation indicators. This study concludes that management strategies play a significant role in strengthening the collaborative capabilities of medical personnel and are able to support the formation of a sustainable collaborative work culture.

**Keywords:** Collaboration Of Medical Personnel, Management Strategy, Interprofessional Communication, Hospital

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## 1. Introduction

Collaboration among medical personnel is a crucial element in providing holistic, effective, and high-quality healthcare. Through collaboration, healthcare professionals can share knowledge and expertise to improve patient outcomes and ensure a patient-centered approach to care. Collaboration also plays a role in preventing medical errors, reducing costs, and increasing overall service efficiency. However, various obstacles often arise in the practice of interprofessional collaboration, such as ineffective communication, differences in hierarchy and roles, and management systems that do not yet support interdisciplinary collaboration (Pertwi & Kusnadi, 2021). Infrastructure limitations, such as limited discussion spaces or an unintegrated patient information system, also pose obstacles (Rahayu, 2023). A similar phenomenon was observed at Arafah Anwar Medika Hospital, where professional egos and ineffective communication channels were fundamental issues, highlighting the need for more targeted managerial strategies.

The success of enhancing collaboration depends not only on the strategies designed, but also on how they are organized and implemented in the work environment. This includes better communication systems, clarity of roles and responsibilities for medical personnel, and strengthening a collaborative culture that encourages open and productive professional interactions (Légaré et al., 2011). Strategy implementation needs to be monitored through regular evaluation and performance monitoring to ensure the effectiveness

of implemented measures and adjust the approach if obstacles arise (McDonald et al., 2013). Without clear controls, even a well-designed strategy risks failing to deliver a sustainable impact.

In practice, various challenges can arise, ranging from resistance to change, limited resources, to a lack of awareness among medical personnel of the importance of teamwork (Salas et al., 2008). Observations at Arafah Anwar Medika Hospital revealed resistance due to professional egos and individual habits. Therefore, the implemented strategy must be flexible, adaptive, and able to accommodate the dynamics of the hospital environment.

Based on this description, the main problem is not only low collaboration, but also the lack of a structured management strategy to support it. This research focuses on formulating appropriate management strategies to improve collaboration among medical personnel at Arafah Anwar Medika Hospital, considering factors that influence the strategy's effectiveness and how these strategies can be implemented and controlled to significantly impact the quality of healthcare services.

Based on the previous background, this research aims to: (1) Describe the condition of collaboration among medical personnel at Arafah Anwar Medika Hospital. (2) Identify factors that influence the effectiveness of collaboration among medical personnel. (3) Analyze management strategies that can be used to improve the collaboration capabilities of medical personnel. (4) Formulate implementation and control of management strategies for sustainable implementation.

## 2. Method

This research was conducted at Arafah Anwar Medika Hospital in Sukodono, East Java, a private hospital that has been operating since 2011 and provides healthcare services to the residents of Sukodono and Sidoarjo. The study ran from September to October 2025. The study subjects included hospital employees, while key informants were management and medical personnel directly involved in the implementation of collaboration. The research approach was descriptive qualitative to gain an in-depth understanding of hospital management and innovation programs aimed at improving collaboration between medical personnel, particularly to address the negative trends of collaboration. The research data consisted of primary data obtained through in-depth interviews with purposively selected informants, as well as secondary data in the form of hospital documents, profiles, archives, and relevant literature.

Data collection was conducted through participant observation to understand social interactions and field conditions, in-depth interviews to obtain information about informants' words and behaviors, and supplementary documentation to support data validity. Data analysis was conducted descriptively and qualitatively using deductive reasoning, moving from general theory to specific applications in the field, through the stages of collection, reduction, presentation, categorization, triangulation, and final conclusions. Data validity was guaranteed through credibility with triangulation of sources and methods and extended observation time, transferability through detailed descriptions of the research context, dependability through audits by the supervising lecturer, and confirmability through audit tracking of the entire data collection and analysis process. This approach ensures that the data obtained is objective, relevant, and reliable, and able to answer research questions on hospital management and innovation efforts to improve collaboration between medical personnel.

## 3. Result and Discussion

### Data Processing

This study employed a descriptive qualitative method, collecting data through semi-structured interviews with seven informants purposively selected for their active involvement in medical service coordination. The

informants included deputy service directors, physicians, installation heads, ward heads, and radiologists with between two and fourteen years of work experience. The primary research instrument was an interview guide structured around five themes: understanding collaboration among medical professionals, collaborative practices in service delivery, management strategies that support collaboration, barriers and challenges to collaboration, and suggestions and hopes for improving collaboration. Interviews were conducted in person and online during September 2025, recorded, transcribed verbatim, and reconfirmed with respondents through member checking. The data obtained were then reduced by selecting relevant statements, presented in a coding table per informant, and categorized into key themes. Data validity was maintained through source triangulation by comparing perspectives across professions, member checking, and peer debriefing with supervisors. This ensured that the data obtained was reliable, accurate, and relevant for analyzing medical professional collaboration at Arafah Anwar Medika Hospital.

## Research Results

### Current State of Collaboration Among Medical Personnel

Based on interviews with seven informants from various professions, the current state of collaboration among medical personnel at Arafah Anwar Medika Hospital indicates that collaboration is ongoing, but is not yet optimal and is not evenly distributed across all units. Most informants understand collaboration as professional cooperation that requires effective communication, mutual respect, and clarity of roles between professions. Dr. N explained that collaboration means mutual support and professionalism, and Dr. M emphasized the importance of understanding each other's job descriptions.

In practice, some units coordinate well through regular meetings and digital communication, but others experience one-way communication and lack of involvement of staff, resulting in delayed or incomplete information, as revealed by Ms. R from the Laboratory. This situation creates variations in collaboration capabilities across units, with some units strong in teamwork, while others face miscommunication, unbalanced workloads, and interpersonal barriers.

Thematic analysis of the interviews revealed three main patterns. First, understanding of collaboration is good but uneven; values such as mutual respect, two-way communication, and role clarity are stronger at the leadership level and have not been fully internalized by all staff. Second, coordination occurs but is often interrupted, influenced by individual communication styles, with top-down communication dominating and unit participation limited. Third, interprofessional relationships are influenced by work culture; organizational hierarchies and the egos of certain professions influence the dynamics of cooperation, resulting in harmony in some units while others experience friction or misalignment.

## Discussion

The findings regarding the collaboration of medical personnel at Arafah Anwar Medika Hospital align with the theory of interprofessional collaboration (WHO, 2010; Reeves et al., 2010), which emphasizes the importance of open communication, role clarity, and harmonious working relationships between professionals. Although medical personnel conceptually understand the meaning of collaboration, its implementation still faces structural and interpersonal challenges, with communication programs and coordination forums not fully addressing uneven staff involvement and miscommunication between units.

D'Amour and Oandasan (2005) explain that ideal collaboration practices require alignment between individual understanding and organizational structure. At this hospital, despite the existence of coordination mechanisms, imbalanced participation and miscommunication hinder optimal collaboration practices, particularly in units with high workloads and limited resources, resulting in less effective team functioning,

as McDonald et al. (2018) emphasizes that communication failure is a primary cause of impaired interprofessional collaboration.

Thus, the collaboration at Arafah Anwar Medika Hospital can be categorized as developing, meaning it is already underway but still requires strengthening in terms of institutional aspects, organizational culture, and equitable distribution of communication competencies. Source triangulation revealed a shared view that communication is key to collaboration. Although unit leaders assessed collaboration as being well-functioning, staff assessed communication as uneven and often one-way. Most professionals identified professional ego and workload as barriers. These results reinforce the conclusion that collaboration requires managerial support to be more equitable, structured, and sustainable.

### Factors Influencing Collaboration

Based on interviews, the quality of collaboration among medical personnel at Arafah Anwar Medika Hospital is influenced by various factors, including individual, team, organizational, and operational workload. Communication is the most dominant factor, with miscommunication, differing perceptions, and delays in information delivery between units still common. Mrs. R revealed that communication from superiors is often one-way, and Dr. N assessed that interprofessional communication is still weak. Furthermore, limited human resources and an unbalanced workload also hamper collaboration, as explained by Mrs. C regarding the patient-to-medical-person ratio, which impacts teamwork. Professional ego and individual attitudes are real obstacles, as some medical personnel are reluctant to collaborate or feel superior, as expressed by Mr. B and Dr. M. The predominantly top-down organizational structure and hierarchical pattern limit staff involvement in decision-making, while internal management systems and policies, including training programs, coaching, and coordination meetings, support collaboration, but their implementation is uneven, as evidenced by Mr. S's comment regarding the lack of a specific strategy for the radiology unit. Communication technology, such as WhatsApp Groups and online media, helps accelerate information flow, but the distribution and speed of information are not always uniform across professions, thus limiting the effectiveness of collaboration.

#### a. Data Analysis

A thematic analysis of informants' responses revealed four categories of factors influencing collaboration among medical personnel at Arafah Anwar Medika Hospital. Personal factors include professional ego, individual attitudes, open communication, motivation, and willingness to cooperate, which often become sources of interpersonal conflict in some units. Team factors include human resource composition, workload, role clarity, and coordination patterns. Units with stable human resources and a strong communication culture demonstrate more effective collaboration. Organizational factors are evident in hierarchical culture, one-way communication, uneven cross-professional training, and limited formal discussion spaces that hinder interprofessional collaboration. Meanwhile, work environment factors such as high patient load, service dynamics, and inappropriate recruitment of new staff also impact the effectiveness of collaboration in the field.

#### b. Discussion

The results of this study indicate that collaboration among medical personnel at Arafah Anwar Medika Hospital is influenced by interrelated factors, consistent with the theory of interprofessional collaboration. Communication is a key determinant, with the dominance of top-down communication and inconsistent information hindering cross-professional coordination, consistent with findings by McDonald et al. (2018) and WHO (2010). Workload and human resource capacity impact team flexibility, creating role overlap, and reducing collaboration effectiveness, consistent with Reeves et al. (2010). High professional egos and a hierarchical organizational culture highlight the need to strengthen internal values and a shared vision, as explained by D'Amour and Oandasan Management Strategies to Improve Medical Personnel Collaboration Skills (Qualitative Study at Arafah Anwar Medika Hospital). Anas Yahya Abdullah et.al

(2005). Management system support, such as cross-professional SOPs, participatory leadership, and regular coordination forums, is not yet evenly distributed across units, despite training and meetings, as per CIHC guidelines (2010). Digital communication technology facilitates coordination, but still requires interpersonal skills to convey messages accurately. Overall, communication, individual behavior, and organizational culture emerged as the dominant factors determining the quality of collaboration among medical personnel at this hospital.

c. Triangulation

The results of source triangulation confirmed the finding that communication is a key factor influencing medical staff collaboration, with all informants agreeing on this. Although leaders assessed that collaboration was ongoing, implementing staff perceived a lack of engagement, indicating differing perspectives across levels. Furthermore, professional ego and individual attitudes consistently emerged as barriers across several professions, while limited human resources across units worsened coordination. A hierarchical organizational culture was also confirmed to hinder open communication. Overall, triangulation strengthened the validity of the finding that determinants of collaboration operate at multiple levels, from the individual, to the team, to the organization, and to the work environment.

### **Barriers/Challenges to Collaboration**

The results showed that barriers to collaboration among medical staff at Arafah Anwar Medika Hospital arise from four main interrelated aspects: communication, limited human resources, a hierarchical culture, and professional ego. Communication barriers were the most dominant, with suboptimal coordination between units, frequent miscommunication, and one-way communication, as expressed by Dr. M and Mrs. R. Therefore, standardization of formal and informal mechanisms is necessary. Human resource limitations lead to high workloads and role imbalances, which hinder effective coordination, according to Ms. C's findings and the theory of D'Amour & Oandasan (2005). A hierarchical organizational culture leads to decisions and communication being dominated by leaders, resulting in less involvement of implementers, as stated by Ms. R, indicating the need for a more inclusive governance structure (Reeves et al., 2010). Furthermore, professional egos and interpersonal barriers create conflicts that disrupt collaboration, as emphasized by Mr. B and Dr. M, so a formal conflict resolution mechanism is essential (Barr et al., 2013). Source triangulation demonstrates consistency of findings across various units and professions, confirming that barriers to collaboration are not merely individual issues, but systemic challenges that require managerial attention and a comprehensive collaboration strengthening strategy.

### **Strategies Proposed by Medical Personnel to Improve Collaboration**

Interview results indicate that medical personnel at Arafah Anwar Medika Hospital proposed several strategies to improve interprofessional collaboration, including team building, cross-professional training, employee rotation, and strengthening regular communication forums. Team building is considered essential for strengthening interpersonal relationships, reducing professional ego, and fostering a sense of community, in line with the internalization concept of D'Amour & Oandasan (2005) and the CIHC core competencies (2010), as emphasized by Dr. M and Dr. N. Interprofessional Education (IPE) training is proposed to align perceptions, clarify roles, and improve communication skills, in accordance with WHO recommendations (2010), as conveyed by Bu R and Mas S. Inter-unit employee rotation is considered effective for increasing cross-unit understanding, strengthening empathy, and reducing professional ego, supporting the principles of the shared mental model of Reeves et al. (2010), as expressed by Mr. B and Mrs. C. Strengthening cross-professional communication forums is necessary for uninterrupted two-way information flow and more consistent coordination, through cross-professional meetings or structured digital groups, in accordance with the findings of Mitchell et al. (2012), as highlighted by Mrs. C and Mr. S.

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Cross-professional triangulation demonstrated consistency in the four strategies, albeit with varying emphases: units with high workloads emphasized team building and rotation, while support units emphasized training and interpersonal communication, and management emphasized all strategies as part of strengthening a collaborative culture. These results confirm that improving collaboration requires a combination of relationship-based, competency-based, experience-based, and system-based interventions simultaneously.

## Discussion

### Relationship to Interprofessional Collaboration Theory

Collaboration among medical personnel at Arafah Anwar Medika Hospital has been ongoing, but it is not evenly distributed across all units, thus hampering the effectiveness of teamwork in some parts of the hospital. Most healthcare professionals understand the principles of interprofessional collaboration, including open communication, mutual respect, and clarity of roles, as conceptualized by D'Amour & Oandasan (2005) and the WHO (2010). Communication is a key barrier to collaboration, as coordination between units is sometimes one-way, information is delayed, and implementers are not always involved, consistent with the findings of McDonald et al. (2018).

Limited medical personnel and an unbalanced workload hinder cross-professional coordination, leading some units to experience decreased work effectiveness, consistent with the theory of Reeves et al. (2010). A hierarchical organizational culture and the egos of certain professions hinder harmonious working relationships, as decisions and communication often dominate at the leadership level and involve fewer implementing staff. Implemented management strategies, such as In-House Training (IHT) for Excellent Communication, coaching, and reward systems, are still not evenly distributed across units, resulting in suboptimal collaborative practices, as noted by Orchard et al. (2012).

Collaborative leadership in hospitals, through regular communication forums and coaching, provides a good foundation, but the gap between strategic management policies and operational implementation needs to be addressed to strengthen collaboration (CIHC, 2010). This research finding also reinforces the concept of the Collaborative Competency Framework (Barr et al., 2013), which states that effective collaboration requires mastery of competencies in five key domains:

1. Role Clarification

Role clarification is the ability of professionals to understand, explain, and appreciate the roles and responsibilities of their own profession and those of other professionals within the healthcare team (CIHC, 2010). Role clarity allows each team member to work within their respective areas without overlap, thus building trust and effective collaboration (D'Amour & Oandasan, 2005). Role ambiguity in hospitals can lead to conflict or delays in decision-making, especially in emergency situations, which reduces the effectiveness of care.

At Arafah Anwar Medika Hospital, medical personnel generally understand their roles, but overlapping and confusion about responsibilities still occur during peak service times or staff turnover. Inter-unit coordination is sometimes disrupted by a lack of understanding of the functions or limitations of other units, highlighting the need for formal collaborative guidelines. A management strategy such as developing cross-unit SOPs can clarify the division of roles and responsibilities, in accordance with D'Amour & Oandasan's (2005) formalization dimension, thereby strengthening accountability and collaboration between professionals.

2. Interprofessional Communication

Interprofessional communication is the ability to exchange information, ideas, and perspectives effectively and respectfully between team members from different professions (Barr et al., 2013).

Effective communication is the foundation of interprofessional collaboration because it helps prevent miscommunication, improves coordination, and strengthens trust among healthcare workers, thus impacting patient safety (McDonald, Jayasuriya, & Harris, 2018).

In practice, communication includes verbal communication, documentation, the use of digital media, and the provision of constructive feedback, ensuring a complete and accurate flow of information between professions. At Arafah Anwar Medika Hospital, communication is a prominent competency; all informants agreed that communication is key to successful collaboration, fostered through interprofessional meetings, WhatsApp groups, daily briefings, and In-House Training (IHT) for Excellent Communication.

However, there are still differences in perceptions and miscommunication between units due to differences in professional backgrounds, high workloads, and inconsistent communication styles, necessitating regular strengthening of interprofessional communication training. These findings support research by McDonald et al. (2018) that effective interprofessional communication directly contributes to improved clinical outcomes and service efficiency, underscoring the importance of management strategies for sustainable human resource development.

### 3. Team Functioning

Team functioning is the ability of team members to work cooperatively to achieve common goals by ensuring task coordination, mutual support, and maintaining harmonious interprofessional relationships (Reeves et al., 2010). Effective teams are characterized by a clear work structure, proportional role allocation, and regular communication mechanisms. Mutual trust and shared responsibility for service outcomes are the foundations of team functioning (CIHC, 2010).

In hospitals, the implementation of team functioning is reflected in cross-professional coordination, both through formal meetings and online communication groups, which enable team members to support each other and maintain shared service goals.

At Arafah Anwar Medika Hospital, several units, such as the Emergency Department, Radiology, and Outpatient Units, have demonstrated positive team functioning, with rapid coordination and support among team members, indicating the effective implementation of team functioning principles.

However, some units still face challenges in maintaining team function due to limited human resources, differing work schedules, and a lack of formal team-building activities, which reduce the effectiveness of collaboration.

Management strategies need to emphasize strengthening team function through cross-professional training, joint recreational activities, and work reflection forums involving all team members, in line with the principle of shared goals and vision (D'Amour & Oandasan, 2005), which emphasizes shared goals and a shared commitment to patient care.

### 4. Collaborative Leadership

Collaborative leadership is the ability to lead collectively by emphasizing cooperation, shared responsibility, and open communication (Orchard, Curran, & Kabene, 2012). At Arafah Anwar Medika Hospital, management has implemented participatory leadership by involving medical personnel in cross-professional forums and encouraging two-way communication, reflecting a facilitative, collaborative leadership style (CIHC, 2010). However, implementation is not uniform across all units, as some still maintain a hierarchical structure. Therefore, management strategies need to emphasize collaborative leadership training for unit heads to achieve alignment of leadership styles across the organization. Collaborative leadership also supports the governance dimension in D'Amour & Oandasan's (2005) theory, increasing team effectiveness and job satisfaction between professions.

5. Conflict Resolution

Conflict resolution is the ability of healthcare workers to recognize, manage, and resolve conflict constructively to maintain positive working relationships (Barr et al., 2013). At Arafah Anwar Medika Hospital, major conflicts are rare, but minor frictions resulting from differing perceptions, professional egos, or miscommunication still occur, and these are generally resolved informally through direct communication or mediation by the unit head. To improve the effectiveness of collaboration, management needs to establish formal mechanisms such as internal mediation forums, conflict management training, or interprofessional counseling to ensure conflict is handled professionally. This strategy not only strengthens working relationships but also creates a healthy organizational climate, in line with the theory of interprofessional collaboration. It also emphasizes the need for strengthened role clarification, cross-professional communication, and collaborative leadership to ensure optimal collaboration across all dimensions.

Management Strategy

SWOT Analysis of Medical Personnel Collaboration

Table 1. Strengths, Weaknesses, Opportunities, and Threats (SWOT)

Aspects	Key Factors	Field Findings/Evidence
Strengths	<ol style="list-style-type: none"> <li>Active cross-professional coordination forum (meetings, online groups, briefings).</li> <li>Excellent communication training programs and regular IHT (Interprofessional Health Training).</li> <li>Open and participatory management leadership.</li> <li>A patient-oriented culture is emerging in several units.</li> <li>A shared commitment to maintaining service quality.</li> </ol>	Coordination and communication between professions have been conducted routinely through online groups and cross-professional meetings.
Weaknesses	<ol style="list-style-type: none"> <li>Keterbatasan SDM di unit tertentu</li> <li>Komunikasi antar profesi belum seragam.</li> <li>Ego profesi dan pengaruh hierarki masih terasa.</li> <li>Pelatihan lintas profesi belum merata di seluruh unit.</li> <li>Rekrutmen tenaga baru belum sesuai kompetensi.</li> </ol>	Several respondents stated that workloads are unbalanced and communication between units is sometimes ineffective.
Opportunities	<ol style="list-style-type: none"> <li>Support for Ministry of Health regulations regarding interprofessional collaboration.</li> <li>Enthusiasm among medical personnel for training and competency development.</li> <li>Utilization of digital technology for rapid coordination.</li> <li>Potential for external collaboration with educational institutions.</li> <li>Patient-oriented values aligned with the hospital's vision.</li> </ol>	National regulations and programs support strengthening interprofessional collaboration, opening opportunities for innovation in internal communication systems.

Aspects	Key Factors	Field Findings/Evidence
Threats	<ol style="list-style-type: none"> <li>1. A hierarchical organizational culture.</li> <li>2. Limited recruitment of new experts with appropriate competencies.</li> <li>3. High workloads hinder coordination.</li> <li>4. Differences in perception and individual egos between professions.</li> <li>5. Potential decline in service quality if miscommunication is not resolved.</li> </ol>	Several informants considered the dominance of certain professions and time constraints to be factors hindering effective teamwork.

Based on interviews, Arafah Anwar Medika Hospital's main strengths lie in its formal coordination system and employee professionalism. However, its main weaknesses are miscommunication and professional ego. Opportunities for improvement emerged from employee suggestions for team building and cross-unit rotation. Meanwhile, threats stem from the organization's hierarchical culture.

### Management Strategy Formulation (TOWS)

Table 2. TOWS

Strategy Combination	Strategy Formulation	Recommended Implementation
SO (Strength–Opportunity)	Leveraging internal strengths to seize external opportunities.	<ol style="list-style-type: none"> <li>1. Integrating excellent communication training with cross-professional team building activities.</li> <li>2. Utilizing digital platforms to strengthen coordination between units.</li> <li>3. Developing patient-oriented interprofessional training.</li> <li>4. Strengthening a culture of two-way communication and team-based recognition.</li> </ol>
WO (Weakness–Opportunity)	Overcoming internal weaknesses by capitalizing on external opportunities.	<ol style="list-style-type: none"> <li>1. Conduct regular cross-professional training to align perceptions.</li> <li>2. Rotate between units to ensure equal distribution of human resources.</li> <li>3. Establish a cross-professional aspiration forum.</li> <li>4. Develop external collaboration with educational institutions.</li> </ol>
ST (Strength–Threat)	Leveraging internal strengths to overcome external threats.	<ol style="list-style-type: none"> <li>1. Increase the implementation of collaborative leadership across all units.</li> <li>2. Encourage two-way communication to reduce conflict.</li> <li>3. Strengthen team-based reward systems.</li> <li>4. Optimize cross-professional forums for problem solving.</li> </ol>
WT (Weakness–Threat)	Minimizing weaknesses and avoiding threats.	<ol style="list-style-type: none"> <li>1. Establish an internal mediation unit to handle conflicts.</li> <li>2. Evaluate the medical personnel recruitment system.</li> <li>3. Develop a code of ethics for interprofessional collaboration.</li> <li>4. Conduct regular supervision and evaluation of the effectiveness of collaboration.</li> </ol>

The SWOT-TOWS mapping results indicate that collaboration among medical personnel at Arafah Anwar Medika Hospital is at the stage of strengthening a collaborative culture and consolidating a cross-professional management system, where internal and external factors mutually influence the effectiveness of collaboration. The hospital's internal strengths analysis highlights a strong communication culture, open leadership, and a commitment to service quality through regular coordination forums and communication training such as the IHT. This aligns with the theory of interprofessional collaboration (CIHC, 2010) and the view of Wheelen & Hunger (2018) regarding organizational strength as strategic capital.

However, internal weaknesses remain a challenge, particularly limited human resources in the ICU and Lotus units, which create an imbalanced workload, and a dominant hierarchical culture that hinders two-way communication. This is consistent with David & David's (2017) observation that internal weaknesses can reduce strategic effectiveness if not balanced with equitable coaching and training. This situation emphasizes the need for a shared understanding between professions and a better distribution of human resources.

Externally, hospitals have significant opportunities to strengthen interprofessional collaboration through the support of Indonesian Ministry of Health policies (Ministry of Health Regulations No. 3 of 2020 and No. 11 of 2025) and advances in information technology, which can be utilized for cross-professional training, communication forums, and interpersonal communication competency development. Rangkuti (2015) emphasized that external opportunities must be integrated with internal strengths to strengthen the organization's strategic position, allowing Arafah Anwar Medika Hospital to expand its communication programs and health education partnership network.

External threats to be aware of include a hierarchical organizational culture, high professional egos, limited access to new experts, and high workloads, which can reduce coordination and job satisfaction. David & David (2017) suggested that threats must be responded to through defensive strategies to maintain operational stability and effectiveness. This demonstrates the need for an adaptive system through collaborative leadership and interprofessional conflict resolution mechanisms.

The TOWS analysis identified four main strategies: SO strategies leverage internal strengths to address external opportunities, such as integrating excellent communication training with team-building activities; WO strategies address internal weaknesses by capitalizing on opportunities, such as periodic cross-professional training to reduce miscommunication and professional egos; ST strategies leverage internal strengths to address external threats, such as open leadership to counter a hierarchical culture; and WT strategies are defensive, such as establishing an internal mediation unit and evaluating recruitment systems. This approach aligns with Wheelen & Hunger's (2018) principle that the TOWS matrix helps organizations convert weaknesses into strengths and anticipate threats through preventative strategies.

In conclusion, Arafah Anwar Medika Hospital's strategic position falls within the growth and build strategy category, with sufficient internal strengths to expand collaborative capacity, but still requiring strengthening of its work structure and culture. The proposed strategies include strengthening collaborative human resource capacity through cross-professional training, strengthening collaborative systems and structures through standard operating procedures (SOPs) and a cross-professional code of ethics, and strengthening a collaborative organizational culture through participatory leadership and team-based rewards. This approach is in line with the Collaborative Practice Framework (WHO, 2010) as well as the views of Wheelen & Hunger (2018), David & David (2017), and Rangkuti (2015) regarding the importance of strategic analysis based on actual conditions to build effective and sustainable interprofessional collaboration.

## Operational Strategies Proposed by Medical Personnel

Interview results indicate that medical personnel at Arafah Anwar Medika Hospital proposed operational strategies to improve the effectiveness of interprofessional collaboration, drawing on their diverse professional experiences to provide a comprehensive picture of ideal collaborative practices. Key proposed strategies include team building, cross-professional training, inter-unit rotation, and structured communication forums.

Team building is considered essential for strengthening interpersonal relationships and building trust among medical personnel. Ms. C stated that these activities "make interprofessional relationships more fluid and less rigid." Reeves et al. (2010) emphasize that strong interpersonal relationships are the foundation for effective collaborative work, while CIHC (2010) emphasizes the role of trust, empathy, and team cohesion as collaborative competencies.

Interprofessional training is also an important strategy for aligning perceptions between professionals and correcting miscommunication. Informants stated that this training is necessary "so that everyone can have the same perception of care." The WHO (2010) Framework for Action on Interprofessional Education emphasizes that IPE strengthens role understanding, communication skills, and shared decision-making, while Barr et al. (2013) emphasized role clarification and role conflict reduction.

Inter-unit rotation was proposed to broaden medical personnel's understanding of the conditions and workflows of other units. One informant stated, "Rotation can help medical personnel better understand each other's tasks." Mitchell et al. (2012) explained that rotation increases organizational flexibility and cross-unit coordination, while the D'Amour & Oandasan (2005) model places internalization as the basis for understanding the values, perspectives, and workloads of other professions.

Structured communication forums are also considered essential for maintaining continuity of information between shifts and between units. Ms. C stated, "There must be a communication forum between shifts so that information is not lost." McDonald et al. (2018) emphasized that effective communication reduces clinical errors and improves coordination, while CIHC (2010) places communication forums within the governance dimension as organizational support for collaborative work mechanisms.

The overall proposed operational strategy encompasses three domains: relational through team building, professional competency through cross-professional training, and structural-organizational through inter-unit rotation and communication forums. These three domains are interrelated and align with the Collaborative Practice Framework (WHO, 2010) and D'Amour & Oandasan's (2005) theory of collaborative organization.

Overall, the strategies proposed by healthcare professionals are realistic and aligned with modern concepts of interprofessional collaboration, emphasizing improved technical coordination, strengthening organizational culture, and enhancing interpersonal competencies. Implementing these strategies in management policies has the potential to increase the effectiveness of cross-professional collaboration, thus positively impacting the quality and safety of care.

## Strategy Implementation and Control

The implementation of management strategies to improve collaboration among medical personnel at Arafah Anwar Medika Hospital requires a structured approach through the POAC (Planning, Organizing, Actuating, and Controlling) stages. The strategy's success depends heavily on leadership, organizational structure, and ongoing evaluation mechanisms, in accordance with the principles of collaborative governance in the Interprofessional Collaborative Practice theory (CIHC, 2010).

During the planning stage, management must develop a strategic plan for strengthening collaboration by establishing goals, priorities, and success indicators. Research data demonstrates the need for medical personnel to strengthen cross-professional communication, provide interprofessional training, provide inter-shift communication forums, and provide team-building activities. Wheelen and Hunger (2018) emphasize that strategic planning serves as the organizational foundation for aligning programs with internal needs and external opportunities.

The organizing stage involves establishing a team structure or working committee, such as the Interprofessional Collaboration Committee, or defining the duties of existing committees to facilitate coordination, mediate conflicts, and evaluate strategy implementation. D'Amour and Oandasan (2005)

emphasize that a clear organizational structure supports the governance dimension, creating a conducive environment for collaborative interactions. Organizations also need to develop cross-unit SOPs and appoint shift coordinators as interprofessional liaisons.

The implementation phase (actuating) includes operational activities such as excellent communication training, cross-professional training, team-building activities, inter-unit rotations, and regular communication forums. Reeves et al. (2010) emphasize that collaborative leadership acts as a team facilitator, encouraging openness, managing conflict, and guiding collective decision-making. Implementing this strategy requires synergy between unit heads, DPJPs, nurse coordinators, and the management team as agents of organizational cultural change.

The controlling phase is carried out through routine monitoring, performance evaluations, communication audits, and assessment of collaboration indicator achievements. Indicators that can be used include handover compliance, role clarity, interprofessional satisfaction, the number of miscommunication incidents, and the effectiveness of coordination meetings. Kaplan and Norton (1996) emphasize the Balanced Scorecard as a framework for assessing internal processes and learning and growth. Formal conflict mediation mechanisms are needed to address differences in perception or professional egos (Barr et al., 2013), while feedback and the Continuous Quality Improvement (CQI/PDCA) cycle enable continuous improvement.

Overall, implementing a management strategy to enhance healthcare professional collaboration requires an integration of structural approaches, interpersonal competencies, and organizational culture. The strategy's success is underpinned by consistent monitoring, measurable performance indicators, and collaborative leadership that unites the entire profession, in accordance with the Framework for Action on Interprofessional Education and Collaborative Practice (WHO, 2010), which emphasizes system and policy support as key to sustainable collaborative practice.

### Key Performance Indicators (KPIs) for Healthcare Professional Collaboration

**Table 3.** Key Performance Indicators (KPIs) for Healthcare Professional Collaboration from an Input Perspective (Human Resources and Systems Readiness)

Indicator Code	Indicator Name	Operational Definition	Formula / Calculation Method	Data Source	Frequency	Standard / Target
INP-01	Compliance with excellent communication training	Proportion of medical personnel who have participated in advanced communication training	$(\text{Number of medical personnel who have participated in training} \div \text{total number of medical personnel}) \times 100\%$	Training Attendance List	Quarterly	$\geq 90\%$
INP-02	Ownership of cross-professional communication SOPs	Availability of SOPs for interprofessional communication across all units	Document audit	Unit SOP Document	Semesterly	100% of units have SOPs

**Table 4.** Key Performance Indicators (KPIs) for Medical Personnel Collaboration Process Perspective (Collaboration Implementation)

Indicator Code	Indicator Name	Operational Definition	Formula / Calculation Method	Method	Frequency	Standard / Target
PRO-01	Interprofessional handover compliance	Handover process according to SBAR standards	$\text{Audit} \rightarrow \frac{\text{Number of compliant handovers}}{\text{Total handovers}} \times 100\%$	Observation + Audit	Monthly	$\geq 95\%$
PRO-02	Frequency of interprofessional coordination meetings	Number of formal interprofessional coordination meetings	$\frac{\text{Calculate meetings executed}}{\text{planned}}$	Minutes	Monthly	$\geq 2$ meetings/month
PRO-03	Incidence of interprofessional miscommunication	Incidents caused by miscommunication	Number of recorded incidents	IKP Report	Quarterly	0 major incidents

**Table 5.** Key Performance Indicators (KPIs) for Medical Personnel Collaboration from an Output Perspective (Short-Term Results)

Indicator Code	Indicator Name	Operational Definition	Measurement Method	SNARS Target	Frequency
OUT-01	Interprofessional Conflict Resolution	Interprofessional conflicts that can be resolved through mediation	$\frac{\text{Number of resolved conflicts}}{\text{total conflicts}}$	$\geq 95\%$ complete	Quarterly
OUT-02	Interprofessional Consultation Response Time	Time from consultation request to response	Medical record audit	$\leq 30$ minutes	Monthly

**Table 6.** Key Performance Indicators (KPI) for Medical Personnel Collaboration from an Outcome Perspective (Impact on Patients & Organization)

Indicator Code	Indicator Name	Operational Definition	Method	Target	Frequency
OUTC-01	Clinical incidents related to miscommunication	Patient safety incidents resulting from miscommunication between professionals	IKP + RCA Report	Zero Harm	Quarterly
OUTC-02	Interprofessional satisfaction	Medical personnel satisfaction ratings regarding collaboration and communication	Internal satisfaction survey	$\geq 85\%$ satisfaction	Semesterly

### Planning, Organizing, Actuating, and Controlling (POAC) Collaboration for Medical Personnel

Successful implementation of a collaboration strategy also requires a structured managerial framework. The POAC (Planning, Organizing, Actuating, and Controlling) model is used in this study to illustrate the operational management flow in implementing a strategy to improve collaboration for medical personnel. This framework assists hospitals in developing thorough plans, building supporting organizational

structures, driving program implementation, and conducting ongoing control. Therefore, the presentation of KPIs and POAC diagrams in this sub-chapter serves not only as an evaluation tool but also as a guideline for implementing a collaboration management strategy that aligns with collaborative leadership theory, interprofessional collaborative practice (IPC), and the principles of clinical governance recommended by the WHO and CIHC. The combination of KPIs and POAC is expected to provide a comprehensive overview of how collaboration strategies can be consistently implemented, monitored, and improved in the context of healthcare services.

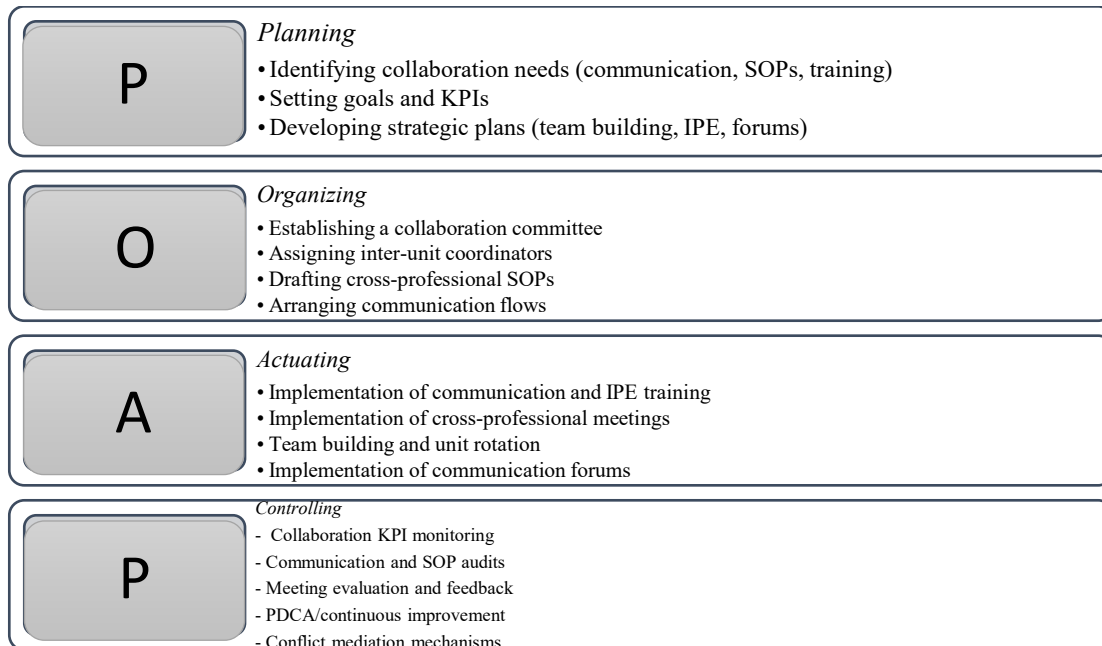


Diagram 1. POAC

### Relation of Findings to Research Objectives

The findings of this study align with the research objectives in Chapter I, as evidenced by four major themes: collaboration conditions, influencing factors, proposed strategies, and mechanisms for implementing and controlling management strategies.

First, the objective of describing the conditions of collaboration among medical personnel at Arafah Anwar Medika Hospital was achieved. The results indicate that collaboration is ongoing but not yet optimal, with communication as the dominant component, while role clarity, cross-professional coordination, and SOP compliance remain variable. These findings align with Interprofessional Collaborative Practice (WHO, 2010), which emphasizes open communication, role clarity, and mutually respectful relationships.

Second, the objective of identifying factors influencing collaboration effectiveness was addressed through these factors, including individual factors (professional ego, communication style, motivation), organizational factors (hierarchical culture, coordination structure, workload, human resource availability), and systems (cross-professional SOPs, consultation mechanisms, reporting systems). These findings align with the theory of D'Amour & Oandasan (2005), which emphasizes the dimensions of governance, formalization, and interactional factors. Triangulation revealed that the main obstacles were miscommunication, imbalanced human resources, and differing perceptions among medical personnel.

Third, the objective of analyzing management strategies to improve collaboration was achieved through proposed strategies including cross-professional communication training, team building activities, structured communication forums, staff rotation, and strengthening cross-unit SOPs. The SWOT-TOWS analysis integrated empirical findings with Wheelen & Hunger's (2018) strategic management theory,

resulting in SO, WO, ST, and WT strategies that strengthen human resources, organizational culture, communication structures, and conflict resolution mechanisms.

Fourth, the objective of formulating the implementation and control of management strategies was achieved through the application of the POAC (Planning–Organizing–Actuating–Controlling) approach, which encompassed collaboration program planning, organizing supporting structures, implementing training and communication forums, and controlling through communication audits, KPI monitoring, and conflict mediation mechanisms. PMKP–SNARS-based KPIs were used to evaluate collaboration measurably and continuously.

Overall, this study demonstrates that collaboration among medical personnel is a multidimensional construct that requires integrated managerial strategies, collaborative leadership, and a continuous evaluation system. The research provides theoretical contributions through collaboration mapping based on IPC theory and practical contributions in the form of strategic recommendations that can be directly implemented by Arafah Anwar Medika Hospital.

#### 4. Conclusion

This study aims to analyze management strategies for improving the collaboration capabilities of medical personnel at Arafah Anwar Medika Hospital using a qualitative approach. The results indicate that collaboration among medical personnel has occurred through various mechanisms, such as online communication, cross-unit meetings, direct coordination, and the implementation of mutually supportive services. However, the effectiveness of this collaboration has been uneven due to limited human resources, high workloads, and imbalanced involvement between professions. Medical personnel's understanding of the importance of collaboration for patient safety is relatively good, providing the initial capital for strengthening a collaborative culture in the hospital. The study identified several factors influencing the effectiveness of collaboration, including the quality of interprofessional communication, role clarity, team function, collaborative leadership, and conflict resolution mechanisms. Structural factors such as organizational hierarchy, professional egos, lack of cross-professional training, and mismatched competencies of new human resources also impact smooth collaboration. These barriers demonstrate the need for a comprehensive and consistent management approach for effective collaboration.

Management strategies deemed effective by medical personnel include excellent communication training, In-House Training (IHT), strengthening cross-professional coordination forums, establishing consultation and coaching mechanisms, and developing team-building activities. The SWOT–TOWS analysis confirms that the optimal strategy combines internal strengths, such as active communication and open leadership, with external opportunities in the form of Ministry of Health regulations and advances in digital technology. This strategy also needs to address weaknesses and threats through cross-professional training, employee rotation, the development of collaborative SOPs, and the establishment of a conflict mediation unit to sustainably improve collaboration effectiveness. The implementation and control of the strategy require a structured framework through POAC (Planning, Organizing, Actuating, Controlling). The strategic plan must establish performance indicators (KPIs) related to collaboration, such as the effectiveness of cross-professional communication, speed of coordination, the number of inter-unit conflicts, and medical staff satisfaction. Organization is achieved through the formation of collaboration teams or committees, the appointment of shift coordinators, and the development of cross-unit SOPs. Strategy implementation includes training, regular communication forums, team building, and unit rotation, supported by collaborative leadership. Control is carried out through communication audits, performance reflection forums, an inter-professional problem reporting system, and a formal conflict mediation

mechanism. This ongoing evaluation is aligned with the PMKP–SNARS standards so that the collaboration strategy can be implemented systematically and integrated with the hospital's quality system.

Overall, this study successfully answered all the research objectives formulated in Chapter I. The findings demonstrate the conditions of medical personnel collaboration, the factors that influence it, relevant management strategies, and operational implementation and control mechanisms. Thus, this study provides an empirical basis for the development of collaborative management strategies at Arafah Anwar Medika Hospital in a sustainable manner, in line with the principles of modern interprofessional collaboration and strategic management practices.

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