

Communication Challenges Encountered by Radiologic Technologists in Selected Hospitals in Laguna

¹Elisha Jerrea Deladia, ²Gabriel G. Amoyan, ³Christian Samuel D. Baterisna, ⁴Ernalyn C. Porlage

Calamba Doctors' College

¹edeladia@calambadoctorscollege.edu.ph, ²gabrielamoyan@calambadoctorscollege.edu.ph,

³cbaterisna@calambadoctorscollege.edu.ph, ⁴ernalyn@calambadoctorscollege.edu.ph

Article Details:

Received: 14 May 2026

Revised: 30 May 2026

Accepted: 9 June 2026

Published: 30 June 2026

Corresponding Email:

edeladia@calambadoctorscollege.edu.ph

Recommended Citation:

Deladia, E. J., Amoyan, G. G., Baterisna, C. S. D., Porlage, E. C. (2026). Communication Challenges Encountered by Radiologic Technologists in Selected Hospitals in Laguna. The International Review of Multidisciplinary Research. 1 (7), 124-133. <https://doi.org/10.67167/vertex.504>

Index Terms:

radiologic technologists, communication, perceived challenges, radiology department, patient care, interprofessional communication, laguna hospitals

Abstract. This study identified the perceived communication challenges encountered by radiologic technologists in selected hospitals in Laguna. Utilizing a quantitative descriptive research design and a purposive non-probability sampling technique, data were gathered from sixty-one (61) licensed professionals through a validated survey questionnaire. The demographic profile of the participants was evaluated based on age, sex, years of experience, and area of practice. Perceived communication challenges were categorized across three domains: technologist-to-patient, technologist-to-radiology personnel, and technologist-to-non-radiology personnel communication. Weighted mean served as the primary statistical tool. The findings revealed that the overall level of perceived communication challenges across all three domains was interpreted as a Moderate Challenge. Specific communication barriers were most prevalent in high-pressure clinical environments. Challenges reached peak intensity when technologists were forced to navigate severe time constraints and manage interactions with emotionally volatile or high-tempered individuals, both within and outside the radiology department. The study results strongly suggest that environmental stressors and emotional volatility serve as the primary structural disruptors of effective, precise information exchange in clinical imaging settings. Consequently, a data-driven action plan was developed to mitigate these barriers. This proposed framework introduces standardized communication protocols, such as targeted Situation-Background-Assessment-Recommendation (SBAR) training, and institutional interprofessional workshops. Implementing these strategic interventions aims to minimize potential medical errors caused by communication breakdowns, optimize workflow efficiency, and elevate the overall safety and quality of patient care within the healthcare facilities of Laguna.

Introduction

Fostering effective communication is fundamental to high-quality healthcare. Effective communication between healthcare workers and patients is essential, as it fosters trust, improves patient satisfaction, enhances patient safety, optimizes workflow efficiency, and ultimately enhances the overall quality of care. In the healthcare setting, the care providers need to maintain and improve the exchanges of information precisely, accurately, and respectfully with patients and other healthcare workers within the healthcare system to provide the highest quality of care. Within the context of radiologic technology, communication plays a vital role in maintaining trust, workflow efficiency, and improving patient safety. Radiologic technologists carry the responsibility to provide high-quality care while having to carry out technical radiographic procedures that need proper communication with patients, fellow Technologists, and other healthcare workers.

Van and Engelbrecht (2021) stated that even in modern, and equipped with advanced systems, failure in communication may still take place. Similarly, Obayda (2023) stated that most radiologic technologists posited that proper and effective

communication is important; however, he further stated that discrepancies happen in what the Technologists report and how the patient perceives the information.

Given these insights, the study describes the specific communication challenges encountered by radiologic technology professionals in selected hospitals in Laguna. The study also examined the demographic profile of the radiologic technologists, including age, sex, years of experience, and area of practice. The present study investigates the challenges in three domains: (1) technologist-patient communication, (2) technologists-radiology personnel communication, and (3) technologist-non-radiology personnel communication. In line with this, Beardmore (2024) suggests that communication challenges must be described in context before strategies or interventions can be developed—an approach that this study adopts.

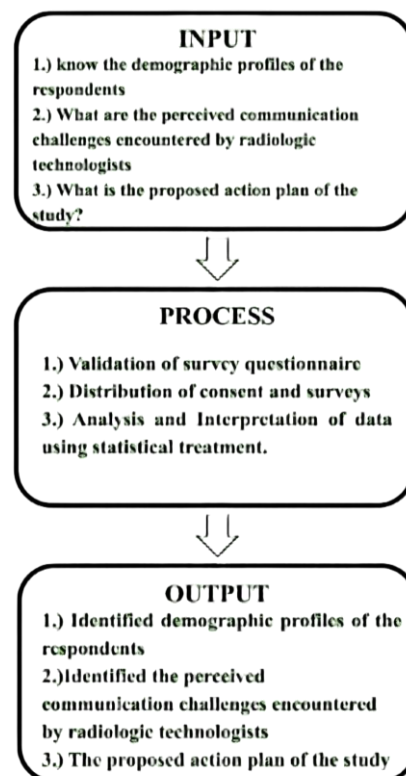


Figure 1.0. The Conceptual Foundation

The conceptual foundation of this study followed a systematic progression that began with the identification of core variables related to the professional environment of radiologic technologists in Laguna. The first stage of the study focused on gathering demographic profiles of the professionals who participated, which included their age, sex, years of experience, and area of practice. These personal and professional factors served as the baseline for understanding the broader context of the communication challenges encountered within the healthcare setting. Alongside this, the researchers had determined the perceived communication challenges across Technologists-patient communication, Technologists-radiology personnel communication, and Technologists-non-radiology personnel communication.

These components were then subjected to a validation and statistical analysis to produce three important outcomes. The analysis first resulted in a comprehensive baseline assessment of the current radiologic workforce in Laguna, highlighting the dominance of early and young professionals. This was followed by the clear identification of the most prevalent barriers in communication, specifically pinpointing time constraints and emotional volatility as major disruptors in communication. Finally, these findings culminated in the development of a structured action plan, which introduced standardized protocols in communication and interprofessional workshops designed to bridge existing gaps and elevate the quality of patient care.

Research Questions

The study sought to determine the perceived communication challenges encountered by Radiologic Technology professionals in selected hospitals in Laguna and answered the following questions:

Specific Problem/s:

1. What are the demographic profile of radiologic technologists in selected hospitals in Laguna, in terms of:
 - 1.1 Age
 - 1.2 Sex
 - 1.3 Years of Experience
 - 1.4 Area of Practice
2. What are the perceived communication challenges encountered by radiologic technologists in Selected Hospitals in Laguna, in terms of:
 - 2.1 technologists-patient
 - 2.2 technologists-radiology personnel
 - 2.3 technologists-non-radiology personnel
3. What action plan may be proposed based on the findings of the study?

Methodology

Research Locale

City/Locale	Available Population	Actual Respondents	%
San Pedro	19	16	26.23%
Biñan	14	12	19.67%
Santa Rosa	12	10	16.39%
Calamba	27	23	37.71%
Total	72	61	100%

Table 1. Distribution of Respondents by Locale

Respondents of the Study

The participants in this study were sixty-one (61) licensed radiologic technologists who are currently employed in the cities of-San Pedro, Biñan, Santa Rosa, and Calamba, Laguna. The participants are selected as primary respondents because they are licensed to perform diagnostic procedures and must maintain ongoing interactions with patients, radiology personnel (radiologists, fellow technologists, and radiology nurses), and non-radiology personnel (referring physicians, nurses, transporters, etc.). The researchers employed purposive non-probability sampling to ensure that participants had the requisite clinical experience to provide precise insights into the study's objectives. To determine the appropriate sample size from the total population of seventy-two (72) professionals, the researchers utilized the Raosoft online sample size calculator, applying a five (5) percent margin of error and ninety-five (95) percent confidence level.

The inclusion criteria required that participants must be a radiologic technologist licensed by the Professional Regulation Commission (PRC) with at least six months of clinical experience, and active engagement in diagnostic imaging examinations at the time of the study. Nevertheless, technologists assigned to administrative roles and those on leave are excluded from completing the questionnaire. Ethical considerations were maintained throughout the process; the respondents were fully informed of the study's purpose and provided with voluntary written consent before starting the survey. To protect the respondents and the hospital, no personal information was collected, nor was the hospital's name. Anonymity and confidentiality were guaranteed; therefore, all the gathered data were used strictly for academic and research purposes only.

Sampling procedure

The study employed purposive non-probability sampling. The non-probability sampling method was chosen because the researcher required the deliberate selection of Radiologic Technologists with specific clinical expertise and professional qualifications. Only those with the standard qualifications, such as having at least six months of experience and clinical exposure in diagnostic imaging, were considered appropriate to provide credible insights into the communication challenges encountered in their professional practice. Furthermore, Bolderston and Sanders (2024) demonstrated that purposive sampling is effective in gathering in-depth insights from radiographers regarding their experiences with patient communication in high-pressure medical settings.

Research Instrument

The primary tool utilized for data collection in this study was a researcher-structured survey questionnaire design to identify the specific communication challenges encountered by Radiologic Technology professionals in selected hospitals in Laguna. The instrument is divided into two major components to provide a comprehensive analysis of the data. Part I consists of the demographic profile of the respondents, such as age, sex, years of experience, and area of practice. This method is considered because it recognizes that demographic factors may influence the communication challenges associated with the study outcomes. Part II contains the communication challenges scale, which originally featured thirty (30) items but was subsequently refined to twenty-nine (29). Twenty-nine items were distributed across the three domains, where nine items were dedicated to the technologist-patient. And the ten items each for technologists-to-radiology personnel, and technologists-to-non-radiology personnel communication.

Data Gathering Procedure

The process of data gathering started with the preparation of formal communication and administrative clearances. The researchers first secured a letter to conduct a study, given to the chief cooperating officer of Calamba Doctors' College, the program coordinator, research adviser, and research professor to certify the academic nature of the study. This was followed by the preparation of formal request letters addressed to the chief radiologic technologists of the selected hospitals in Laguna, which were San Pedro, Biñan, Santa Rosa, and Calamba, Laguna. Upon receiving the signed letters and official approvals from these institutions, the researchers coordinated with the department heads to determine the most appropriate schedule for distributing the survey questionnaires to the licensed professionals.

Scoring Procedure

Assigned points	Range of Mean	Categorical response	Verbal Interpretation
4	4.00 - 3.25	Strongly Disagree	Major Challenge
3	3.24 - 2.50	Disagree	Minor Challenge
2	2.49 - 1.75	Agree	Moderate Challenge
1	1.00 - 1.74	Strongly Agree	Not a Challenge

Table 2. Level of perceived communication challenges encountered by radiologic technologists in terms of: (technologists-patient, technologists-radiology personnel, technologists-non-radiology personnel communication)

To quantify the responses on the perceived challenges from the participants, a four-point Likert scale was used as the scale of measurement. The scale ranges from 1.00 to 4.00, providing specific verbal interpretations that categorize the intensity of the challenges as (4.00-3.25) considered as a Major Challenge, (3.24-2.50) as Minor Challenge, (2.49-1.75) as Moderate Challenge, and (1.74-1.00) as Not a Challenge.

Statistical Treatment of Data

To address the primary objectives concerning the encountered communication challenges of the professionals across the three identified domains, the Weighted Mean was employed as the central statistical measure. This tool allowed the researchers to calculate the average response for each item, which was then mapped against a four-point Likert scale for verbal interpretation. The resulting means were analyzed to identify which specific scenarios, such as high-tempered individuals or time constraints, presented the highest degree of difficulty for the technologists. Finally, the overall grand mean was computed to determine the general level of communication challenges experienced by the professionals, serving as the empirical basis for the development of the proposed action plan.

Delimitation of the Study

The study is focused to licensed Radiologic Technologists in Laguna—Such as San Pedro, Biñan, Santa Rosa, and Calamba. The study is delimited among three domains of professional communication interaction: technologists-patients, technologists-radiology personnel, and technologists-non-radiology personnel. Certain factors outside the control of the researchers may have affected the results. The findings may be influenced by the honesty and accuracy of participants' survey responses. The total number of respondents was also dependent on their availability and willingness to participate. In addition, time limitations and differences in hospital policies may have influenced the overall outcomes.

Results and Discussion

This chapter presents the data gathered from sixty-one (61) radiologic technologists in selected hospitals in Laguna, followed by a detailed analysis and interpretation based on the study's objectives. The findings systematically evaluate the demographic profiles and the perceived communication challenges encountered in clinical practice to identify specific barriers that disrupt effective information exchange. This analysis serves as the empirical basis for a proposed action plan designed to streamline interprofessional communication and enhance the overall quality of patient care.

Age Group	Frequency (f)	Percentage (%)
22 - 29 years old	39	63.93%
30 - 39 years old	17	27.87%
40 - 49 years old	3	4.92%
50 years old and above	2	3.28%
TOTAL	61	100%

Table 3. Frequency distribution of the Demographic Profile for Respondents' Age

In this study, the largest age group was 22–29 years old (39), 63.93%, followed by 30–39 years old (17), 27.87%, 40–49 years old (3) 4.92%, and 50 years old and above (2), 3.28%, as shown in **Table 3**. It shows the age distribution of study participants of the younger professional workforce, which dominates the radiologic workforce at the selected hospitals in Laguna, because most radiologic professionals belong to this age group. According to Smith and Blank (2023), many healthcare systems globally are experiencing workforce shifts, with younger healthcare professionals entering practice. Similarly, De Guzman and Angcahan (2020) emphasized that evolving professional identity among radiologic technologists may influence confidence and communication engagement. The younger professional workforce may affect the communication dynamics of the workforce, given that they are still building their self-confidence and communication skills. Thus, the age distribution may affect the application of communication strategies to prevent medical errors.

Sex	Frequency (f)	Percentage (%)
Male	33	54.10%
Female	26	42.62%
Prefer not to say	2	3.28%
TOTAL	61	100%

Table 4. Frequency distribution of the Demographic Profile for Respondents' Sex

In this research, the majority of respondents were male (33), 54.10%, followed by female (26), 42.62%, while 3.28% (2) chose to keep their gender identity private, as shown in **Table 4**. The table shows that male radiologic technologists dominated the workforce in the selected hospitals in Laguna. According to Reiner and Chawla (2024), while the radiologic technology profession has seen a historical balance in gender distribution, male professionals often dominate certain specialized interventional and high-pressure clinical roles. Furthermore, Lewis and Robinson (2023) noted that gender diversity within healthcare teams can lead to varied communication styles, which, if properly managed, can enhance patient-centered care and reduce diagnostic misunderstandings. This balance suggests that the communication challenges identified in this study are likely reflective of broader professional experiences rather than being heavily skewed by gender-specific perspectives.

Years of Experience	Frequency (f)	Percentage (%)
0 – 3	26	42.62%
3 – 6	19	31.15%
6 - 9	6	9.84%
9 years and above	10	16.39%
TOTAL	61	100%

Table 5. Frequency distribution of the Demographic Profile for Respondents' Years of Experience

In terms of professional experience, the largest group had 0–3 years of experience (26) 42.62%, followed by 3–6 years (19) 31.15%, 9 years and above (10) 16.39%, and 6–9 years (6) 9.84%, as shown in **Table 5**. Most participants, according to the data, are new professionals in the field. The research study by Aaron and Haynes (2024) shows that radiologic technologists have better professional behavior, communication skills, and patient care with the increase in their experience. Additionally, Rawashdeh et al. (2025) report that the experience of the participants in the field of practice improves the

communication skills of healthcare professionals, which consequently improves patient care. These findings indicate that early-career radiologic technologists would benefit from a mentorship program to reduce the rate of medical errors.

Area of Practice	Frequency (f)	Percentage (%)
Binan	12	19.67%
Calamba	23	37.71%
Santa Rosa	10	16.39%
San Pedro	16	26.23%
TOTAL	61	100%

Table 6. Frequency distribution of the Demographic Profile for Respondents' Area of Practice

This report shows that the largest group of respondents practiced in Calamba (23) 37.71%, followed by Biñan (12) 19.67% and San Pedro (16) 26.23%, while Santa Rosa had the smallest representation (10) 16.39%, in **Table 6**. This variation may be attributed to differences in organizational size and departmental structure. In this research study by Parial et al. (2024), the demand and workforce distribution often differ depending on the size of the hospitals and the level of urbanization. Moreover, Alabdullah and Karwowski (2024) assert that the institutional setting plays a crucial role in the communication culture of the healthcare staff. Hence, the practice area could be the reason for the difference in communication and the efforts to prevent medical errors.

Assigned points	Range of Mean	Categorical response	Verbal Interpretation
4	4.00 - 3.25	Strongly Disagree	Major Challenge
3	3.24 - 2.50	Disagree	Minor Challenge
2	2.49 - 1.75	Agree	Moderate Challenge
1	1.00 - 1.74	Strongly Agree	Not a Challenge

	Indicators	Mean	Interpretation	Rank
1	I am able to maintain effective communication with patients despite a heavy workload.	1.90	Moderate Challenge	9
2	I successfully adapt my communication style to meet the needs of patients with disabilities.	2.18	Moderate Challenge	8
3	I am able to explain radiographic procedures in a clear and age-appropriate manner to pediatric patients.	2.31	Moderate Challenge	5.5
4	I manage to remain calm and professional even when dealing with anxious or uncooperative patients.	2.31	Moderate Challenge	5.5
5	I consistently encourage my patients to ask questions both before and after the procedure.	2.33	Moderate Challenge	7
6	I ensure that communication with patients remains a priority despite time constraints during procedures.	2.51	Moderate Challenge	1.5
7	I maintain clear communication with patients even when handling multiple diagnostic examinations.	2.41	Moderate Challenge	3
8	I am able to stay composed and patient when a patient has difficulty following instructions.	2.24	Moderate Challenge	4
9	I communicate effectively and professionally with patients who exhibit high-tempered behavior.	2.51	Moderate Challenge	1.5
Overall Mean		2.31	Moderate Challenge	

Legend: 4.00-3.25-Major Challenge, 3.24-2.50-Minor Challenge, 2.49-1.75- Moderate Challenge, 1.74-1.00- Not a Challenge

Table 7. Perceived challenges in technologists-patient communication

The communication challenges encountered by radiologic technologists between patients received an overall mean ($M = 2.31$), which is interpreted as Moderate Challenge. This implies a complex, interrelated issue, with the value indicator indicating that the quality of communication is affected by operational, patient-related, and systemic factors, suggesting a direct relationship with patient trust, safety, and imaging results. The highest mean ($M = 2.51$) indicates that time constraints and high-tempered patients are prevalent, with both ranked first, indicating that these are the most widespread challenges among radiologic technologists. This suggests that time constraints and workload heavily affect the communication between technologists and patients. The lowest mean ($M = 1.90$) indicates that, although the heavy workload is marked as last, some still experience communication challenges due to heavy workloads. However, it is the least addressed issue among respondents, indicating that they maintain effective communication between patients, even in a high-pressure workplace. The overall mean received a total ($M = 2.31$), which is interpreted as Moderate Challenge.

The findings reveal that navigating interactions with high-tempered patients or anxious family members requires significant cognitive effort from radiologic technologists. This phenomenon is best understood through the framework of emotional labor—the process wherein professionals must regulate and manage their personal feelings to maintain a calm, reassuring, and professional clinical demeanor despite stressful provocations (Beardmore, 2024). In a high-throughput diagnostic environment, the continuous demand for emotional labor serves as a hidden stressor. If left unaddressed by hospital management through proper psychological support mechanisms, this accumulated situational anxiety can directly contribute to professional burnout, diminished job satisfaction, and ultimately, higher turnover intentions among radiologic technology staff.

Connecting the work of Rockall et al. (2022) with the highest mean, relating to time constraints and high-tempered patients. The study further dives into the significance of communication breakdown as the most critical issue within the field, which can be attributed to the influence of time. According to technologists in the study, this may lead to discomfort for patients, or may not demonstrate the appropriate level of compliance of patients, which could contribute to poorer quality imaging, which has implications for the quality and accuracy of clinical reporting. Creating improved and structured communication training and providing organizational support for all imaging technologists is a way to assist with any time, workloads, or organizational pressures that, in the end, will benefit patient satisfaction and clinical efficiency.

	Assigned points	Range of Mean	Categorical response	Verbal Interpretation
4		4.00 - 3.25	Strongly Disagree	Major Challenge
3		3.24 - 2.50	Disagree	Minor Challenge
2		2.49 - 1.75	Agree	Moderate Challenge
1		1.00 - 1.74	Strongly Agree	Not a Challenge

	Indicators	Mean	Interpretation	Rank
1	I consistently provide precise information to all radiology personnel.	2.38	Moderate Challenge	3
2	I communicate clearly with radiology personnel to avoid gaps in understanding.	2.28	Moderate Challenge	6
3	I maintain effective dialogue with high-tempered colleagues.	2.52	Moderate Challenge	2
4	I proactively clarify information to prevent misunderstandings.	2.34	Moderate Challenge	4
5	I maintain open and effective collaboration with my radiology team.	2.69	Minor Challenge	1
6	I am willing to admit mistakes to ensure diagnostic accuracy.	2.31	Moderate Challenge	5
7	I communicate well with co-technologists despite high patient volume.	2.21	Moderate Challenge	7
8	I coordinate effectively with my team regardless of workload.	2.20	Moderate Challenge	8
9	I am confident in my communication with radiologists.	2.15	Moderate Challenge	9
10	I feel comfortable asking questions to my colleagues and radiologists.	2.11	Moderate Challenge	10
	Overall Mean	2.32	Moderate Challenge	

Legend: 4.00-3.25-Major Challenge, 3.24-2.50-Minor Challenge, 2.49-1.75- Moderate Challenge, 1.74-1.00- Not a Challenge

Table 8. Perceived challenges in technologists-radiology personnel communication

The communication between technologists and radiology personnel had an overall mean ($M = 2.32$), which is interpreted as Moderate Challenge. This indicates that some communication challenges exist in the radiology department, although they occur at a generally low level. The indicator with the highest mean ($M = 2.69$), ranked as number one, involved the difficulty in maintaining open and effective communication when technologists work with radiology personnel. This shows that collaboration is the main concern for respondents, which implies that a lack of coordination and mutual understanding may interfere with the delivery of radiology services. In contrast, the indicator with the lowest mean of ($M = 2.11$), ranked as number ten, involved the difficulty in communication of technologists with other radiology personnel due to the high number of patients. This indicates that patient volume is a less significant communication concern compared to other collaborative challenges in the department. The highest mean ($M = 2.69$), interpreted as challenging, shows that technologists experience challenges maintaining open and effective communication when collaborating with radiology personnel. In line with Pesapane et al. (2024), communication problems can influence the radiologists' ability to arrive at accurate diagnoses as well as the technologists' ability to produce images of high quality. The study identified unclear requisitions, incomplete clinical histories, and ineffective communication between team members as factors that make it harder for technologists to follow imaging protocols correctly. Agrawal (2023) also emphasized that technologists sometimes need to seek additional clarification when instructions are unclear to ensure that imaging procedures are carried out correctly, highlighting moments when communication can be challenging. These findings support the present result, showing that technologists may have trouble in maintaining clear and effective communication when collaborating with radiology personnel.

	Assigned points	Range of Mean	Categorical response	Verbal Interpretation
4		4.00 - 3.25	Strongly Disagree	Major Challenge
3		3.24 - 2.50	Disagree	Minor Challenge
2		2.49 - 1.75	Agree	Moderate Challenge
1		1.00 - 1.74	Strongly Agree	Not a Challenge

	Indicators	Mean	Interpretation	Rank
1	I provide complete and clear information to non-radiology personnel.	2.20	Moderate Challenge	8
2	I maintain professional dialogue with high-tempered staff from other units.	2.36	Moderate Challenge	4
3	I communicate efficiently with non-radiology staff under time pressure.	2.51	Minor Challenge	3
4	I am able to explain radiographic procedures clearly to outside personnel.	2.30	Moderate Challenge	6
5	I maintain effective communication with other units despite a heavy workload.	2.67	Minor Challenge	1
6	I consistently deliver precise information to prevent confusion among staff.	2.57	Minor Challenge	2
7	I initiate communication with non-radiology personnel with confidence.	2.31	Moderate Challenge	5
8	I communicate effectively with outside staff regardless of patient volume.	2.11	Moderate Challenge	9
9	I am willing to admit mistakes to non-radiology staff to ensure patient safety.	2.31	Moderate Challenge	7
10	I feel confident asking necessary questions to personnel outside my department.	2.11	Moderate Challenge	10
	Overall Mean	2.35	Moderate Challenge	

Legend: 4.00-3.25-Major Challenge, 3.24-2.50-Minor Challenge, 2.49-1.75- Moderate Challenge, 1.74-1.00- Not a Challenge

Table 9. Perceived challenges in technologists-non-radiology personnel communication

The communication between technologists and non-radiology personnel received an overall mean ($M = 2.35$), which is interpreted as Moderate Challenge. This implies that when communication occurs, there are persistent challenges that affect interprofessional exchange. The indicator with the highest mean ($M = 2.67$) ranked as number one (1), representing a challenge in communication related to a heavy workload. This indicates that high-pressure environments can affect communication among Radiologic Technologists and other healthcare staff outside radiology. On the other hand, the indicator with the lowest mean ($M = 2.11$), ranked as number ten, is the hesitation to ask questions due to a lack of confidence, suggesting that Radiologic Technologists are more capable of asking questions to non-radiology personnel than keeping up with the logistics of a high-pressure clinical environment. The highest mean indicator, relating to a heavy workload, ranked as the number one (1) challenge among the radiologic technologists. Vicentini et al. (2024) found that inaccurate or unclear messages, lack of feedback, and organizational noise, such as disruptions in workflow and overloaded information, are the major contributing factors to interprofessional communication in healthcare. Similar to this, Akyurt (2021) noted that the workplace and increased workloads can affect radiologic technologists, creating an increase in their stress levels. Elevated stress levels in the workplace result in poor communication skills among technologists due to less patience, less emotional availability, and less interpersonal engagement with patients and colleagues.

Proposed Action Plan for better communication in Radiologic Technology Practice

The researchers focused on the highest-ranked concerns per domain based on the communication challenges encountered by the radiologic technologists in Laguna. The following action plan was developed to ensure that the proposed interventions are data-driven and impactful. The proposed action plan is deliberately designed to address the primary gaps identified by the gathered data in the study, more importantly, focusing on numbers that are ranked as the highest indicators of each domain. By addressing these challenges, the action plan aims to reduce potential errors related to those challenges caused by communication breakdowns. The seminar "Calm Amidst the Storm" is for technologists and patient communication, scheduled for November 8, which is World Radiography Day. A date that all radiologic technologists can remember, which could be held annually. This activity corresponds to the finding that high-tempered patients and time constraints, with a mean ($M = 2.51$), are recognized as the most prevalent challenges. According to Rockall et al. (2022), providing technologists with specialized tools to handle anxious patients under pressure is essential for maintaining image quality and patient safety.

For Technologist-Radiology Personnel Communication, the Team Building & Interprofessional Conference takes place during Philippine National RadTech Week. This addresses the challenge of maintaining open communication during collaboration ($M = 2.69$). As noted by Johnson et al. (2025), fostering strong internal relationships and leadership support is critical for moving away from "siloed" work and toward a more integrated, team-based care model that prevents workflow interruptions. Finally, the SBAR Training addresses the highest-ranked challenge for non-radiology personnel: the heavy workload ($M = 2.67$). By implementing the SBAR (Situation, Background, Assessment, Recommendation) framework, technologists can relay critical information to nurses and physicians from other departments in a concise and structured manner. Overall, these activities are intended to result in reduced errors and a more efficient healthcare environment in the selected hospitals of Laguna.

Conclusion and Recommendations

The study concludes that the workforce of radiologic technologists in the selected hospitals in Laguna is primarily comprised of young, early-career professionals. While this indicates that the workforce is updated technically with modern imaging modalities, it is also suggested that there is a need for an institutional support system. Young professionals are stepping into high-pressure environments that require clinical proficiency with interpersonal maturity essential to navigate clinical stress. In relation to technologists-to-patient communication, the results conclude that the barriers to effective communication are mostly caused by environmental and emotional factors rather than technical challenges. The occurrence of challenges in communicating with patients is most likely due to time constraints and patients who are high-tempered, suggesting that "situational noise", such as an overwhelming number of patients and the resulting stress, is the number one disruptor in communicating effectively with patients. This demonstrates that the quality of care is highly dependent on the ability of the radiologic technologists to maintain emotional regulation and clarity under extreme environmental pressure.

Furthermore, geographical and structural nuances across the selected locales in Laguna warrant consideration. Hospitals located in highly urbanized and densely populated commercial hubs—such as Calamba and Santa Rosa—typically experience significantly higher patient volumes and faster clinical turnover rates compared to smaller facilities in San Pedro and Biñan. The data suggest that these localized differences in institutional scale directly influence communication dynamics; technologists operating in overcrowded apex hospitals face more pronounced time constraints and heavier workloads, which systematically exacerbates interprofessional communication friction and limit the time available for thorough patient interaction. Finally, concerning interprofessional coordination, the study concluded that communication with staff outside the radiology department is the most volatile aspect of clinical practice. Interdepartmental friction results in a systemic gap, such as medical units struggling to align their priorities under stress. Ultimately, the study concludes that the structured information exchange is a critical component of the radiology workflow for diagnostic equipment. Without specific interventions, such as the proposed SBAR training, the efficiency of the healthcare environment remains vulnerable to the pressures of interdepartmental communication breakdowns.

Acknowledgement

The authors would like to thank the colleagues and institutions who provided guidance, feedback, and support throughout the conduct of this research and the preparation of this manuscript. Any remaining errors or omissions are the sole responsibility of the authors.

Funding

This research received no external funding from any public, commercial, or not-for-profit funding agency, and no organization provided financial support for the conduct of the study, authorship, or publication of this article.

Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

References

- Aaron, L., & Haynes, K. W. (2024). Relationship Between Professional Behaviors and Radiologic Technologists' Demographics. <https://pubmed.ncbi.nlm.nih.gov/39079731/>
- Agrawal, A. (2023). *Digital transformation of career landscapes in radiology*. *Frontiers in Radiology*, 3, 1180699. <https://www.frontiersin.org/journals/radiology/articles/10.3389/fradi.2023.1180699/full>
- Arkoudis, N.-A., Karofylakis, E., Moschovaki-Zeiger, O., Prountzos, S., Efthymiou, E., Samonis, G., & Koutserimpas, C. (2024). *Interdepartmental miscommunication regarding radiology: Addressing chronic challenges and exploring solutions*. *World Journal of Radiology*, 16(5), 109–114. <https://doi.org/10.4329/wjr.v16.i5.109>
- Beardmore, C. (2024). *How can effective communication help radiographers meet patients' expectations? Insights into Imaging*, 15(1), Article 18. <https://doi.org/10.1186/s13244-024-01868-5>
- Bolderston, A., & Sanders, L. (2024). Enhancing patient-centred care and cultural safety in medical imaging: The radiographers' experience. *Radiography*, 30(2), 512-518. <https://doi.org/10.1016/j.radi.2024.01.012>
- De Guzman, A., & Angcahan, D. (2020). *In search of the "silent professional identity" of Filipino radiologic technologists during the COVID-19 pandemic*. *Radiography*, 26(4), 318–324. <https://doi.org/10.1016/j.jmir.2020.08.006>
- Johnson, P. L., Miller, S. T., & Davis, R. K. (2025). Breaking the silos: Leadership and interprofessional collaboration in diagnostic departments. *Journal of the American College of Radiology*, 22(2), 145–152. <https://doi.org/10.1016/j.jacr.2024.08.012>
- Van Vuuren, C. J., & Engelbrecht, R. (2021). *Overcoming communication barriers in a multicultural radiography environment: Radiographers' experiences*. *Radiography*, 27(2), e149–e157. <https://doi.org/10.1016/j.radi.2020.10.006>
- Parial, L. L., Inocian, E. P., & Sendir, M. (2024). Healthcare professionals' communication self-efficacy and workplace stress: A cross-sectional study. *Journal of Clinical Nursing*, 33(2), 415-427. <https://doi.org/10.1111/jocn.16892>
- Pesapane, F., Gnocchi, G., Quarrella, C., Sorce, A., Nicosia, L., Mariano, L., Bozzini, A. C., Marinucci, I., Priolo, F., Abbate, F., Carrafiello, G., & Cassano, E. (2024). *Errors in radiology: A standard review*. *Journal of Clinical Medicine*, 13(15), 4306. <https://www.mdpi.com/2077-0383/13/15/4306>
- Rawashdeh, M. A., Lewis, S. J., & Zaitoun, M. (2025). Digital transformation and communication barriers in modern radiology departments: A prospective analysis. *International Journal of Medical Informatics*, 181, 105312. <https://doi.org/10.1016/j.ijmedinf.2024.105312>
- Rockall, A. G., Justich, C., Helbich, T., & Vilgrain, V. (2022). *Patient communication in radiology: Moving up the agenda*. *European Journal of Radiology*, 149, Article 110168. <https://www.sciencedirect.com/science/article/pii/S0720048X2200314X>
- Smith, T., & Blank, B. (2023). *Communication and patient safety in the medical imaging environment*. *Journal of Medical Imaging and Radiation Sciences*, 54(1), 12-18. <https://doi.org/10.1016/j.jmir.2022.11.005>
- Van Vuuren, C. J., & Engelbrecht, R. (2021). *Overcoming communication barriers in a multicultural radiography environment: Radiographers' experiences*. *Radiography*, 27(2), e149–e157. <https://doi.org/10.1016/j.radi.2020.10.006>
- Vicentini, C., Grassi, E., Pavan, A., Nicolin, M., & Moro, M. (2024). *Barriers to the implementation of antimicrobial stewardship in long-term care facilities: A human factors and communication perspective*. *Journal of Antimicrobial Chemotherapy*, 79(8), 1748–1758. <https://academic.oup.com/jac/article/79/8/1748/7693000>

Appendices

No appendices are attached to this study.