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Current Quality Level of Referral Letters and Feedback Reports in the First Health Cluster in Riyadh Health Cluster Primary Healthcare Centers

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Abstract

Background: Effective communication between primary healthcare centers (PHCCs) and referral hospitals is critical for ensuring the continuity and quality of patient care. Referral letters and feedback reports are essential for this communication, yet their quality is often inconsistent, potentially impacting patient outcomes. *Study Aim:* To assess the standard of feedback reports from referral hospitals and the quality of referral letters from PHCCs within the first health cluster in Riyadh. *Methodology:* This cross-sectional study randomly selected 360 referral letters and feedback reports from nine PHCCs in the first health cluster in Riyadh. Systematic sampling was employed to select approximately 55 documents from each center. Each document was evaluated based on 16 key components as per the Quality Assurance Manual of the Ministry of Health, using an author-developed scoring system. *Results:* The study included 360 referral letters and feedback reports, with an average quality score of 13.2 ± 1.5 out of 16. A majority of the documents (253, 70.3%) scored 13 or higher. Key components such as general information and patient file numbers were present in all documents (100%). Vital signs were documented in 351 cases (97.5%), and the reason for referral in 327 cases (90.8%). However, investigation results and current treatment details were included in only 142 (39.4%) and 150 (41.7%) of the documents, respectively. Clear handwriting was observed in 262 reports (72.8%), while 98 (27.2%) had legibility issues. *Conclusion:* The overall quality of referral letters and feedback reports in the first health cluster in Riyadh is relatively high. However, significant gaps were identified in the documentation of investigation results, current treatment details, and clinical examination findings. Addressing these gaps through targeted training, standardized documentation practices, and the adoption of electronic health records can enhance the quality of patient referrals and improve care continuity and outcomes.
Keywords: Referral letters, feedback reports, primary healthcare centers, quality assessment, Saudi Arabia.

BACKGROUND

One of the measures of the caliber of healthcare services is the referral system, a channel of contact between doctors at the three levels of healthcare [1]. Any health system must have effective communication between primary, secondary, and tertiary care to function properly. Referral is the procedure through which one doctor asks another to examine, counsel, or manage a patient [2]. Communication between two doctors with varying backgrounds and specialties is also a crucial learning tool for them both [3]. Patients who have undifferentiated illnesses that may have medical, social, or psychological causes present to general practitioners (GPs). Different general practitioners choose varying percentages of their patients for specialist referral [4]. The need for a diagnosis, treatment, assistance, or guidance may be among the grounds for a referral. Referrals are sometimes made for basic surgical procedures, but other times they are made for more complicated reasons that may involve asking a specialist's opinion to reassure the patient that their symptoms are not cause for concern [5]. The consultant is notified of the need and intent for the referral, the referring physician is informed of the consultant's

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465

findings and recommendations, and a decision regarding continued care is reached jointly [6,7]. A key component of effectively meeting patients' health requirements is the establishment of effective referral mechanisms between various levels of health care delivery [8]. Patients are referred to hospitals from lower levels in order for them to receive complex clinical care. In order to manage patients at the lowest level of care possible, an efficient referral system needs effective communication and coordination between care levels as well as support from higher to lower levels [9]. Although expert recommendations made in the right circumstances improve quality, excessive referral utilization may result in higher costs for healthcare services [10]. A communication breakdown can happen at any point during the referral process if the referring doctor fails to ask the right questions or give enough details. The consultant is not required to respond to the referrer's query, [11-13] omit to inform the referring physician of his findings, [4, 7] and make recommendations that may be ambiguous or even unsuitable [13, 14].

The availability of secondary care varies greatly between nations. Patients can refer themselves to secondary care in the US. Referrals to secondary care, however, are generally under the control of general practitioners in nations like Denmark, the Netherlands, the United Kingdom, Spain, Iceland, and Norway [15]. Although the majority of the Eastern Mediterranean Region (EMR) nations are dedicated to enhancing Family practice, implementation is patchy and uneven. In terms of political commitment, patient registration, essential health care packages, essential medicine lists, referral mechanisms, and employees, a status evaluation of Family practice indicated severe inadequacies. The lack of Primary Health Care doctors with the necessary training and the incapacity of the current training programs to meet the massive demands are two other major problems [16]. In 1988, the referral system from primary healthcare facilities to hospitals was put into place throughout the Kingdom. Two similar studies, AlJarallah in Riyadh 1991, and Al-Alfi in Qassim 2007, 17-18] were done which showed significant deficiencies in necessary components of ideal referral letters such as history, vital signs, investigations, provisional diagnoses, and the legibility of the referral letter and feedback report. This study aims to assess the standard of feedback reports from referral hospitals in the first health cluster in Riyadh and referral letter quality from PHCCs.

Study Aim
To assess the standard of feedback reports from referral hospitals in the first health cluster in Riyadh and referral letter quality from PHCCs.

Study Objectives
1. To provide data on the quality of referral letters from PHCCs and evaluations from referral hospitals in the first health cluster in Riyadh.
2. Compare hospital expertise and stance in relation to the Quality of primary care referral letters.

METHODOLOGY
Study Design
The study was designed as a cross-sectional analysis aimed at evaluating the quality of referral letters and feedback reports within the first health cluster in Riyadh. This design was chosen because it allows for a snapshot of the current standards and practices regarding referral communication between primary healthcare centers (PHCCs) and referral hospitals. The cross-sectional approach is both cost-efficient and well-suited to the study's goals of identifying areas for improvement and benchmarking current performance.

Study Setting
The study was conducted in the first health cluster in Riyadh, which comprises 45 government PHCCs. For this research, nine PHCCs (representing 20% of the total) were randomly selected. The selected centers included Alshifa, Alaziziyah, Al-Uraija, AlMansourah, AlMurabba, Tuwayq, Suwaidi, Eastern Laban, and AlMalaz. These centers were chosen to provide a representative sample of the cluster, ensuring that the findings would be broadly applicable across the region.

Sampling Technique
A systematic sampling technique was employed to select the referral letters and feedback reports. From each of the nine selected PHCCs, approximately 55 documents were chosen, totaling 360 referral letters and feedback reports for the entire study. The PHCCs' referral registers were used as the sampling frame. Every fourth submission in the register was selected to ensure an unbiased and systematic selection process, providing a representative sample of the documents generated over a specific period.

Study Population
The study population comprised referral letters and feedback reports generated by the selected PHCCs. These documents included various pieces of patient information necessary for effective referral and subsequent feedback from referral hospitals. The study focused on documents created within a specific timeframe to ensure that the data collected was current and reflective of existing practices.

Inclusion Criteria
The inclusion criteria for the study were clearly defined. All referral letters and feedback reports that contained the essential patient information as outlined by the Quality Assurance Manual of the Ministry of Health were included. This information included general patient details, medical history, examination findings, investigation results, provisional diagnosis, current treatment, reason for referral, and administrative details

such as the patient's file number and the referring physician's signature.

Exclusion Criteria

Referral letters and feedback reports that did not meet the essential criteria specified by the Quality Assurance Manual were excluded from the study. Additionally, documents from PHCCs outside the first health cluster in Riyadh were not considered. Any incomplete records that lacked significant portions of the required data were also excluded to maintain the integrity and consistency of the analysis.

Data Collection Tool

The data collection tool was a checklist developed based on the Quality Assurance Manual of the Ministry of Health. This checklist was used to evaluate the presence of 16 key components in each referral letter and feedback report. The tool was designed to facilitate a thorough and standardized assessment of each document, ensuring that all relevant aspects of referral quality were considered.

Data Collection Plan

Data collection was conducted in a systematic manner over a defined period. The referral registers from the selected PHCCs were reviewed, and every fourth referral letter and feedback report was chosen for analysis. A pilot study was conducted on 10% of the sample to test the clarity and reliability of the data collection tool. The pilot study results were used to refine the checklist and ensure that it accurately captured all necessary information. Data collectors were trained to use the tool consistently, and their work was monitored to maintain quality control throughout the data collection process.

Data Management Plan

Data management involved the careful recording and storage of collected data to ensure accuracy and confidentiality. Each referral letter and feedback report was assigned a unique identifier to facilitate tracking and analysis. Data were entered into a secure database, with regular backups performed to prevent data loss. Only authorized members of the research team had access to the data, and all personal information was anonymized to protect patient confidentiality.

Statistical Analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 26. Descriptive statistics were used to summarize the frequencies and percentages of the key components in the referral letters and feedback reports. The overall quality of each document was scored based on the presence of the 16 key components, with each component given a score of one if present. The total score for each document ranged from 0 to 16.

Ethical Considerations

Ethical considerations were paramount throughout the study. Ethical approval was obtained from the Regional Ethics Committee before data collection commenced. All personal data and patient information were kept confidential, with access restricted to members of the research team. Informed consent was obtained from the directors of the PHCCs, and the study adhered to all ethical guidelines for research involving human subjects. The anonymity of patients and healthcare providers was preserved in all reports and publications resulting from the study.

RESULTS

The study included a total of 360 referral letters and feedback reports from six primary healthcare centers (PHCCs) in the first health cluster in Riyadh. Each referral letter and feedback report was evaluated based on the presence of 16 key components as specified in the Quality Assurance Manual of the Ministry of Health.

Table 1 presents the frequencies of the key components included in the referral letters and feedback reports. All documents (100%) contained general information about the patient, ensuring a complete demographic and clinical profile. The chief complaint was documented in 273 cases (75.8%), leaving 87 (24.2%) without this critical information. Relevant medical history was included in 322 reports (89.4%), while 38 (10.6%) were lacking this detail. Vital signs were recorded in 351 instances (97.5%), showing a high compliance rate, whereas 9 reports (2.5%) did not include this information.

Clinical examination results were documented in half of the reports (180, 50%), with the other half missing this crucial component. The results of investigations were present in 142 reports (39.4%), indicating that 218 (60.6%) did not provide this data. Provisional diagnoses were stated in 333 reports (92.5%), leaving 27 (7.5%) without. Current treatment details were included in 150 reports (41.7%), while the majority (210, 58.3%) did not mention the treatment being administered.

The specialty of the referring physician was almost universally noted, with 359 reports (99.7%) including this information. The reason for referral was documented in 327 cases (90.8%), but absent in 33 (9.2%). Patient file numbers were included in all reports (100%). The name of the PHC was present in 275 reports (76.4%), while 85 (23.6%) omitted this detail. The type of referral was specified in 357 cases (99.2%), leaving only 3 reports (0.8%) without this classification. The date of referral was mentioned in 356 reports (98.9%), with 4 (1.1%) missing it. Clear handwriting was observed in 262 reports (72.8%), whereas 98 (27.2%) were difficult to read. The name and signature of the referring physician were present in 331 reports (91.9%), missing in 29 (8.1%).

Figure 1 visually represents the inclusion of key components in the referral letters and feedback reports.

In terms of overall quality, the average score for the referral letters and feedback reports was 13.2 out of a possible 16, with a standard deviation of 1.5. Scores ranged from 7 to 16. As shown in **Table 2**, a significant majority of the documents (253, 70.3%) scored 13 or higher, indicating a high level of completeness and quality. However, 107 reports (29.7%) scored below 13, reflecting areas needing improvement.

Table 1: Key components of referral letters and feedback reports (n=360)

| Item	Done	Not done
General information	360 (100%)	0 (0%)
Chief complaint	273 (75.8%)	87 (24.2%)
Relevant history	322 (89.4%)	38 (10.6%)
Vital signs	351 (97.5%)	9 (2.5%)
Results of clinical examination	180 (50%)	180 (50%)
Result of investigations	142 (39.4%)	218 (60.6%)
Provisional diagnosis	333 (92.5%)	27 (7.5%)
Current treatment	150 (41.7%)	210 (58.3%)
Name of speciality	359 (99.7%)	1 (0.3%)
Reason of referral	327 (90.8%)	33 (9.2%)
Patient file number	360 (100%)	0 (0%)
Name of PHC	275 (76.4%)	85 (23.6%)
Type of referral	357 (99.2%)	3 (0.8%)
Date of referral	356 (98.9%)	4 (1.1%)
Clear hand writing	262 (72.8%)	98 (27.2%)
Name of physician and signature	331 (91.9%)	29 (8.1%)
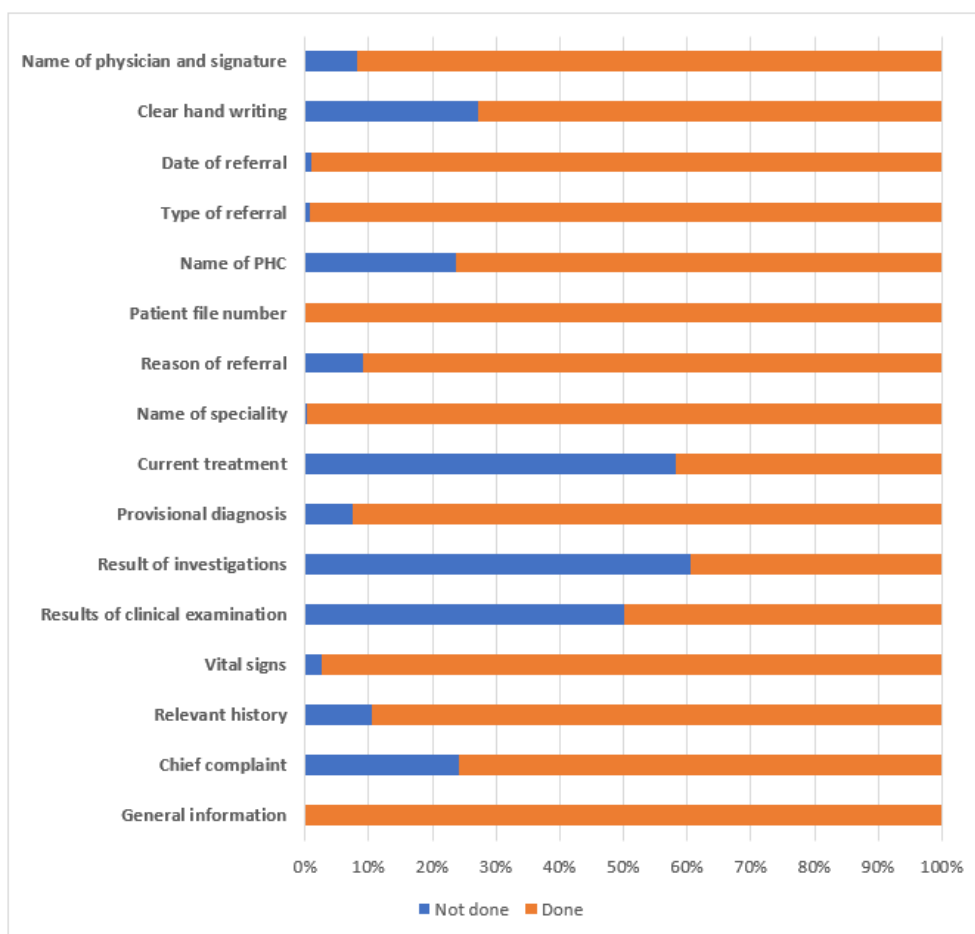
Figure 1: Key components of referral letters and feedback reports

Table 2: Average score and score categories from the doneness of each item.

Item		Mean ± SD / N (%)
Average score	Mean ± SD	13.2 ± 1.5 (7-16)
Score categories	High score (≥13)	253 (70.3%)
	Low score (< 13)	107 (29.7%)

DISCUSSION

Effective communication between primary healthcare centers (PHCCs) and referral hospitals is crucial for the continuity and quality of patient care. Referral letters and feedback reports are fundamental components of this communication process [2]. Referral letters should provide comprehensive patient information, including medical history, examination findings, provisional diagnosis, and reasons for referral, enabling the receiving hospital to deliver appropriate and timely care [1,3,4]. Feedback reports from referral hospitals should, in turn, offer detailed information about the diagnosis, treatment, and follow-up recommendations to guide PHCCs in ongoing patient management. Despite their importance, the quality of these documents is often inconsistent, potentially compromising patient outcomes [2,5].

This study aimed to assess the quality of referral letters from PHCCs and feedback reports from referral hospitals in the first health cluster in Riyadh. We systematically evaluated the presence of 16 key components in these documents to determine their completeness and quality. Our findings provide valuable insights into the current standards of communication within this healthcare cluster and highlight areas needing improvement.

Our analysis revealed that the overall quality of referral letters and feedback reports is relatively high, with an average score of 13.2 out of 16. A significant majority (70.3%) of the documents scored 13 or higher, indicating good compliance with the standards outlined in the Quality Assurance Manual of the Ministry of Health. However, notable deficiencies were observed in certain areas, particularly in the documentation of investigation results (39.4%), current treatment details (41.7%), and clinical examination findings (50%).

The high rate of inclusion for general information (100%), patient file number (100%), and the name of the specialty (99.7%) aligns with previous studies that emphasize the importance of basic demographic and administrative data in referral letters [8,9,18]. These components are fundamental for patient identification and tracking across different healthcare settings. The presence of the referring physician's name and signature in 91.9% of cases further reinforces accountability and traceability, which are critical for patient safety and quality of care [18].

However, the documentation of clinical details such as investigation results, current treatment, and clinical examination findings was notably less consistent. Only 39.4% of referral letters included investigation results, which is lower compared to findings from similar studies conducted in other regions [13,15]. This gap suggests a need for better integration of diagnostic information, which is crucial for informed clinical decision-making at the receiving hospital. Inadequate documentation of current treatment (41.7%) and clinical examination findings (50%) further underscores this issue, potentially leading to suboptimal patient management and delays in treatment [17].

The chief complaint was recorded in 75.8% of the cases, which is consistent with other studies showing variability in this aspect of referral letters. The reason for referral was documented in 90.8% of the letters, a figure that compares favorably with other studies reporting rates ranging from 70% to 90% [18,19]. This high rate of inclusion is encouraging, as it reflects a clear communication of the primary reason for referral, aiding the receiving healthcare provider in prioritizing and addressing the patient's needs promptly [19-21].

The high rate of inclusion of vital signs (97.5%) is a positive finding, as vital signs are critical for assessing the patient's immediate health status and urgency of the referral. This practice is consistent with guidelines recommending the inclusion of vital signs in all referral letters to provide a snapshot of the patient's condition at the time of referral [17].

Conversely, the relatively low inclusion rate for investigation results (39.4%) and current treatment (41.7%) is concerning. These components are essential for the receiving hospital to understand the diagnostic workup that has already been done and the treatments that have been initiated. The absence of this information can lead to redundant testing and delays in care, highlighting a significant area for improvement [19,22].

Clear handwriting was present in 72.8% of the reports, indicating that nearly one-third of the documents had legibility issues. This finding is significant as illegible handwriting can lead to misinterpretation of critical information, potentially compromising patient safety. This issue points to the need for training and possibly transitioning to electronic health records, which can improve legibility and standardization of referral letters [23,24].

One of the study's objectives was to compare hospital expertise and stance in relation to the quality of primary care referral letters. Hospitals generally prefer detailed and structured referral letters that include all relevant clinical information. The high quality of referral

letters observed in this study, as evidenced by the majority achieving a score of 13 or higher, suggests that PHCCs in the first health cluster in Riyadh are generally meeting these expectations. However, the gaps identified, particularly in clinical examination findings and treatment details, indicate areas where further training and standardization could be beneficial [17-19,22].

Recommendations for Improvement

Based on our findings, several recommendations can be made to improve the quality of referral letters and feedback reports. There should be ongoing training for PHCC healthcare providers on the importance of including comprehensive clinical details in referral letters. Workshops and continuous medical education (CME) sessions could be used to emphasize best practices in documentation. The implementation of standardized referral letter templates that prompt for all required information could help ensure that critical components are not omitted. These templates should be integrated into electronic health records (EHR) systems where possible to enhance compliance and ease of use.

Regular audits of referral letters and feedback reports should be conducted, and the results should be shared with healthcare providers. Constructive feedback can help identify common deficiencies and promote improvements over time.

Transitioning to EHR systems could address the issue of illegible handwriting and improve the overall quality and consistency of referral letters. EHR systems can include mandatory fields for key components, reducing the likelihood of missing information.

Encouraging direct communication between referring physicians and specialists at referral hospitals can ensure that any missing information is promptly addressed, and that the patient's care is coordinated effectively.

CONCLUSION

This study provides a comprehensive assessment of the quality of referral letters and feedback reports within the first health cluster in Riyadh. While the overall quality is high, significant gaps in certain clinical details highlight areas needing improvement. Addressing these gaps through targeted training, standardized documentation practices, and the adoption of electronic health records can enhance the quality of patient referrals and ultimately improve patient care outcomes. By fostering a culture of continuous improvement and effective communication between primary and secondary care providers, we can ensure that referral processes support the best possible patient outcomes.

REFERENCES
1. O'Donnell, C. A. (2000). Variation in GP referral rates: what can we learn from the literature?. *Family practice*, *17*(6), 462-471.
2. Hamilton, W. (2010). Cancer diagnosis in primary care. *British Journal of General Practice*, *60*(571), 121-128.
3. Al Amoud, M. (1994). Analysis of poor referral letters. *Saudi medical journal*, *15*(5), 354-357.
4. Lawler, F. H. (1987). Referral rates of senior family practice residents in an ambulatory care clinic. *Academic Medicine*, *62*(3), 177-82.
5. Westerman, R. F., Hull, F. M., Bezemer, P. D., & Gort, G. (1990). A study of communication between general practitioners and specialists. *British Journal of General Practice*, *40*(340), 445-449.
6. Hansen, J. P., Brown, S. E., Sullivan, R. J., & Muhlbaier, L. H. (1982). Factors related to an effective referral and consultation process. *J Fam Pract*, *15*(4), 651-6.
7. McPhee, S. J., Lo, B., Saika, G. Y., & Meltzer, R. (1984). How good is communication between primary care physicians and subspecialty consultants?. *Archives of internal medicine*, *144*(6), 1265-1268.
8. Rosemann, T., Wensing, M., Rueter, G., & Szecsenyi, J. (2006). Referrals from general practice to consultants in Germany: If the GP is the initiator, patients' experiences are more positive. *BMC health services research*, *6*, 1-6.
9. Alleyne, G., Breman, J., Claeson, M., Evans, D., Jamison, D., Jha, P., ... & Musgrove, P. (2006). Disease control priorities in developing countries.
10. Donohoe, M. T. (1998). Comparing generalist and specialty care: discrepancies, deficiencies, and excesses. *Archives of internal medicine*, *158*(15), 1596-1608.
11. Cummins, R. O., Smith, R. W., & Inui, T. S. (1980). Communication failure in primary care: failure of consultants to provide follow-up information. *Jama*, *243*(16), 1650-1652.
12. Lee, T., Pappius, E. M., & Goldman, L. (1983). Impact of inter-physician communication on the effectiveness of medical consultations. *The American journal of medicine*, *74*(1), 106-112.
13. Byrd, J. C., & Moskowitz, M. A. (1987). Outpatient consultation: interaction between the general internist and the specialist. *Journal of General Internal Medicine*, *2*, 93-98.
14. Sears, C. L., & Charlson, M. E. (1983). The effectiveness of a consultation: compliance with initial recommendations. *The American journal of medicine*, *74*(5), 870-876.
15. Ringberg, U., Fleten, N., Deraas, T. S., Hasvold, T., & Førde, O. (2013). High referral rates to secondary care by general practitioners in Norway are associated with GPs' gender and specialist qualifications in family medicine, a study of 4350 consultations. *BMC health services research*, *13*, 1-10.

16. World Health Organization. (2016). *The work of WHO in the Eastern Mediterranean Region: annual report of the Regional Director 2015* (No. EM/RC63/3). World Health Organization. Regional Office for the Eastern Mediterranean.

17. Jarallah, J. S. (1991). The quality of referral letters in two health centers in Riyadh. *Annals of Saudi medicine*, *11*(6), 658-662.

18. Al-Alfi, M. A., Al-Saigul, A. M., Abed-Elbast, A. M., Sourour, A. M., & Ramzy, H. A. (2007). Quality of primary care referral letters and feedback reports in Buraidah, Qassim region, Saudi Arabia. *Journal of Family and Community Medicine*, *14*(3), 113-117.

19. Benjamin, L. M. (2011). Quality of general practitioner referral letters to a South African tertiary hospital: Determinants of quality content and good practice. *Journal of Public Health and Epidemiology*, *3*(11), 482-488.

20. Stille, C. J., Mazor, K. M., Meterko, V., & Wasserman, R. C. (2011). Development and validation of a tool to improve paediatric referral/consultation communication. *BMJ quality & safety*, *20*(8), 692-697.

21. Westerman, R. F., Hull, F. M., Bezemer, P. D., & Gort, G. (1990). A study of communication between general practitioners and specialists. *British Journal of General Practice*, *40*(340), 445-449.

22. Scott, I. A., Mitchell, C. A., & Logan, E. (2004). Audit of consultant physicians' reply letters for referrals to clinics in a tertiary teaching hospital. *Internal medicine journal*, *34*(1-2), 31-37.

23. Kalume, Z., Jansen, B., Nyssen, M., Cornelis, J., Verbeke, F., & Niyoyita, J. P. (2022). Assessment of formats and completeness of paper-based referral letters among urban hospitals in Rwanda: a retrospective baseline study. *BMC Health Services Research*, *22*(1), 1436.

24. Tobin-Schnittger, P., O'Doherty, J., O'Connor, R., & O'Regan, A. (2018). Improving quality of referral letters from primary to secondary care: a literature review and discussion paper. *Primary health care research & development*, *19*(3), 211-222.