National report on emergency department applications in Türkiye via the Ministry of Health Communication Center

Melih Çamcı, Şervan Gökhan

Department of Emergency Medicine, Ankara Bilkent City Hospital, Ankara Yıldırım Beyazıt University, Ankara, Türkiye

Abstract

This study aims to analyze Emergency Department (ED) applications made to the Ministry of Health Communication Center (MOHCC) due to situations encountered during the delivery of emergency health services. The objective is to contribute to the development of in-hospital emergency health services and to provide recommendations for improving these services. This retrospective study examined applications submitted to the Ministry of Health Communication Center regarding ED between January 1, 2018, and December 31, 2018. Applications were randomly sorted, and every 50th application was included in the study sample. Data recorded included the applicant's degree of proximity, type of emergency, area of evaluation in the ED, personnel presence of violence, method of follow-up and resolution method, and the reasons for the application. The total number of calls was 4,977,748, with 2,088,725 applications made. A total of 955 applications meeting the study criteria were analyzed. Findings showed that 59% of the applications were complaints, while common were notifications, harassment allegations, and expressions of gratitude. The most frequent applications were directed towards secondary EDs at a rate of 53.7%. Additionally, 66.9% of the applications were related to the green area. The personnel involved in the applications were found to be hospital management in 37.9% of the cases. Notably, 15% of the applications contained violent language. The majority of complaints submitted to the MOHCC about emergency departments in Türkiye concerned communication issues (27%), prolonged waiting times, and crowding, particularly in public hospitals and green triage zones. These findings highlight the need to improve both administrative processes and patient-provider communication. Management reforms, professional development of healthcare staff, and effective use of feedback systems like MOHCC are essential to enhance service quality and patient satisfaction.

Correspondence: Melih Çamcı, Department of Emergency Medicine, Ankara Bilkent City Hospital, Ankara Yıldırım Beyazıt University, Üniversiteler Neighborhood, 1604 Avenue, No:9 Çankaya, Ankara, Türkiye.
Tel.: +90.0505.8839181. E-mail: drmelih112@gmail.com

Key words: emergency department, health communication, health services administration, patients' complaints, patients' satisfaction.

Conflict of interest: the authors declare that they have no conflict of interests.

Funding: this research received no specific grant from any funding agency in the public, commercial or not for profit sectors.

Contributions: all of the authors significantly contributed to the idea, planning, implementation, data collection, analysis and interpretation of the study. The article's creation, revision, or critical evaluation involved input from all authors. All authors agreed on the journal to which the manuscript was submitted, granted their final approval of the version to be published, and agreed to take responsibility for every part of the work.

Ethical considerations: the approval of Ankara Yıldırım Beyazıt University Faculty of Medicine Clinical Research Ethics Committee (dated 9 January 2019 and reference number 09) was obtained.

Availability of data and material: the datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Using artificial intelligence chatbots: Chatbot Pro GPT-3.5 was used only for the language edition, to increase the fluency and readability of the article's language. Generative AI and AI-assisted technologies have not been used for any other purpose.

Received: 21 May 2025.
Accepted: 19 August 2025.
Early view: 5 September 2025.

Licensee PAGEPress, Italy
Emergency Care Journal 2025; 21:14022
doi:10.4081/ecj.2025.14022

Introduction

In recent years, the concepts of satisfaction and complaints in healthcare services have gained significant importance. Parallel to advances in medical science and technology, innovations in healthcare services in terms of quantity and quality have increased accessibility, demand, expectations, and a greater volume of complaints.[1] The quality of healthcare services and patient satisfaction are based on continuous improvement through complaint management, regardless of whether the feedback is positive or negative.[2] Patient opinions and feedback have become essential in meeting needs and desires, contributing to the institutional quality policy, and transforming this information into better performance and efficiency. This feedback contributes to increasing patient satisfaction, providing data for quality assessment, improvement processes, problem-solving, and effective resource management.[3]

Emergency Departments (EDs) play a vital role in providing uninterrupted and essential services. However, increasing crowding in EDs leads to prolonged waiting times, delayed care, and heightened patient dissatisfaction, reflecting systemic challenges in healthcare.[4,5] Operational difficulties, such as patient flow bottlenecks, negatively impact ED image, communication, and legal

responsibilities,[6] resulting in managerial and clinical problems, including communication errors and malpractice.[5] Frequent ED visits further exacerbate these issues, influencing patient satisfaction and complaints, which are often tied to communication problems and malpractice lawsuits.[7,8] Therefore, effective and collaborative communication among all stakeholders is essential for patient-centered care, positively affecting patient satisfaction, access to care, and quality perception, thereby emphasizing institutional health communication.[9-11]

Communication, as one of the fundamental elements of health governance, is implemented in Türkiye through the Ministry of Health Communication Center (MOHCC). Established in 2003 within the scope of the Health Transformation Project, MOHCC aims to serve as a new communication tool facilitating interaction between healthcare service users and providers. "Applications" to MOHCC are defined as recorded submissions from patients or their relatives, encompassing complaints, appreciations, suggestions, and requests for information. For instance, applications may include complaints about waiting times, concerns over staff shortages, reports of hygiene problems, or expressions of gratitude for services received. These applications are systematically evaluated through follow-up processes and resolution mechanisms, ensuring responsiveness and accountability within the healthcare system. Since 2004, MOHCC has been providing services through the '184' phone line and its website. (https://sabim.gov.tr/).[12] Through this framework, the center has become a vital communication bridge between citizens and the healthcare system, fostering improved service delivery and user satisfaction.

This study aims to analyze applications made to MOHCC regarding various incidents occurring during the delivery of services in hospital EDs across Türkiye. By evaluating the content of these submissions, the study seeks to identify issues, highlight positive feedback, and provide strategic recommendations to improve in-hospital emergency health services.

Materials and Methods

Study design and database query

This research is a descriptive, retrospective, cross-sectional study. The data were examined based on 'applications' made to MOHCC regarding hospital EDs between January 1, 2018, and December 31, 2018, after obtaining permission from the Turkish Ministry of Health's General Directorate of Health Promotion (dated October 2, 2018, with reference number 946229954-622.01) and the approval of the Clinical Research Ethics Committee of Ankara Yildirim Beyazit University Faculty of Medicine (dated January 9, 2019, with reference number 09). Applications were filtered using the keywords 'ED' and other related terms ('physician', 'general practitioner', 'emergency medicine specialist', 'consultant physician', 'nurse', 'auxiliary health personnel', 'adult emergency', 'pediatric emergency', 'green area', 'yellow area', 'red area', 'complaint', 'thanks', 'information request', 'ED management', 'violence'). The applications were coded with reference numbers and anonymized by removing personal data by the MOHCC Reporting Unit. In the obtained study population, applications were randomized, and every 50th application was selected.

Data collection

The data were collected through the MOHCC Information Management System via the Reporting Unit. Applications made to MOHCC between January 1, 2018, and December 31, 2018, filtered using 'ED' and related keywords, were included in the study. From these anonymized and numbered applications, a systematic random sampling method was employed, where every 50th application was included in the study. To ensure the randomness of the selection process and minimize potential bias, the starting point for the sampling was randomly determined within the first 50 applications using a computer-generated random number. This systematic sampling strategy provided a practical and efficient means of obtaining a sample that is representative across the entire dataset of total applications, similar in effectiveness to a simple random sample, as the population list was not ordered in a way related to the characteristics under study. Exclusion criteria for the final dataset were applications that fell outside the filtered keywords and those not related to hospital EDs despite filtering.

The included applications were examined at the MOHCC service building via the information system through http://sabim.saglik.gov.tr. Before the examination, a temporary session was opened to be used during the study, following a personal data protection and confidentiality agreement signed with the MOHCC coordinatorship.

Study method and context

A total of 955 applications meeting the necessary criteria were included in the study. The term 'applications' was operationally defined in this context to facilitate systematic categorization and analysis. These included submissions addressing a variety of issues, ranging from service complaints to acknowledgments, ensuring a comprehensive representation of patient feedback regarding EDs. The applications were classified by geographical regions and institutions (public, private, university). Using the updated hospital information from the General Directorate of Health Information Systems of the Ministry of Health, hospitals and EDs were categorized. The content of the applications was evaluated by a single emergency medicine physician, who also served as the primary researcher for this thesis. This evaluation process was conducted under the close supervision and guidance of an experienced academic supervisor/advisor, ensuring methodological rigor and consistency. The evaluation criteria were meticulously applied using a structured and pre-defined rubric/coding scheme that encompassed: the identity of the applicant; the degree of closeness to the patient; the type of emergency reported; the specific area within the ED being evaluated; the staff involved; whether the submission contained expressions of violence; how the case was followed up and concluded; and the reasons for the application.

Statistical analysis

Statistical analyses were meticulously performed using SPSS 16.0 for Windows. The primary focus of the statistical evaluation was on categorical data, which constituted the majority of the collected variables. For these variables, frequency distributions were computed and presented to summarize the characteristics of the study population and application types. To assess the relationships and differences between independent categorical groups, the Pearson Chi-Square test was systematically applied for proportion comparisons across various contingency tables (*e.g.*, in 2x2 or 3x2 designs). A p-value of less than 0.05 was predetermined as the criterion for statistical significance.

Results

In 2018, an analysis of the Ministry of Health Communication Centre data revealed a total of 4,977,748 incoming calls, resulting in 2,088,725 formal applications. The year's distribution showed the highest number of applications in January and July, with the lowest recorded in June and August (Table 1, Figure 1).

Analysis of the 955 study applications led to the development of a new application taxonomy. Applications were inductively diagrammed by combining discursively similar subcategories within their content, establishing a type-reason taxonomy. This process resulted in a four-tier taxonomic plan to identify issues from their most extreme points to their source. The taxonomy was categorized under three main headings: management, clinical, and relationships.

Figure 2 presents the types and reasons for management-based applications. These were categorized into two primary sections: Institutional Issues and Timing and Access, focusing on ED management within the broader context of overall hospital management. A total of 26 sub-categories were identified in the management taxonomy.

Institutional Issues comprised various challenges. Under staff and hospital resource management, these included inadequate staffing, equipment, ward beds, Intensive Care Unit (ICU) beds, burn units, transport ambulances, and vaccination/injection issues. Environmental factors involved hygiene issues, inadequate physical environment, and insufficient security measures. Service issues were detailed as electronic health record system problems, medical records management, and general service inadequacies. Payment and billing concerns were identified as fee payment requests and billing issues, while bureaucratic issues were subcategorized into procedures and document issues.

Timing and Access issues were subdivided. Under access and acceptance, these included service accessibility and registration/acceptance problems. Timing issues addressed prolonged waiting times, crowding, and delays. Discharge problems were characterized by discharge timing and insufficient post-discharge support. Referral complications involved inconvenient referral, prolonged referral times, and other referral issues.

Figure 3 illustrates the types and reasons for clinical-based applications, divided into two primary sections: Quality and Patient Safety. This clinical taxonomy contained a total of 25 subcategories.

Quality issues encompassed several areas. Patient guidance problems included insufficient follow-up, insufficient guidance, incorrect triage, insufficient post-discharge support, and issues related to hospitalization/discharge/reporting processes. Treatment-related challenges involved insufficient treatment, unsuccessful treatment, incomplete treatment plans, and inability to access treatment. Examination problems consisted of insufficient examinations and insufficient tests/screening. Service quality issues included carelessness and nosocomial infections.

Patient Safety issues were divided into diagnostic errors, medication errors, patient safety breaches, and skills and professional-

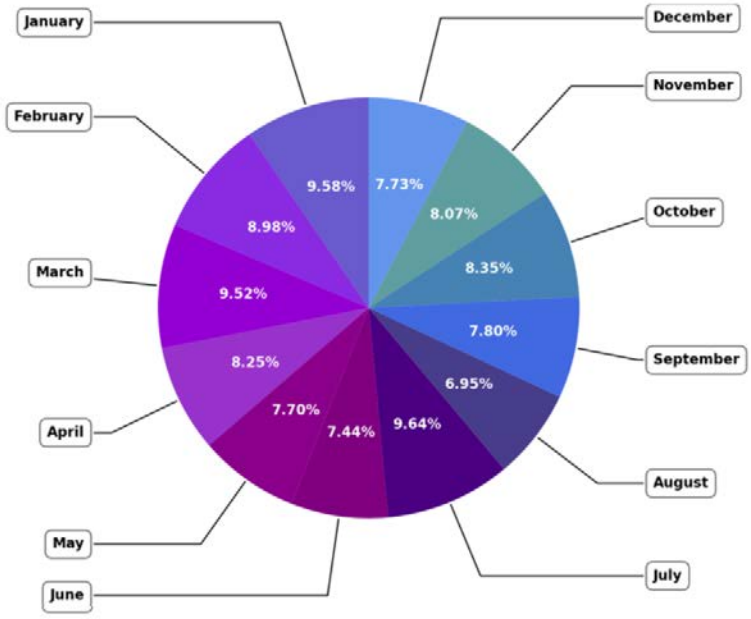

Figure 1. 2018 ratio of Ministry of Health Communication Centre applications by months.

Table 1. Distribution of the number of applications to the Ministry of Health Communication Centre by months.

Months	January	February	March	April	May	June	July	August	September	October	November	December
Application count	200,073	187,597	198,781	172,376	160,921	155,310	201,254	145,154	162,888	174,352	168,626	161,393

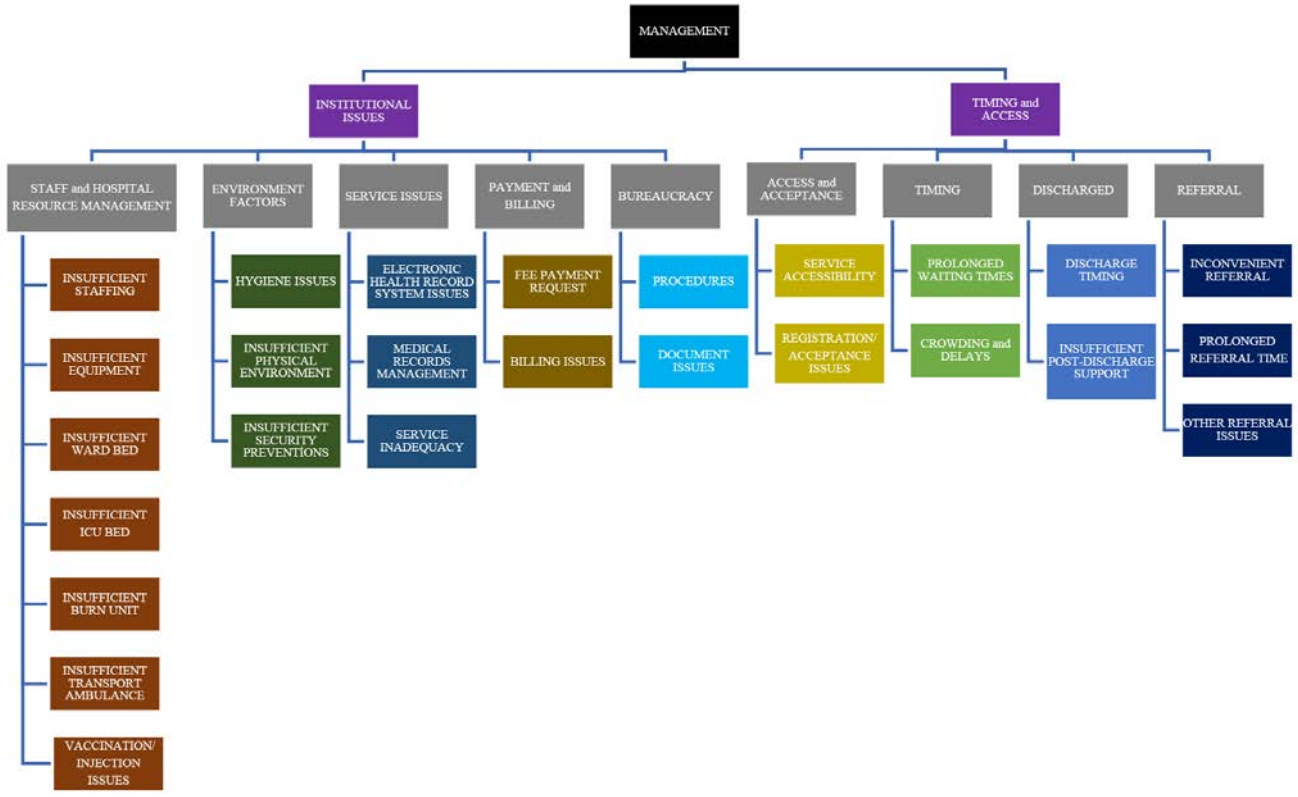

Figure 2. Categorization of management-related applications to MOHCC about ED.

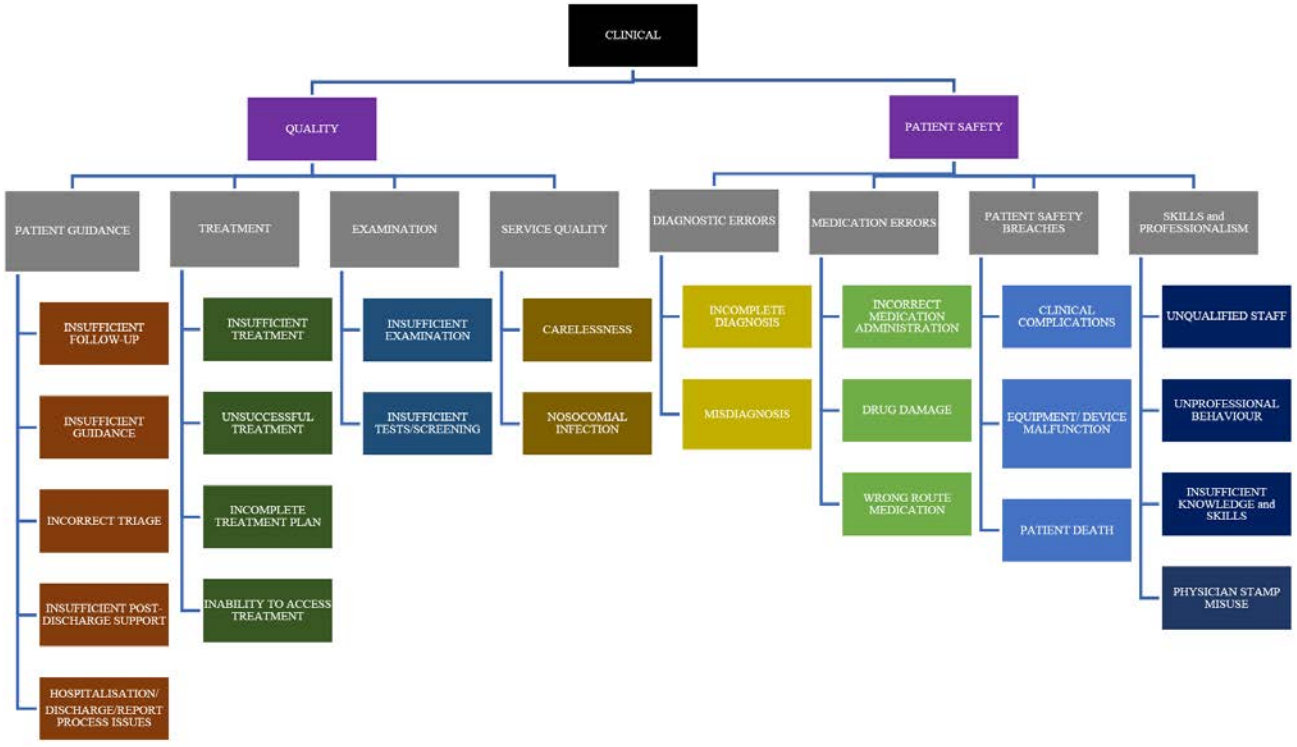

Figure 3. Categorization of clinical quality and patient safety issues in ED applications.

ism. Diagnostic errors involved incomplete diagnoses and misdiagnoses. Medication errors included incorrect medication administration, drug damage, and wrong route medication. Patient safety breaches covered clinical complications, equipment/device malfunctions, and patient death. Skills and professionalism issues highlighted unqualified staff, unprofessional behavior, insufficient knowledge and skills, and misuse of physician stamps.

Figure 4 delineated the types and reasons for communication and relationship-based applications, grouped into three main categories: Communication, Humanity/Caring, and Patient Rights. This taxonomy of relationships identified a total of 19 sub-categories.

Communication issues were further subdivided. Communication disorders included terminology/language issues, communication deficiency, poor listening, and inability to communicate effectively. Information issues covered inability to obtain information, incomplete information, misinformation, and conflicting information. Patient-staff communication problems, specifically, involved unnecessary commentary and interpersonal communication disorders.

Humanity/Caring issues were explored in two main areas. Negative staff behaviors encompassed unnecessary commentary and interpersonal communication disorders. Issues related to respect, reputation, and appreciation concerned breach of patient privacy, lack of interest, rudeness/reprimanding, and neglect.

Patient Rights issues were categorized as consent issues and lack of patient-companion. Additional concerns included misuse/abuse, general breach of patient rights, and discrimination.

Evaluation of applications based on the reason and type taxonomy revealed communication-relationship-information issues as the most common reason, constituting 27% of applications. Prolonged waiting times (9.1%) and ED overcrowding and delays (6.2%) followed closely. Requesting payment accounted for 6.9% of applications, whereas expressions of satisfaction were among the least frequent reasons, at 0.5% (Table 2). Although the sample comprised 955 applications, Table 2 presents 1,735 instances of reasons and types. This discrepancy arose because multiple reasons and types could be recorded within a single application.

Regarding regional distribution, complaints from the Marmara region were highest, at 25%, while the Black Sea region recorded the fewest applications (7.6%). These regional differences were statistically significant (Pearson Chi-Square, $p<0.001$). By institution type, public health institutions received the most frequent applications (71.8%), followed by private health institutions (18.1%) and university hospitals (10.1%). Analyzing the distribution by days, Monday and Tuesday exhibited the highest application rates (15.5%), though no significant difference was observed compared to other weekdays (Pearson Chi-Square, $p=0.332$). Weekly, 72.5% of applications occurred on weekdays, and 27.5% on weekends. Seasonally, 30.7% of applications were filed in winter, and 19.6% in autumn.

In terms of the applicant's relationship to the patient, 52.5% were first-degree relatives, while 39.6% of cases involved patients themselves applying to MOHCC. These differences in applicant relationship were statistically significant (Pearson Chi-Square, $p<0.001$). Among emergency service levels, second-level services were addressed most frequently (53.7%), followed by third-level (38.9%) and first-level (7.3%). Most applications (90.2%) concerned adult emergency services, with 9.7% for pediatric services. When evaluating patient triage codes, applications originated most frequently from the green zone (66.9%). The personnel involved included hospital management (37.9%), general practitioners

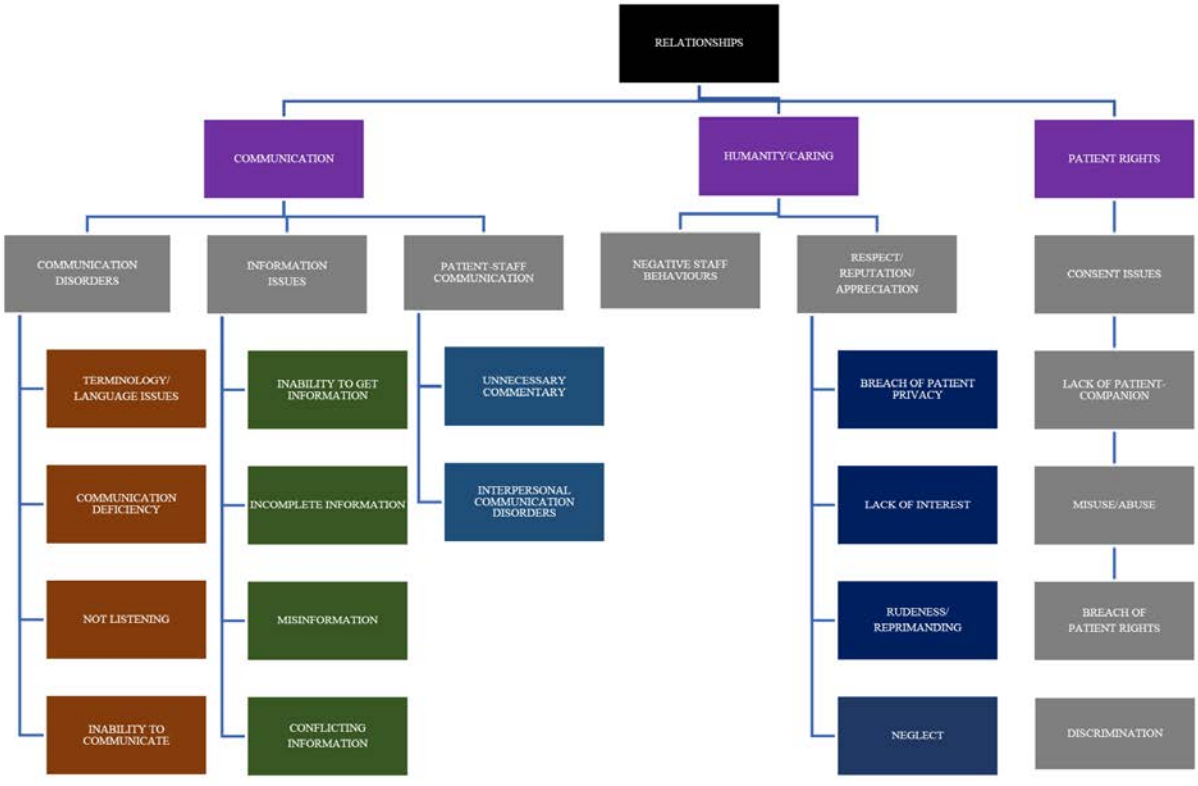

Figure 4. Distribution of communication and patient rights-related complaints in ED applications.

(25.1%), and emergency medicine specialists (15.7%). Violent remarks were found in 15.0% of the applications, while the remaining 85.5% contained no expressions of violence.

Discussion

To the best of our knowledge, this study constitutes the first comprehensive taxonomy-based analysis of ED complaints submitted via a national governmental communication platform in Türkiye. This research presents comprehensive descriptive data on public complaints, offering valuable observations regarding communication and management challenges in EDs and shedding light on prevalent issues within the emergency healthcare service delivery. It will notably contribute to the academic literature by providing a robust evidence base that can inform the development of policies and strategies aimed at improving emergency healthcare service delivery.

Bostan *et al*. found that the highest number of complaint applications within the year was in November with 10.3%, and the lowest was in February with 6.5%.[13] This study also found that temporal patterns in complaint frequency revealed peaks in January and July, but no stable seasonal or monthly trend emerged. These fluctuations likely reflect episodic stressors within the healthcare system, such as surges in patient volume, staffing limitations, or policy transitions, rather than a predictable annual rhythm. The increase in weekday complaints, particularly on Mondays and Tuesdays, supports the notion that EDs are a default access point for non-appointment-based care. This phenomenon can be attributed to the role of EDs as continuously operating units that serve as the primary point of access for unscheduled patient visits. This finding emphasizes the need to reinforce primary care accessibility and to clarify the appropriate use of emergency services.

Reader *et al.* evaluated 59 studies in their systematic review, analyzing a total of 88,069 complaints and creating a taxonomy. They found that 35.1% of the complaints were related to management, 33.7% to clinical issues and 29.1% to relationships.[14] Harrison *et al.* examined 138 complaints submitted to the Australian Health Services Complaint Commission over a five-year period and identified a total of 223 complaint issues. In their three-tiered taxonomy, they found that 68% of the complaints were clinical, 19% were management-related, and 13% were about relationships. In subcategories, they identified quality, safety, delays, skills and behaviors, treatment, examination, and diagnostic errors as the most frequent causes of complaints.[15] In our study, management-related issues were most prominent, followed by relational and clinical concerns. These findings are partially aligned with previous literature, particularly reinforcing the dominant role of management-related issues in ED complaints. Notably, satisfaction-related applications were minimal (0.5%), while irrational submissions comprised 2%. The four-tier taxonomy provided a comprehensive framework for categorizing complaints into 26 management, 25 clinical, and 19 relational subcategories, capturing the full breadth of issues raised. Management complaints primarily reflected systemic and procedural shortcomings; clinical issues centered on care quality and safety; and relational concerns highlighted deficiencies in communication, respect, and patient rights.

Complaints were concentrated on issues such as healthcare personnel's communication deficiencies, lack of interest, rude behavior, indifferent attitude, and the resulting conflicting information. In the literature, patients' reasons for complaints often prominently include staff's poor attitude, lack of interest, and behaviors.[7,13,16] Kırgın Toprak *et al.* found that 26.6% of patient

Table 2. Distribution of applications according to the reason and type taxonomy.

		n	%
Distribution of applications according to the reason and type taxonomy	Relationships-Communication-Information issues	469	27.0
	Prolonged waiting times	158	9.1
	Fee payment request	120	6.9
	Crowding and delays	108	6.2
	Insufficient Equipment-Electronic Health Record system issues	107	6.2
	Insufficient treatment and follow-up	104	6.0
	Insufficient staffing	83	4.8
	Referral issues	78	4.5
	Insufficient examination and tests/screening	76	4.4
	Insufficient ICU bed	70	4.0
	Service inadequacy	63	3.6
	Hygiene issues	47	2.7
	Non-urgent unreasonable requests and complaints	35	2.0
	Mis- and incomplete diagnoses	33	1.9
	Physician stamp misuse	30	1.7
	Insufficient physical environment	24	1.4
	Carelessness	23	1.3
	Insufficient ward bed	23	1.3
	Clinical complications	16	0.9
	Child emergency department need	15	0.9
	Unqualified staff	14	0.8
	Patient death	11	0.6
	Patient satisfaction	9	0.5
	Vaccination/injection issues	6	0.3
	Registration and acceptance issues	6	0.3
	Breach of patient privacy	5	0.3
	Misuse/abuse	2	0.1
	Total	1735	100.0

complaints were due to a lack of respect.[17] Uludağ analyzed the content of applications and found that 47% were due to lack of information, 0.5% due to privacy violations, 0.3% due to lack of informed consent, 33.8% due to lack of respect and comfort, and 0.2% due to an inability to have visitors.[18] Şantaş *et al.* similarly noted that lack of interest and courtesy accounted for a substantial portion of complaints in both private (32.6%) and public (42.3%) hospitals.[19] In this study, issues related to communication, empathy, and interpersonal conduct constituted 27% of all complaints. This finding is consistent with previous reports in the literature and points to a persistent gap in patient-provider interaction. While staff behavior was a significant factor, broader systemic issues—such as ED overcrowding, staff shortages, and low health literacy—also contributed to communication failures. Additionally, misaligned patient expectations and inadequate institutional communication further exacerbated this breakdown. The findings underscore a persistent gap in patient-provider interaction and highlight relationship-centered communication as a key area for targeted improvement to enhance patient satisfaction.

Prolonged waiting times, ED crowding, equipment and material shortages, and inadequacies in examination, diagnosis, follow-up, and treatment are prominent issues. Zengin *et al.* identified prolonged waiting times in EDs as 13% of complaints, treatment inadequacy as 16.7%, misdiagnosis as 7.4%, and examination inadequacy as 5.6% of clinical complaints.[16] Uludağ found that 14.2% of complaints were related to management issues, 2.9% to information processing problems, 14.7% to service inaccessibility, and 17.9% to medical issues.[18] Yıldırım *et al.*'s local study found that complaints in public healthcare institutions were most frequently related to service delivery and administrative processes, while in private healthcare institutions, complaints were most often about healthcare service charges.[20] In this study, management-related complaints such as waiting times (9.1%), overcrowding (6.2%), and equipment shortages (6.2%) were more frequent than clinical complaints, including inadequate follow-up and treatment (6%) and insufficient examination (4.4%). This distribution reinforces the notion that systemic and organizational shortcomings outweigh individual clinical failures in shaping patient dissatisfaction within emergency care settings.

Complaint applications were highest in Istanbul (32.49%), followed by Ankara (16.3%) and Izmir (5.9%), with fewer applications from smaller provinces. In the distribution of complaints by healthcare institution, 34.2% were hospitals, 6.7% were private healthcare institutions, and 0.7% were university hospitals.[13] When examining regional demographic distribution, Istanbul, considered a separate region, ranked first with 25% of applications and a population ratio of 4.75%. The Aegean Region had the second-highest application rate, accounting for 23% of the total. This situation can be explained by the culture of applications and complaints and the awareness of the ways to seek rights in healthcare in these respective regions. Analysis by institution type revealed that 71.8% of applications were directed to public hospitals, 10.1% to university hospitals, and 18.1% to private hospital EDs. The predominance of public healthcare institutions housing EDs likely explains why the majority of applications—71.8%—were submitted to public hospitals.

When examining the relationship between patients and those making the complaints, Zengin et al. found that 46.3% of complaints were made by the patient themselves, 14.8% by their child, 1.3% by their spouse, 1.3% by a friend, and 9.3% by other individuals. The relationship between complaints and triage codes was found to be 55.6% green, 14.8% yellow, and 29.6% red.[16] Chavan *et al.* identified that 64% of complaints were made by the patient, and 29% by the patient's relatives.[21] Contrary to the literature, this study found that in EDs, first-degree relatives were the most frequent complainants at 52.5%, while 39.6% of complaints were made by the patients themselves. This difference can be explained by the fact that patients visiting EDs often have unstable general conditions and are not in a position to make complaints. Although the green code includes clinically stable patients, the high rate of complaints from this group likely reflects dissatisfaction due to prolonged waiting times, limited communication, or unclear expectations rather than clinical severity. Therefore, MOHCC should be designed and considered not only as a patient-doctor communication tool but also as a multi-channel communication method. In the distribution of complaints by triage codes, 66.9% were most frequently made from the green area, followed by 22.0% from the yellow code and 11.1% from the red code. This highlights a perceptual gap between clinical triage systems and patient expectations, where even clinically appropriate decisions can be perceived as neglect or a lack of care, especially in high-volume EDs. This indicates that the concept of triage in EDs is not sufficiently understood and that health literacy in this area needs to be improved. The most frequently complained-about hospital EDs were second-level EDs at 53.7%. This finding, which differs from existing literature, aligns with the observation that patient density is primarily concentrated in second-level EDs.

Similar studies in the literature have observed that physicians are the most frequently reported personnel at 37.9%.[7,13] Another study found that physicians were the most frequently complained about at 56.6%, while social workers and pharmacists were the least complained about at 0.2%.[17] A different study conducted in EDs found that 38.9% of complaints were about physicians, 20.4% about consultant physicians, 1.3% about secretaries, 9.3% about nurses, and 1.9% about hospital management.[16] In terms of satisfaction reports by professional groups, nurses ranked first at 56.2% (n=587), followed by physicians at 17.7% (n=185).[7] This study found similar results to the literature, with physicians at 25.1% and emergency medicine specialists at 15.7%, totaling 40.8%. This lower complaint rate may be attributed to reduced direct interaction time or more specific clinical roles. However, the low number of applications specifically targeting emergency medicine specialists is noteworthy and underscores the importance of having a sufficient number of emergency medicine specialists in all EDs. Another striking finding is that 37.9% of the applications were related to hospital management. Viewing problems encountered during the delivery of health services as clinically based and frequently seeking solutions in medical reasons is to overlook the most significant communication and management issues. This indicates that managerial and organizational problems are reflected in the healthcare staff. Accurate resolution, thorough analysis, and effective management of patient complaints are essential for ensuring satisfaction, maintaining quality, and sustaining competitiveness.[22]

Limitations

This study, while comprehensive, is subject to several limitations. First, the analysis, categorization, and taxonomy development were performed on a systematic random sample due to the extensive volume of total applications. While this sampling method aimed for representativeness, it may inherently lead to an incomplete portrayal of all possible complaint issues, potentially excluding nuanced application types or reasons not captured within the selected interval. Furthermore, the analysis is confined to a single year (2018) of data, which limits the ability to discern tem-

poral trends or long-term variations in application patterns.

A significant methodological vulnerability lies in the content analysis and categorization of applications being performed by a single emergency medicine physician, who was also the principal investigator of study. Although a highly structured and pre-defined rubric was meticulously applied to standardize the evaluation process and minimize subjective bias (as detailed in the Materials and Methods section), the absence of formal inter-rater reliability assessment by multiple independent experts may have introduced interpretation bias and limited the triangulation of qualitative findings.

Additionally, this research relies on data from the MOHCC applications, which predominantly reflect the subjective perceptions and reported experiences of callers. These applications may not always represent verified events or provide a balanced view of overall service satisfaction, as the center is primarily utilized for addressing grievances. Moreover, the study focused exclusively on complaint content and did not assess the validity or resolution outcomes of individual applications, necessitating future research to incorporate institutional follow-up data and resolution rates for a more comprehensive understanding.

Despite these limitations, the findings derived from a comprehensive national communication center database in Türkiye offer valuable insights into common communication and management challenges within Turkish EDs. While direct generalization to all international healthcare contexts requires caution due to variations in healthcare systems and patient demographics, these results may inform similar public health initiatives and emergency care improvements in comparable settings.

Conclusions

This study demonstrated that most complaints submitted to the MOHCC concerning EDs in Türkiye were related to communication problems (27%), followed by prolonged waiting times (9.1%) and crowding (6.2%). Complaints predominantly targeted public hospitals (71.8%) and secondary-level EDs (53.7%), with a high concentration in the green triage zone (66.9%). Applications were most frequently submitted by first-degree relatives of patients. The complaint taxonomy revealed that management-related issues were the most prominent, followed by communication, relationship-based and clinical problems.

These findings highlight that dissatisfaction with emergency healthcare services stems from structural inefficiencies and communication breakdowns rather than isolated clinical errors. Accordingly, improving ED service quality requires strengthening administrative procedures, reducing overcrowding, and increasing the visibility and accountability of hospital management. Equally essential is enhancing the communication skills, empathy, and professionalism of healthcare providers to ensure respectful, effective patient interactions.

Health authorities should adopt a multifaceted approach that includes developing policy guidelines, investing in staff development, and creating supportive work environments. Tools such as real-time guidance systems in EDs, transparent information boards, and artificial intelligence-supported MOHCC data analysis may strengthen early warning mechanisms, reduce dissatisfaction, and support patient-centered care. Ultimately, integrating systemic reform with relationship-based communication strategies will be key to improving both service quality and public trust in EDs.

References

1. Jabbari A, Khorasani E, Jazi MJ, et al. The profile of patients' complaints in a regional hospital. Int J Health Policy Manag 2014;2:131-5.
2. Öztas BE, Dirican O, Tengilimoğlu D. Evaluation of patient complaints in health institutions. Al Farabi Uluslararası Sosyal Bilimler Dergisi 2019;4:108-19. (in Turkish).
3. Abbasi-Moghaddam MA, Zarei E, Bagherzadeh R, et al. Evaluation of service quality from patients' viewpoint. BMC Health Serv Res 2019;19:170.
4. Di Somma S, Paladino L, Vaughan L, et al. Overcrowding in emergency department: an international issue. Internal Emerg Med 2015;10:171-5.
5. Åhlin P, Almström P, Wänström C. Solutions for improved hospital-wide patient flows–a qualitative interview study of leading healthcare providers. BMC Health Serv Res 2023;23:1-17.
6. Vainieri M, Panero C, Coletta L. Waiting times in emergency departments: a resource allocation or an efficiency issue? BMC Health Serv Res 2020;20:1-10.
7. Yalçınkaya D, Güçlü A. Evaluation of patient complaints in hospitals: a foundation university hospital example. Hacettepe Sağlık İdaresi Dergisi 2023;26:65-84. (in Turkish).
8. Abidova A, da Silva PA, Moreira S. Understanding complaints in the emergency department. Health Serv Insights 2021;14:11786329211057351.
9. Arslan A. Health communication based on public relations models: research of The Ministry of Health on new media. Ege Üniversitesi İletişim Fakültesi Medya ve İletişim Araştırmaları Hakemli E-Dergisi 2021;8:4-28. (in Turkish).
10. Ghahramanian A, Rezaei T, Abdullahzadeh F, Sheikhalipour Z, Dianat I. Quality of healthcare services and its relationship with patient safety culture and nurse-physician professional communication. Health Promotion Perspect 2017;7:168-74.
11. Xiang J, Stanley SJ. From online to offline: Exploring the role of e-health consumption, patient involvement, and patient-centered communication on perceptions of health care quality. Computers Human Behavior 2017;70:446-52.
12. Sağlık Bakanlığı İletişim Merkezi. Available from: https://sabim.gov.tr/. Accessed July 18, 2024.
13. Bostan S, Kılıç T, Çiftçi F. Comparative analysis of patient complaints via SABIM line in The Ministry of Health. Global J Econ Business Studies 2014;3:32-40. (in Turkish).
14. Reader TW, Gillespie A, Roberts J. Patient complaints in healthcare systems: a systematic review and coding taxonomy. BMJ Quality&Safety 2014;23:678-89.
15. Harrison R, Walton M, Healy J, Smith-Merry J, Hobbs C. Patient complaints about hospital services: applying a complaint taxonomy to analyse and respond to complaints. Int J Qual Health Care 2016;28:240-5.
16. Zengin S, Al B, Yavuz E, Şen C, Cindoruk Ş et al. Patient and relative complaints in a hospital emergency department: a 4-year analysis. Turkish J Emerg Med 2012;12:163-8.
17. Kırgın Toprak D, Şahin B. Panorama of patient complaints in Ministry of Health hospitals. Sağlıkta Performans ve Kalite Dergisi 2012;3:1-28. (in Turkish).
18. Uludağ A. View of the patient rights committees of the hospitals on applications including communication problems: sample of Konya hospitals. Turkiye Klinikleri J Med Sci 2011;31:653-63. (in Turkish).
19. Şantaş F, Şantaş G, Erigüç G. Investigation of electronic com-

plaints towards private and public hospitals in Turkey. Uluslararası Sağlık Yönetimi ve Stratejileri Dergisi 2019;5:291-301.
20. Yıldırım RF, Kumru S. Evaluation of patient complaints and satisfaction with applications made to call center of The Ministry of Health: the case of İstanbul-Kadıköy. Eurasian J Health Technol Assess 2021;5:124-37. (in Turkish).
21. Chavan R, Porter C, Sandramouli S. Formal complaints at an eye hospital: a three-year analysis. Int J Health Governance 2007;12:85-92.
22. Güler HN. Analysis of complaints regarding health institutions. İstanbul Gelişim Üniversitesi Sosyal Bilimler Dergisi 2023;10:328-43. (in Turkish).