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Original Research Article

Criminological Insights into Medical Dispute Management: A Pilot Study from a Forensic and Criminological Perspective

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Key words

Medicolegal forensic analysis,
Medical disputes,
Criminology in healthcare,
Hospital legal responsibility.

Abstract

Background: Medical disputes in hospital settings represent complex socio-legal phenomena influenced by patient perceptions, institutional practices, and social control mechanisms, rather than purely clinical or legal issues. This study aims to analyze medical disputes at Hospital X Makassar from a criminological perspective and to examine the role of dispute management as a bridging mechanism between hospital legal responsibility and the application of Forensic and Medicolegal Medicine principles. **Methods:** This study employed a mixed-methods pilot design involving 35 patient complaint cases. Quantitative data were analyzed using exploratory regression models, while qualitative data were obtained through interviews and document reviews. **Results:** The regression model showed limited predictive power, with no significant overall model fit and a negative adjusted R-squared value. Qualitative findings revealed that most disputes were driven by communication gaps, perceived injustice, and information asymmetry rather than confirmed clinical negligence. **Discussion:** Criminological analysis indicates that conflict and labelling processes contribute to the escalation of disputes, whereas internal social control mechanisms play a role in preventing unnecessary criminalization of medical personnel. **Conclusion:** Medical disputes are predominantly non-clinical and should be managed through non-litigation approaches supported by Forensic and Medicolegal Medicine to ensure fair, objective, and sustainable dispute resolution.

1. Introduction

As a constitutional state, Indonesia requires healthcare services to meet both clinical and legal standards. Law No. 17/2023 reinforces hospitals'

legal responsibilities, including the obligation to protect healthcare workers. Legal disputes involving patients often arise from dissatisfaction,

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misunderstandings, or alleged negligence, each of which carries significant legal implications.^{1,2}

Forensic and medicolegal disciplines play a key role in evaluating such cases through medical record audits, *visum et repertum*, and the 4D framework (Duty, Deviation, Damage, Direct Cause).³ However, medicolegal analysis alone cannot fully explain the social factors that drive patient complaints against physicians.⁴ Criminological theories of labeling, conflict, and social control help clarify how communication gaps, institutional weaknesses, and emotional stress can escalate disputes into legal conflicts.^{5, 6, 7, 8, 9}

Despite existing regulations, many Indonesian hospitals still face challenges, including a limited number of forensic specialists, inconsistent documentation, and weak coordination with legal authorities.^{10, 11} Prior studies have often examined malpractice or legal protection separately, with little integration of medicolegal and criminological perspectives.^{12, 13}

RS X Makassar offers a relevant case owing to its role as a referral center that frequently handles medicolegal disputes. Issues such as inconsistent procedures and low legal awareness indicate gaps between regulations and practices.

This study aims to analyze medical disputes at RS X Hospital Makassar through a criminological lens within the framework of Forensic and Medicolegal Medicine, contributing to the development of fair, objective, and sustainable medical dispute resolution.

2. Methods

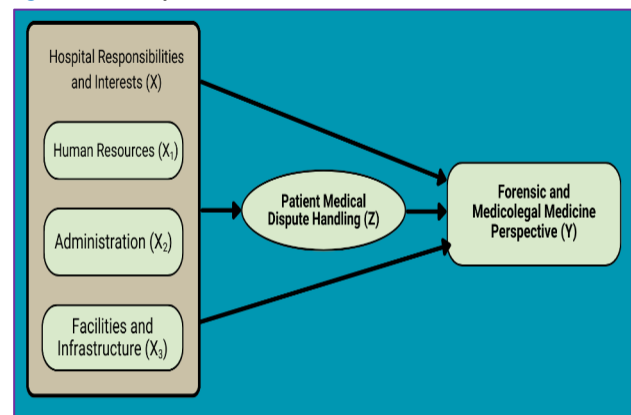
This study employed a mixed-methods approach^{14, 15}, integrating quantitative analysis through questionnaires with qualitative insights from in-depth interviews to comprehensively examine medical dispute handling at Hospital X in Makassar, a regional referral hospital with an active Medicolegal Clinic, conducted between February 2024 and October 2025 (Figure 1). The quantitative component analyzed the influence of hospital legal liability, patient legal case handling mechanisms, and the application of Forensic Medicine and Medicolegal principles, while the qualitative component explored legal, organizational, and criminological dimensions that could not be fully captured statistically. Data sources consisted of primary data from questionnaires and interviews, and secondary data including medical records, audit reports, medicolegal

documents, regulations, and scientific literature. Using purposive sampling, 35 patient respondents who had submitted complaints or medical disputes, along with key informants, were included.

Considering the limited sample size, this study was designed as a quantitative exploratory pilot study aimed at identifying preliminary patterns and contributing factors of medical disputes. Quantitative data were measured using a five-point Likert scale and analyzed through descriptive statistics and exploratory path analysis, supported by validity, reliability, and classical assumption tests to ensure robust and unbiased results, ultimately generating an initial conceptual model to guide future research with larger samples. The path analysis was applied in an exploratory manner to examine potential relationships among variables.

The Institutional Ethics Committee determined that this study was exempt from full ethical review because it involved anonymous survey data and posed minimal risk to participants.

Figure 1: Conceptual Framework



3. Results

Forms and Criminological Analysis of Patient Medical Disputes Based on Forensic and Medicolegal Theory Perspectives

The following data summarizes and analyzes the types of medical disputes reported by 35 respondents at Hospital X Makassar. The classification was developed by grouping recurring patterns of patient complaints and subsequently linking each form of dispute with relevant criminological explanations, including labeling theory, conflict theory, and social control theory.

Based on the table 1, most medical disputes (more than 50%) stem from operational service aspects, particularly waiting times, rather than

substantive medical negligence. Disputes that actually lead to allegations of medical negligence are very minimal, and after analysis using a Forensic Medicine and Medicolegal approach (4D: duty, deviation, damage, direct cause), no elements of negligence were found to be fully fulfilled. These findings confirm that the majority of medical disputes at Hospital X Makassar are service-related, influenced by miscommunication, patient expectations, and social dynamics, rather than pure clinical errors.

Table 1 also shows that most medical disputes stem not from crime or medical negligence but from social dynamics, conflicts of interest, and labeling processes in healthcare interactions. Conflict theory dominates system- and service-based disputes, whereas labeling theory explains the escalation of complaints due to perceptions and stigma against medical personnel or hospitals. Social control theory plays a crucial role in limiting the escalation of disputes through objective forensic and medicolegal mechanisms.

Research Instrument Testing

The questionnaire items were evaluated through validity and reliability testing using an initial distribution to 35 patients of Hospital X in Makassar who had submitted service complaints. All 25

statement attributes were valid at a 95% confidence level. The reliability test showed a Cronbach's α value above 0.60, indicating low measurement error and consistent results over repeated use.

Path Analysis.

Table 2 presents the results of the path analysis examining the direct and indirect relationships among hospital legal responsibility (X), forensic and medicolegal principles (Y), and the handling of patient medical disputes (Z) at Hospital X Makassar.

Note: Path a represents the effect of X on Y, Path b represents the effect of Y on Z, Path c represents the total effect of X on Z, and Path c' represents the direct effect of X on Z after controlling for Y. The mediation effect of Y is weak, indicating that forensic and medicolegal principles do not significantly mediate the relationship between hospital legal responsibility and the handling of medical disputes.

Overall, the path analysis indicates that hospital legal responsibility has a strong direct effect on the handling of medical disputes, while the mediating role of forensic and medicolegal principles is relatively weak, suggesting that dispute resolution is predominantly influenced by direct institutional and legal mechanisms rather than indirect medicolegal mediation.

Table 1: Forms and Criminological Analysis of Patient Medical Disputes Based on Forensic and Medicolegal Perspectives at Hospital X Makassar (n = 35)

No	Forms of Medical Disputes	Short Description	Hospital Interests and Responsibilities	Number of Cases	Percentage (%)	Relevant Criminological Analysis	Forensic and Medicolegal Perspectives
1	Long service waiting time	Complaints regarding long queues for registration, polyclinics, pharmacies, or doctor delays due to visits/emergencies, but not proven by 4D analysis	Administration (X ₂)	18	51,4	Conflict Theory Disputes arise from the imbalance of interests between patient needs for prompt service and limited hospital resources. Conflicts are triggered by patient expectations that do not align with the capacity of the service system.	Duty: Long waiting times do not indicate deviation, as hospitals follow standards, increase staff, and prioritize care amid high patient volumes. Damage: Generally, no direct medical harm is found, only subjective discomfort or dissatisfaction. Direct Causal Relationship: There is no direct causal link between waiting time and medical harm, thus negligence criteria are not met.
2	Miscommunication of medical/administrative information	Patients/families feel that they have not been explained, even though informed consent or an explanation has been given, but this has not been proven by 4D analysis.	HR (X ₁)	7	20,0	Labeling Theory: Patient misunderstandings can lead to medical personnel or hospitals being labeled as "non-transparent" or "negligent," even if procedures and informed consent have been followed. Negative labels arise from	Duty: Medical information was delivered per informed consent standards, with no deviation, despite the patient's limited subjective understanding Damage: The loss was non-medical and mild psychological, with no clinical impact. Direct Causal Relationship: No direct causal relationship was found, as no medical injury

						the patient's subjective interpretation.	resulted from the miscommunication.
3	Patient referral and discharge disputes	Refusal of referral, objection to being discharged/forced to go home (Hospital type B should be Hospital type A), but not proven by 4D analysis	Facilities and infrastructure (X ₃)	4	11,4	Conflict Theory & Social Control: Conflict arises from differences in medical and emotional perceptions between patients and families. Hospitals exercise social control through referral standards and clinical policies that patients may not always understand.	Duty: Physicians are required to make referrals and discharges according to medical indications and clinical standards. Deviation: There was no deviation, as referral/discharge decisions were in accordance with guidelines. Damage: There were no cases of objective health damage. Direct Causal Relationship: A causal relationship between the medical action and the loss was not proven forensically and medicolegally, therefore, the element of negligence was not met.
4	Administrative and financing disputes (BPJS/General)	Complaints related to BPJS status, non-covered costs, or changes in patient status, but not proven by 4D analysis	Administration (X ₂)	3	8,6	Conflict Theory: Disputes are fueled by the complex structure of the healthcare financing systems. Information imbalances and perceived administrative power give rise to conflicts between patients and institutions.	Duty: The hospital is obligated to carry out administration in accordance with the applicable regulations and financing systems. Deviation: No administrative errors occurred; miscommunication stemmed from limited understanding of BPJS rules, and application use did not constitute medicolegal violations. Damage: No physical or medical damage was found to the patient. Direct Causal Relationship: There was no direct causal relationship between the administrative issues and the patient's medical injury because no physical injury was found.
5	Perception of unprofessional /unfriendly service	Allegations of unfriendly or unprofessional behavior of officers without evidence of medical negligence, but not proven by 4D analysis	HR (X ₁)	2	5,7	Labeling Theory: Subjective assessments of an officer's behavior lead to negative labeling of an individual or institution, even when there is no apparent ethical or legal violation.	Duty: Healthcare workers have an ethical obligation to behave professionally. Deviation: A perceived unfriendly impression was observed, while no deviation from professional standards was observed because the medical and healthcare workers were providing emergency care to another patient. Damage: No medical harm was found. Direct Causal Relationship: There was no direct causal relationship between the healthcare worker's behavior and the patient's health impairment.
6	Alleged medical action/medical negligence	Initial complaints pointed to allegations of negligence, but were not proven by 4D analysis.	Facilities and infrastructure (X ₃)	1	2,9	Social Control Theory: Hospitals and Forensic Medicine and Medicolegal mechanisms serve as formal social control tools to objectively assess whether there are	Duty: Doctors have legal and professional obligations to adhere to medical standards of care. Deviation: There was no deviation from professional standards because it was only related to the hospital's application system experiencing a network outage,

						elements of medical negligence based on a 4D analysis.	which resulted in a patient's status changing from alive to dead. Damage: There was no actual damage or injury to the patient, only material loss due to the change in status, which can be addressed with system repairs. Direct Causal Relationship: There is no causal relationship between the medical action and the patient's loss because it is not directly related to the medical injury but only to the change in status in the system.
Total				35	100		

Source: Research Data, 2025.

Table 2: Path Analysis Results of the Mediation Model (n = 35).

Path	Relationship	Standardized Coefficient (β)	Test Statistic	p-value	Effect Type	Interpretation
Path a	Hospital Legal Responsibility (X) → Forensic and Medicolegal Principles (Y)	-0.112	F = 0.420	0.740	Direct	Not significant
Path b	Forensic and Medicolegal Principles (Y) → Handling of Medical Disputes (Z)	0.487	t = 3.215	0.003	Direct	Significant positive effect
Path c	Hospital Legal Responsibility (X) → Handling of Medical Disputes (Z)	0.652	F = 9.380	0.000	Direct	Significant effect
Path c'	Hospital Legal Responsibility (X) → Handling of Medical Disputes (Z) (controlling Y)	0.598	—	< 0.01	Direct (Adjusted)	Still significant
Indirect Effect	X → Y → Z	-0.054	—	—	Indirect	Weak mediation effect
Total Effect	X → Z (c + ab)	0.598	—	—	Total	Dominated by direct effect

4. Discussion

To further interpret the empirical findings, a criminological framework was applied to explain the underlying mechanisms of medical disputes.

Table 3: Criminological Interpretation of Medical Disputes Based on Forensic and Medicolegal Perspectives (n = 35).

Type of Medical Dispute	Frequency (%)	Key Characteristics	Criminological Interpretation
Waiting time complaints	51.4%	Service delay, high patient load	Conflict theory
Miscommunication	20%	Information gap, misunderstanding	Labeling theory
Referral disputes	11.4%	Disagreement on medical decisions	Conflict theory
Administrative issues	8.6%	BPJS, financing confusion	Social control theory
Service perception	5.7%	Attitude, communication tone	Labeling theory

Table 3 presents an integrated analysis linking the empirical forms of medical disputes with relevant criminological theories to explain their underlying dynamics. It demonstrates that most disputes arise from systemic, communication, and perceptual factors rather than actual medical negligence, with conflict, labeling, and social control theories providing the primary explanatory frameworks. This confirms that medical disputes are multidimensional phenomena that must be

interpreted beyond purely clinical or legal perspectives.

Overview of the Forms and Factors Causing Patient Medical Disputes at Hospital X in Makassar

Based on 35 respondents at Hospital X Makassar, medical disputes were multidimensional, shaped by service quality, communication, administration, structural limits, and psychosocial factors. The most frequent dispute involved long waiting times (51.4%), reflecting gaps between patient expectations and hospital constraints, rather than medical malpractice. Patients often do not fully understand this situation, which triggers negative perceptions of the hospital.¹⁶ The second most common form of dispute involved miscommunication of medical and administrative information, occurring in seven cases (20%). Although medico-legal verification showed that explanations and informed consent were generally provided according to procedure, limited health literacy, patients emotional conditions, and complex medical terminology contributed to misunderstandings. This indicates that many medical disputes stem from differences in interpretation rather than from breaches of professional standards.¹⁷

Disputes concerning patient referrals and discharge decisions were identified in four cases (11.4%). These disputes generally arose from conflicts between clinical judgments based on professional standards and the emotional expectations of patients' families, who in some instances perceived referral or discharge decisions as neglect despite their basis in medical indications, service efficiency, and patient safety considerations. This confirms that medical disputes are inseparable from the psychological and relational factors between medical personnel and patients.¹⁸ Administrative and financing-related disputes were identified in three cases (8.6%), primarily involving the BPJS Kesehatan system. These complaints included changes in membership status, costs not covered by insurance, and inconsistencies in administrative procedures, where the complexity of healthcare financing regulations often led patients to perceive the hospital as obstructing access to services. In this context, disputes arise as a consequence of complex structural systems, not from the individual errors of medical staff.¹⁹

Another form of dispute involved perceptions of unprofessional or unfriendly service, reported in two cases (5.7%). These disputes were largely subjective, without evidence of ethical or legal violations, and were mainly influenced by staff attitudes, communication style, and patients' expectations for empathy and personal attention. Factors such as healthcare worker fatigue and high service burden influence the dynamics of these interactions.^{20, 21}

Interestingly, among all analyzed dispute cases, only one case (2.9%) explicitly indicated alleged medical negligence.²² However, a forensic and medicolegal review using the 4D principle (duty, deviation, damage, and direct cause) showed that the case did not fully satisfy all elements required to establish medical negligence.²³ These findings underscore that most medical disputes do not automatically carry medicolegal implications, as disputes at early stages are predominantly administrative or social in nature, with forensic assessment becoming relevant only when there is a clear indication of deviation from professional standards.^{4, 18, 24, 25}

Relationships between Variables and Criminological Analysis of Patient Medical Disputes

1. Relationships Between Variables

The statistical results show that the simultaneous regression model assessing the influence of hospital interests and legal responsibility on patient medical disputes is not significant, with only the facilities and infrastructure variable demonstrating a significant partial effect, indicating that patients most clearly perceive legal responsibility through the adequacy of services provided. In contrast, human resources and administrative aspects did not show significant relationships, as they tend to be viewed by patients as standardized components of the system. Furthermore, medical disputes do not function significantly as an intervening variable between hospital legal responsibility and the application of forensic and medicolegal principles, largely due to differences in data characteristics, where subjective patient perceptions contrast with the objective evidence required in forensic–medicolegal analysis, reinforcing the conclusion that most medical disputes are administrative or social in nature and only gain medicolegal relevance when there is a clear indication of professional standard violations.

2. Criminological Analysis of the Dynamics of Medical Disputes from a Forensic and Medicolegal Perspective

The findings show that medical disputes are predominantly driven by systemic and perceptual factors rather than professional medical negligence. Most disputes involve long waiting times (51.4%) and miscommunication of medical or administrative information (20%), while allegations of medical negligence account for only 2.9% of cases. From a criminological perspective, this pattern aligns with conflict and labelling theories, where disputes arise from unequal expectations, limited resources, and subjective patient interpretations that may lead to negative labelling of healthcare workers. In line with Health Law No. 17 of 2023, such disputes should not be immediately framed as criminal acts, as the law emphasizes legal protection, proportional dispute resolution, and the prevention of unnecessary criminalization of medical practice through ethical and disciplinary mechanisms.²⁰

Government Regulation No. 28 of 2024 further reinforces the prioritization of non-litigation dispute resolution and the use of forensic and medicolegal analysis, particularly the 4D framework, as an

objective filter before legal escalation. Most cases fail to meet the elements of damage and direct causality required for medical negligence. The Professional Disciplinary Council functions as a formal social control mechanism, ensuring balance between patient protection and professional accountability. Overall, medical disputes should be addressed through preventive measures, effective communication, internal mediation, and proportional forensic-medicolegal evaluation, reflecting a rational and fair approach to managing conflicts in healthcare services.²³

Theoretical and Practical Implications and Strategic Recommendations

Theoretically, this study confirms that medical disputes constitute a multidimensional socio-legal phenomenon and cannot be reduced to purely technical medical issues. A clear distinction exists between disputes based on patient perceptions and medical negligence, which can only be determined objectively through Forensic Medicine and Medicolegal analysis.²⁵ From a normative perspective, dispute handling is grounded in Indonesia's health and legal framework, emphasizing hospitals' responsibility to protect both patients and healthcare workers through adequate human resources, administration, and facilities. Criminologically, medical disputes are best explained through conflict, labelling, social control, and strain theories, highlighting information gaps, power imbalances, and systemic pressures rather than negligence alone. The study recommends prioritizing non-litigation, science-based dispute resolution through internal hospital mechanisms and forensic-medicolegal evaluation, with restorative justice as an alternative when internal resolution fails, to ensure proportional, fair, and humane outcomes for all parties.

Study Limitation

One limitation of this study is the relatively small sample size, which restricts the generalizability of the statistical results. Therefore, the findings should be interpreted as preliminary insights into the dynamics of medical disputes in hospital settings. Future studies with larger and more diverse samples are necessary to validate the proposed model.

5. Conclusion

This study concludes that medical disputes at Hospital X in Makassar are predominantly non-clinical

in nature, mainly arising from miscommunication, prolonged waiting times, referral and discharge issues, financial administration, and perceptions of healthcare workers' attitudes and professionalism, which are driven by information gaps, limited patient understanding, emotional factors, and systemic service constraints. Criminological analysis indicates that these disputes are largely shaped by conflict theory, with labelling and social control theories also playing significant roles, demonstrating that disputes emerge not only from alleged medical negligence but also from relational imbalances and perceptions of injustice. The application of forensic and medico legal science through an early 4D analysis functions as an effective mitigation mechanism to identify cases with legal potential, enabling fair, proportional, and predominantly non-litigation dispute resolution while preventing the criminalization of medical personnel.

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