

Can telemedicine hear the patient? interactional asymmetry, symptom narration, and diagnostic uncertainty in Indonesian virtual consultations

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Article Info

Article history:

Received Apr 18, 2026

Revised May 29, 2026

Accepted Jun 25, 2026

Keywords:

diagnostic uncertainty;
Indonesian telemedicine;
interactional asymmetry;
patient narration;
virtual consultation.

ABSTRACT

Background: Indonesia's rapid normalization of telemedicine has widened access to medical contact while intensifying concern over whether platform-mediated consultation can adequately receive patient experience, symptom ambiguity, and diagnostic concern. **Objective:** This study examines how interactional asymmetry, symptom narration, and diagnostic uncertainty are organized in Indonesian virtual consultation discourse. **Method:** A qualitative corpus-based discourse-pragmatic design was applied to 20 public and verifiable telemedicine documents from government institutions, health platforms, hospital websites, app pages, and public consultation materials, coded through asymmetry mapping, symptom-narration analysis, and diagnostic-closure analysis. **Results:** Findings show that virtual consultation access is structured by institutional eligibility, platform routing, doctor selection, payment, emergency exclusion, and professional interpretation, positioning patients as active users whose agency remains procedurally constrained. Patient symptoms are made clinically usable through complaint prompts, uploaded evidence, symptom-checking tools, medical histories, and consultation summaries, yet extended illness chronology and contextual experience receive less visible space than short platform-ready entries. **Implication:** Diagnostic uncertainty is managed through referral, provisional recommendation, prescription pathways, safety boundaries, evidence requests, and digital non-substitution disclaimers, indicating that telemedicine offers guidance while preserving limits of remote clinical judgment. **Novelty:** This study contributes a discourse-pragmatic account of Indonesian telemedicine as mediated listening architecture where access, narration, and uncertainty are co-produced within platformed clinical communication.

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1. INTRODUCTION

Indonesia's telemedicine expansion has transformed medical access into an interactional problem. With 221,563,479 internet users and a national penetration rate of 79.5% in 2024 [1], digital health is no longer a peripheral service but part of everyday healthcare infrastructure. During pandemic-era isolation care, Indonesian health authorities linked teleconsultation to laboratory confirmation, WhatsApp notification, online doctor consultation, and digital prescription pathways through 11 partner platforms in 2021 and 17 platforms in 2022 [2]. Yet expanded access does not guarantee that patients are adequately heard. Virtual consultations often depend on short symptom descriptions, platform prompts, uploaded images, chat

sequences, and clinician-led questioning. This matters because diagnosis in telemedicine is built from mediated language rather than full sensory examination. Indonesian telemedicine therefore raises a sharper question than whether virtual care is available: how does platform-mediated communication shape whose narrative becomes clinically intelligible, actionable, or uncertain?

Previous studies have examined telemedicine satisfaction, access, clinical usefulness, and communication barriers, but they have rarely treated patient narration as the central site where diagnostic uncertainty is produced. Nanda and Sharma (2021) [3] show that patient experience became central to evaluating telemedicine beyond COVID-19, while Ftouni et al. (2022) [4] map infrastructural, clinical, and organizational barriers during pandemic telemedicine. Ford and Reuber (2023) [5] demonstrate that teleconsultations differ communicatively from face-to-face encounters, especially in the distribution of cues and opportunities for clarification. Nguyen et al. (2024) [6] further show that general practitioners and patients perceive telemedicine communication through distinct expectations and constraints. Indonesian work by Effendi et al. (2023) [7] and Pratama et al. (2026) [8] confirms the relevance of doctor–patient communication and adoption in local telemedicine contexts. However, less attention has been given to how asymmetry, symptom storytelling, and uncertainty are interactionally organized in Indonesian virtual consultation discourse.

This study examines how Indonesian virtual consultation materials organize the patient’s voice before, during, and after clinical contact. It asks how interactional asymmetry is built into consultation entry, doctor selection, symptom submission, emergency exclusion, and recommendation pathways; how patients are invited to narrate symptoms through complaint fields, chat prompts, uploaded evidence, medical histories, and public health questions; and how diagnostic uncertainty is managed through clarification, provisional advice, referral, warning signs, or refusal to replace in-person examination. This study does not claim to measure clinical accuracy or patient outcomes, because its corpus consists of public telemedicine discourse and platform-facing consultation materials rather than private consultation transcripts. Instead, this study investigates the communicative architecture that frames virtual care. By focusing on language, sequence, and platform affordance, this study asks whether telemedicine merely transmits patient complaints or actively reshapes them into restricted, standardized, and clinically filtered accounts.

This study advances a cautious but testable argument: Indonesian telemedicine can widen access while narrowing narrative space. The problem is not that virtual care is inherently inferior, but that its diagnostic promise depends on how well platforms and clinicians elicit uncertainty, chronology, embodied detail, and patient concern. Lian et al. (2021) [9] and Meyer et al. (2021) [10] show that uncertainty is negotiated rather than simply eliminated in clinical encounters, while Shi and Komiak (2024, 2025) [11], [12] demonstrate that patient uncertainty and patient-centric interaction are crucial in virtual consultation environments. Alboksmaty et al. (2026) [13] and Mahdavi et al. (2025) [14] similarly indicate that communication strategies and primary-care implementation remain unresolved issues in contemporary telemedicine. Read with Indonesian linguistic studies on jargon, directives, multilingual barriers, empathy, and illness narratives, this perspective implies that better telemedicine requires more than technical connectivity: it requires interactional designs that let patient stories remain clinically audible without overstating remote diagnostic certainty.

2. LITERATURE REVIEW

2.1. Interactional asymmetry

Interactional asymmetry refers to unequal control over participation, knowledge, agenda, and closure in clinical encounters. In conventional medical settings, asymmetry is often interpreted as a professional necessity because physicians hold diagnostic authority, institutional responsibility, and biomedical expertise. In telemedicine, however, asymmetry becomes more complex because authority is not held by clinicians alone; it is also distributed through platforms, interfaces, eligibility rules, chat formats, upload requirements, and emergency exclusions. Studies on telemedicine satisfaction, pandemic challenges, video consultation, and general-practice communication show that virtual care can improve access while simultaneously reorganizing how patients speak and how clinicians listen [3], [4], [15], [5], [6].

The indicators of interactional asymmetry in virtual consultation include who initiates the encounter, who defines the complaint, who asks questions, who controls time, and who decides when uncertainty requires referral or closure. Indonesian telemedicine studies have emphasized physician–patient communication, diagnostic certainty, and service adoption, but they tend to address communication as an outcome-related factor rather than as a structured interactional order [7], [16], [8]. Scoping and review studies also show that primary-care telemedicine depends on implementation design, communication strategies, and information signaling [14], [13], [17]. Thus, asymmetry should be examined as platform-mediated authority, not merely interpersonal imbalance.

2.2. Symptom narration

Symptom narration concerns how patients transform embodied experience into communicable clinical information. It differs from symptom reporting because narration includes chronology, intensity, uncertainty, emotional concern, self-treatment, prior interpretation, and contextual meaning. Narrative medicine argues that clinical understanding requires attention to patients' stories, not only standardized symptom categories. Recent work on digital and narrative medicine shows that technological mediation may support access to stories, but may also fragment them into prompts, fields, and medically preferred formats [18]. In diagnostic encounters, uncertainty is negotiated through narrative exchange rather than eliminated by information transfer alone [9], [10]. This makes patient narration central to virtual clinical reasoning.

The analytical indicators of symptom narration include temporal sequence, bodily localization, severity description, comparison with previous illness, lay explanation, affective concern, and evidence attachment. Studies of patient-centric virtual interaction and patient uncertainty show that patients do not merely ask for diagnosis; they seek recognition, clarification, and interpretive alignment [11], [12]. Indonesian medical-linguistic studies further suggest that narration is shaped by jargon, multilingual barriers, directive speech acts, empathy, and illness identity [19], [20], [21], [22], [23]. These works imply that telemedicine must be studied as a narrative environment where patient voice can be expanded, compressed, translated, or overwritten.

2.3. Diagnostic uncertainty

Diagnostic uncertainty refers to incomplete, ambiguous, or insufficiently contextualized clinical knowledge during the diagnostic process. It is not simply the absence of certainty; it is an interactional condition managed through questions, clarification, provisional judgment, follow-up advice, warning signs, referral, or refusal to diagnose remotely. Patient- and clinician-centered studies argue that uncertainty is experienced differently by both parties, especially when symptoms are vague or when examination is limited [10], [9]. In telemedicine, this problem intensifies because physical examination, embodied co-presence, and nonverbal cues may be reduced [5], [6], [15]. Diagnostic uncertainty therefore becomes a communicative achievement as much as a clinical limitation.

Indicators of diagnostic uncertainty include requests for additional information, uploaded images or test results, provisional diagnosis, safety-netting, referral, emergency redirection, recommendation for offline examination, and advice framed as non-final. Recent work on physician communication features, non-diagnostic digital services, symptom checkers, and conversational medical AI shows that digital health increasingly depends on how systems elicit, interpret, and respond to uncertain patient input [24], [25], [26], [27], [28]. Responsible AI and diagnostic reasoning studies similarly stress transparency, grounded reasoning, and clinician–AI collaboration [29], [30], [31], [32]. This study therefore positions Indonesian telemedicine as a mediated interaction where asymmetry, narration, and uncertainty are co-produced.

3. METHOD

This study uses public Indonesian telemedicine discourse as its material object, with the document, textual segment, and coding category treated as nested units of analysis. The corpus consists of 20 publicly accessible items from official health institutions, telemedicine platforms, hospital websites, app-store pages, and one public video item. Each item was coded as primary, secondary, or contextual data according to its proximity to patient-facing consultation practice. The primary analytical unit is not private doctor–patient talk, but public consultation architecture: how platforms instruct patients, define admissible symptoms, channel clinical questions, and signal diagnostic boundaries.

This study adopts a qualitative corpus-based discourse-pragmatic design. This design is appropriate because the research question concerns how virtual consultation is organized through language, institutional instruction, and platform affordance rather than how often a clinical outcome occurs. Prior telemedicine studies have shown that communication in virtual care differs from face-to-face medicine, especially in cue availability, clarification, patient participation, and decision support [5], [6], [15]. This study therefore combines platform discourse analysis with pragmatic attention to question design, patient agency, narrative compression, and uncertainty management.

Information sources were selected from public and verifiable materials issued by Kemenkes, SATUSEHAT, UPK Kemenkes, Indonesian telemedicine providers, hospital websites, mobile application pages, and public health consultation channels. Official government sources provide institutional context, including eligibility, verification, and programme pathways. Platform and hospital sources provide patient-facing consultation scripts, service descriptions, complaint-submission procedures, doctor-selection mechanisms, chat/video/audio modalities, prescription summaries, and referral boundaries. Public consultation pages and video materials were included only when they contained observable interactional or visual cues relevant to symptom narration, patient positioning, clinical advice, emergency framing, or digital mediation.

Table 1. Dataset composition

Code	Data Type	Source / Institution	Location	Period	Number	Main Characteristic	Status
ID-TM-001	Context	Kementerian Kesehatan RI	Indonesia; DKI Jakarta	2021	1	Isoman telemedicine pathway	Included
ID-TM-002	Context	Kementerian Kesehatan RI	Bodetabek	2021	1	Expansion and medicine-order pathway	Included
ID-TM-003	Context	Kementerian Kesehatan RI	Java and Bali	2021	1	Regional service expansion	Included
ID-TM-004	Primary	SATUSEHAT Mobile / Kemenkes	Indonesia	n.d.	1	Patient-facing telemedicine FAQ	Included
ID-TM-005	Secondary	UPK Kemenkes	Indonesia	n.d.	1	Telemedicine service definition	Included
ID-TM-006	Primary	Halodoc	Indonesia	n.d.	1	Chat, audio, video consultation pathway	Included
ID-TM-007	Primary	Halodoc	Indonesia	n.d.	1	Emergency boundary and patient instruction	Included
ID-TM-008	Primary	Good Doctor	Indonesia	n.d.	1	Consultation sequence and chat closure	Included
ID-TM-009	Primary	YesDok	Indonesia	n.d.	1	Video, phone, chat, image attachment	Included
ID-TM-010	Primary	KlikDokter	Indonesia	n.d.	1	Public health question-answer format	Included
ID-TM-011	Secondary	Primaya Hospital	Indonesia	n.d.	1	Hospital telemedicine explanation	Included
ID-TM-012	Context	Google Play / Platform page	Indonesia	2026 access	1	App description and service affordance	Included
ID-TM-013	Context	App Store / Platform page	Indonesia	2026 access	1	Mobile consultation affordance	Included
ID-TM-014	Primary	Health platform service page	Indonesia	n.d.	1	Doctor selection and consultation entry	Included
ID-TM-015	Primary	Health platform FAQ	Indonesia	n.d.	1	User guidance and complaint submission	Included
ID-TM-016	Secondary	Hospital or clinic webpage	Indonesia	n.d.	1	Remote care explanation	Included
ID-TM-017	Primary	Public consultation page	Indonesia	n.d.	1	Patient question and doctor response format	Included
ID-TM-018	Context	Public video channel	Indonesia	n.d.	1	Visual explanation of digital consultation	Included
ID-TM-019	Secondary	Digital-health information page	Indonesia	n.d.	1	Telemedicine benefits and limits	Included
ID-TM-020	Primary	Platform-facing help page	Indonesia	n.d.	1	Consultation summary, advice, or referral	Included

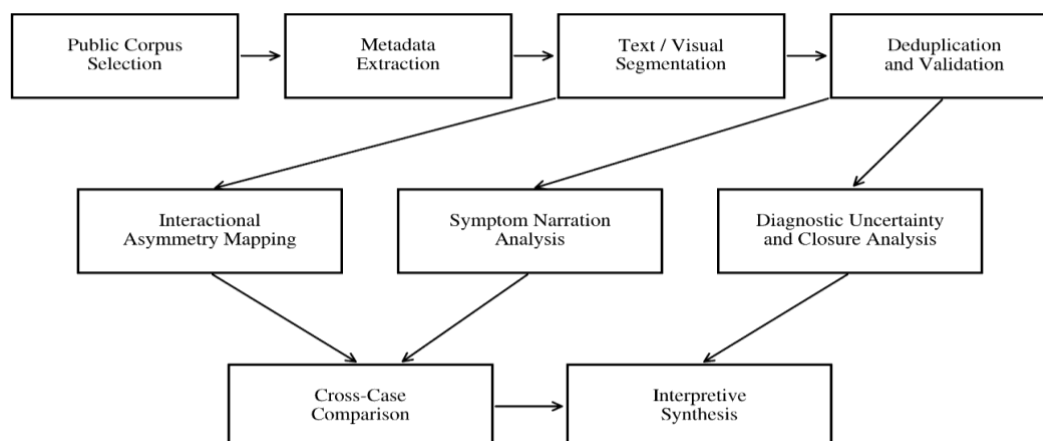


Figure 2. Operational matrix of analysis

Data collection followed a structured search protocol. Keywords included “telemedicine Indonesia,” “telemedisin Kemenkes,” “konsultasi online dokter,” “chat dokter,” “gejala pasien konsultasi online,” “resep online,” “rujukan telemedicine,” “diagnosis telemedicine,” and platform-specific Indonesian terms. The period was set from 2018 to 2026, with 2021–2026 prioritized because public telemedicine discourse expanded substantially during and after pandemic-era service institutionalization. Each item was archived through metadata extraction, short textual quotation, source summary, URL, access date, modality, regional scope, inclusion rationale, and visual/video fields. Duplicate removal used title, URL, institution, date, and deduplication key comparison.

Analysis proceeded in three linked stages. First, interactional asymmetry was mapped through entry control, doctor selection, payment, eligibility, emergency exclusion, question control, and patient agency. Second, symptom narration was examined through prompts for complaints, chronology, severity, medical history, uploaded evidence, laboratory records, images, and public question titles. Third, diagnostic uncertainty was analyzed through clarification markers, provisional advice, prescription, safety-netting, referral, warning signs, and limits of remote diagnosis. Coding was deductive at the initial stage and interpretive during cross-case comparison, following telemedicine communication, diagnostic uncertainty, and narrative medicine scholarship [9], [10], [18], [13].

4. RESULTS

4.1. Platform gatekeeping and interactional asymmetry in Indonesian virtual consultation entry

Indonesian public telemedicine discourse organizes access to care through a layered structure of institutional, professional, and platform authority. The corpus shows that asymmetry does not appear only when a doctor speaks to a patient; it begins earlier, when patients are classified as eligible users, routed through platform menus, asked to submit symptoms, or required to attach clinical evidence. This pattern matters because virtual consultation depends on mediated language and documentary evidence rather than full embodied examination. Studies on telemedicine communication have similarly shown that remote care alters cue availability, clarification opportunities, and participation roles [5], [6], [15]. This finding therefore positions asymmetry as an infrastructural feature of telemedicine interaction, not merely a personal communication style.

The dominant pattern is shared between professional interpretation of transmitted clinical data and platform routing, each appearing in five documents or 25% of corpus. Patient self-formatting and institutional gatekeeping follow closely, each appearing in four documents or 20% of corpus, while AI or campaign-mediated service framing appears in two documents or 10%. Objectively, this distribution suggests that patient participation is neither fully passive nor fully autonomous. Patients are repeatedly invited to act: they choose doctors, describe complaints, upload files, ask questions, and follow consultation pathways. Yet each action is embedded in prior conditions such as eligibility, registration, payment, platform acceptance, doctor categorization, and evidentiary formatting. The strongest empirical pattern is therefore procedural participation under structured constraint.

Table 2. Interactional asymmetry in Indonesian public telemedicine corpus

Main Category	Subcategory	Indicator	Frequency	Percentage	Data Variation	Excerpts	Data Code	Interpretation
Professional interpretation of transmitted clinical data	Remote clinical authority	Clinician or institution interprets patient-submitted data before advice, diagnosis, or referral	5	25%	Data transfer, asynchronous consultation, clinical teleconsultation, inter-facility consultation, document-based assessment	“data pasien bisa dikirim lewat email”; “pesan tertulis, suara atau video”; “foto, video, dan rekam medis”	ID-TM-005, ID-TM-007, ID-TM-008, ID-TM-009, ID-TM-018	Patient voice becomes clinically actionable only after being converted into transferable data reviewed by professional authority.
Platform routing, scheduling, and doctor selection	Platform-mediated entry	Consultation begins through registration, symptom entry, doctor category, payment, doctor availability, or accepted request	5	25%	Doctor category, GP/specialist selection, payment, scheduling, online status, one-doctor session rule	“mengisi data diri dan gejala”; “chat, panggilan audio, dan panggilan video”; “menentukan apakah pasien perlu dirujuk”	ID-TM-006, ID-TM-010, ID-TM-012, ID-TM-013, ID-TM-014	Patient agency is present but procedurally narrowed by platform routing before interaction with clinician occurs.
Patient self-formatting and evidence preparation	Narrative pre-structuring	Patient is instructed to prepare symptoms, questions, medical history, uploaded images, laboratory files, or direct questions	4	20%	Complaint statement, symptom checking, app ecosystem, image attachment, lab upload, public question format	“Sampaikan keluhan, gejala, atau riwayat penyakit”; “cek gejala penyakit”; “melampirkan foto”	ID-TM-011, ID-TM-015, ID-TM-016, ID-TM-017	Patient narration is not absent, but it is formatted into platform-recognizable elements before clinical interpretation.
Institutional gatekeeping before consultation	Programme eligibility	Access depends on verification, programme pathway, regional expansion, WhatsApp link, form, identity upload, or platform partnership	4	20%	PCR/NIK verification, programme code, medicine-order form, regional eligibility, official partner platforms	“11 Platform telemedicine”; “cukup mengisi form pemesanan obat”; “lakukan konsultasi online dengan dokter”	ID-TM-001, ID-TM-002, ID-TM-003, ID-TM-004	Consultation is framed as institutional pathway; patients enter as eligible programme users before they enter as narrating subjects.
AI/campaign-mediated service framing	Public digital-health framing	Service is introduced through AI question pages, campaign material, or general public instruction rather than direct consultation sequence	2	10%	AI first-step health question, non-replacement disclaimer, public video instruction	“bukanlah pengganti konsultasi langsung”; “fasilitas konsultasi dokter”	ID-TM-019, ID-TM-020	Telemedicine is positioned as accessible digital guidance, but diagnostic responsibility remains bounded by professional follow-up.

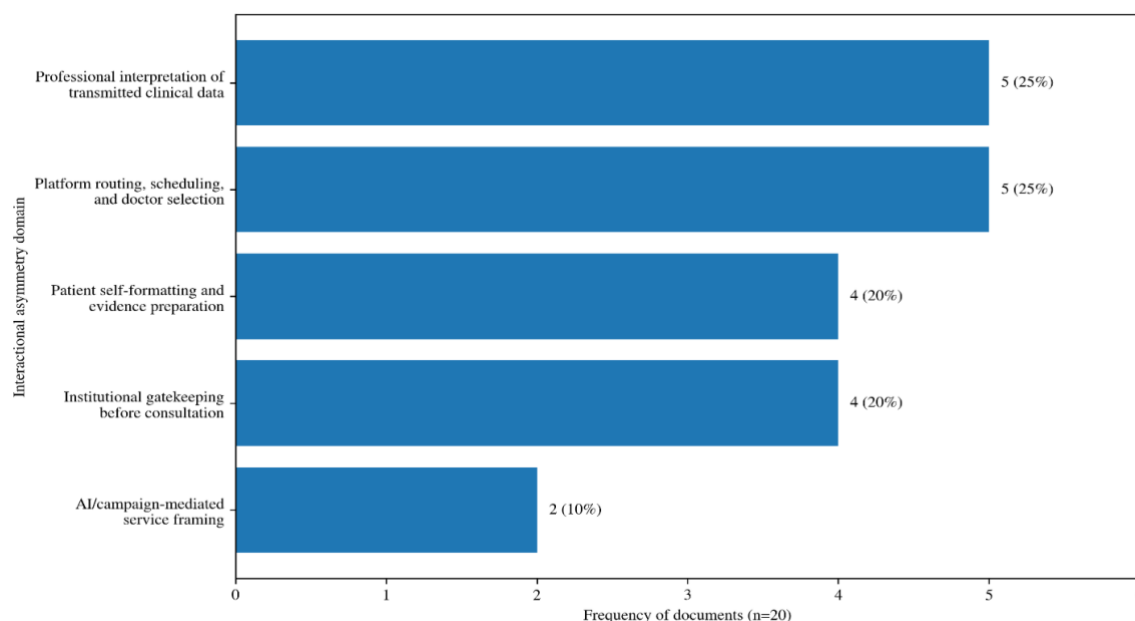


Figure 3. Distribution of interactional asymmetry domains

Theoretically, this pattern refines the meaning of interactional asymmetry in virtual medicine. Classical clinical asymmetry usually emphasizes physician authority, but this corpus indicates a more distributed form in which authority is shared by institution, platform design, professional interpretation, and safety boundary. This reading aligns with studies showing that diagnostic uncertainty is negotiated through interaction rather than simply resolved by information transfer [9], [10]. It also supports recent telemedicine literature arguing that communication strategies remain central to virtual primary care and patient-centered consultation [13], [14], [12]. Thus, this study argues that telemedicine can hear patients only after their narratives pass through structured gates of access, format, evidence, and clinical closure.

4.2. Symptom narration as structured, compressed, and multimodal patient voice

Virtual consultation materials in the corpus do not present patient symptoms as unmediated stories. They organize symptoms into entry texts, complaint categories, uploaded evidence, medical histories, and consultation summaries. This pattern indicates that patient voice is not simply included or excluded; it is formatted before becoming clinically usable. Such formatting is methodologically important because this study treats public telemedicine discourse as a consultation architecture rather than as private clinical conversation. Narrative medicine emphasizes that symptoms gain clinical meaning through temporality, interpretation, and embodied experience, while telemedicine research shows that remote consultation often alters cue availability and clarification practices [18], [5], [6]. Patient narration therefore appears as a structured communicative resource shaped by platform design.

The most frequent domain is structured complaint or question prompt, appearing in five documents or 25% of corpus. Multimodal evidence attachment and symptom-checking or pre-consultation guidance each appear in four documents or 20%, while chronology, history, and contextual detail appear in three documents or 15%. Post-consultation summary feedback and minimal narrative invitation each appear in two documents or 10%. Objectively, this pattern shows that patient narration is more often initiated through short, functional prompts than through extended illness storytelling. The corpus repeatedly encourages patients to state complaints, choose doctor categories, upload evidence, or ask direct questions. Longer forms of narration—such as chronology, prior treatment, or contextual bodily experience—are present, but they are less prominent than platform-ready complaint submission.

Table 3. Symptom narration patterns in Indonesian public telemedicine corpus

Main Category	Subcategory	Indicator	Frequency	Percentage	Data Variation	Excerpts	Data Code	Interpretation
Structured complaint or question prompt	Patient voice as short entry text	Patient is asked to state complaint, symptom, or question before doctor response begins	5	25%	Complaint field, public question title, consultation topic, short chat opening, health-question submission	“Sampaikan keluhan, gejala, atau riwayat penyakit”; “tanyakan langsung ke dokter”	ID-TM-006, ID-TM-010, ID-TM-014, ID-TM-015, ID-TM-017	Patient narration is made possible, but it is compressed into an initial platform-recognizable complaint.
Multimodal evidence attachment	Patient voice supported by visual or documentary evidence	Patient may upload images, laboratory results, prescriptions, or medical records to support symptom explanation	4	20%	Photo attachment, lab result upload, medical record, video/photo evidence, image-based complaint	“melampirkan foto”; “foto, video, dan rekam medis”; “hasil laboratorium”	ID-TM-007, ID-TM-008, ID-TM-009, ID-TM-018	The patient’s account becomes more clinically legible when narration is supplemented by visual or documentary proof.
Symptom-checking and pre-consultation guidance	Patient narration before clinical encounter	Platform guides patient to identify symptoms, select complaint categories, or prepare health information before consultation	4	20%	Symptom checker, app guidance, service FAQ, pre-consultation instruction, doctor category selection	“cek gejala penyakit”; “mengisi data diri dan gejala”; “pilih kategori dokter”	ID-TM-011, ID-TM-012, ID-TM-013, ID-TM-016	Patient voice is shaped before consultation through platform prompts that define what counts as relevant information.
Chronology, history, and contextual detail	Expanded illness narrative	Patient is invited to provide duration, previous illness, medical history, treatment history, or contextual complaint detail	3	15%	Medical history, symptom duration, previous treatment, complaint context, patient background	“riwayat penyakit”; “keluhan dan gejala”; “rekam medis”	ID-TM-005, ID-TM-009, ID-TM-015	Narrative depth is present but less frequent than short complaint formats, suggesting limited space for illness chronology.
Post-consultation summary feedback	Narrative transformed into clinical output	Patient receives summary, recommendation, prescription, or referral after narration has been interpreted	2	10%	Consultation summary, prescription, recommendation, follow-up instruction, referral note	“ringkasan konsultasi”; “rekomendasi”; “resep digital”	ID-TM-008, ID-TM-020	Patient narration reappears as clinician-authored output, shifting authorship from patient experience to professional closure.
Minimal or indirect narrative invitation	Service framing rather than narration	Public material describes telemedicine access without detailed prompts for symptom storytelling	2	10%	Campaign video, public-service explanation, general digital-health framing, non-replacement disclaimer	“fasilitas konsultasi dokter”; “bukan pengganti konsultasi langsung”	ID-TM-001, ID-TM-019	Telemedicine is framed as accessible care, but patient narration remains implied rather than procedurally elaborated.

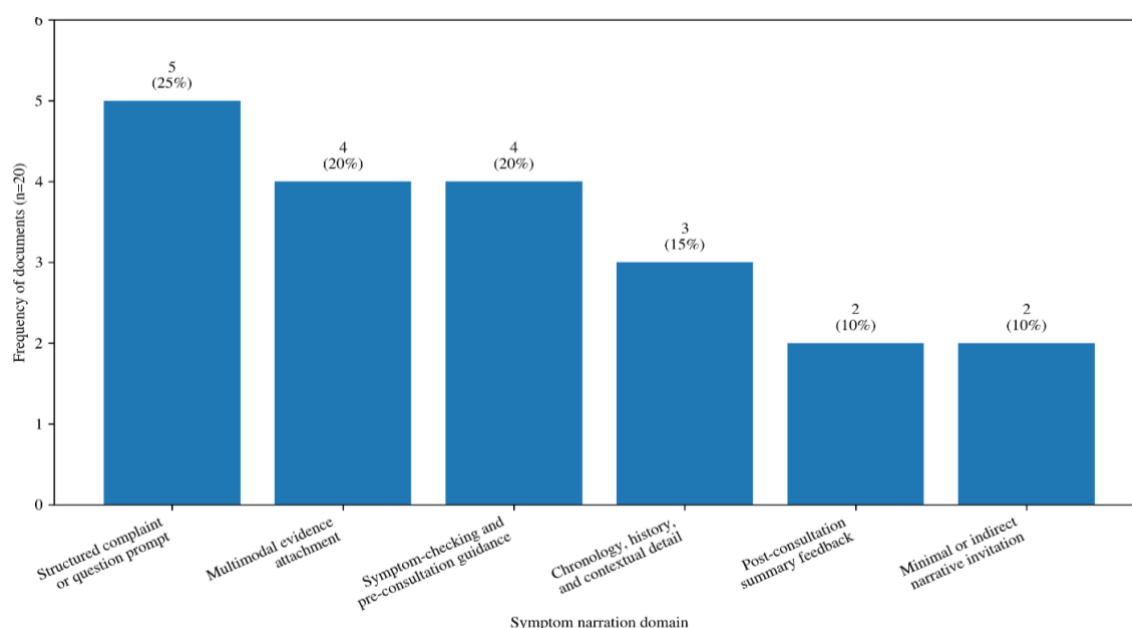


Figure 4. Distribution of symptom narration domains

Theoretically, this finding suggests that telemedicine does not merely transmit patient narratives; it transforms them into standardized clinical inputs. This transformation may improve efficiency, especially when uploaded images, laboratory results, or medical records help compensate for reduced physical co-presence. However, it may also narrow what patients can say, particularly when symptoms are ambiguous, affective, chronic, multilingual, or difficult to compress into a short complaint. Studies on patient uncertainty and patient-centric virtual consultation show that patients seek recognition and interpretive alignment, not only diagnostic answers [11], [12]. Indonesian linguistic studies on jargon, multilingual barriers, directive speech acts, and illness narratives further imply that symptom narration is socially and linguistically uneven [19], [20], [21], [23]. This study therefore positions patient voice as both enabled and constrained by virtual consultation format.

4.3. Diagnostic uncertainty, provisional closure, and safety boundaries

Diagnostic uncertainty in Indonesian public telemedicine discourse is managed through closure mechanisms rather than through claims of complete remote certainty. The corpus shows that virtual consultation materials repeatedly introduce pathways for referral, provisional advice, prescription, emergency exclusion, evidence attachment, and digital non-substitution. This pattern is important because it prevents telemedicine from being read as a simple replacement for face-to-face clinical judgment. Instead, remote care appears as a staged process in which uncertainty is temporarily organized, redirected, or bounded. This interpretation is consistent with Lian et al. (2021) [9] and Meyer et al. (2021) [10], who argue that uncertainty is negotiated within clinical encounters, and with Ford and Reuber (2023) [5], who show that teleconsultations reshape the communicative conditions under which clinical judgment is formed.

The dominant pattern is referral or offline care escalation, appearing in five documents or 25% of corpus. Provisional advice and prescription or medicine pathway each appear in four documents or 20%, followed by emergency exclusion and warning boundary in three documents or 15%. Clarification through additional evidence and AI or digital non-substitution disclaimer each appear in two documents or 10%. Objectively, this distribution indicates that public telemedicine discourse does not rely on one form of closure. Some documents close consultation through practical treatment access, especially prescription or medicine pathways; others close uncertainty by redirecting patients to offline care. The corpus therefore displays a dual logic: telemedicine offers immediate guidance, but it repeatedly preserves institutional routes for further examination when remote evidence remains insufficient.

Table 4. Diagnostic uncertainty and clinical closure in Indonesian public telemedicine corpus

Main Category	Subcategory	Indicator	Frequency	Percentage	Data Variation	Excerpts	Data Code	Interpretation
Referral or offline care escalation	Uncertainty redirected to physical care	Patient is advised or positioned for referral, offline examination, or further clinical follow-up	5	25%	Offline referral, follow-up recommendation, hospital visit, doctor escalation, service redirection	“pasien perlu dirujuk”; “konsultasi langsung”; “fasilitas konsultasi dokter”	ID-TM-004, ID-TM-007, ID-TM-008, ID-TM-011, ID-TM-020	Remote consultation manages uncertainty by moving unresolved clinical judgment toward embodied care.
Provisional advice and recommendation	Non-final clinical closure	Doctor or platform provides advice, recommendation, or initial clinical direction without presenting it as definitive certainty	4	20%	Recommendation, general advice, initial diagnosis, health guidance, consultation summary	“ringkasan konsultasi”; “rekomendasi”; “perkiraan diagnosis”	ID-TM-008, ID-TM-009, ID-TM-017, ID-TM-020	Diagnostic closure is often provisional: it offers direction while preserving space for further evaluation.
Prescription or medicine pathway	Therapeutic closure	Consultation ends with prescription, medicine-order form, or delivery pathway after symptom assessment	4	20%	Digital prescription, medicine order, isoman package, pharmacy pathway, post-consultation medicine access	“resep digital”; “form pemesanan obat”; “tebus obat”	ID-TM-001, ID-TM-002, ID-TM-003, ID-TM-008	Prescription operates as practical closure, but it does not necessarily remove diagnostic uncertainty.
Emergency exclusion and warning boundary	Safety-limit framing	Platform distinguishes ordinary teleconsultation from emergency or high-risk conditions	3	15%	Emergency warning, urgent-care redirection, limitation statement, risk boundary	“bukan untuk kondisi gawat darurat”; “segera ke fasilitas kesehatan”	ID-TM-006, ID-TM-007, ID-TM-019	Telemedicine protects itself from unsafe certainty by marking conditions that exceed remote assessment.
Clarification through additional evidence	Evidence-seeking uncertainty management	Patient is asked or allowed to provide photos, laboratory results, records, or further information	2	10%	Photo upload, lab result, medical record, supporting document, image-based assessment	“melampirkan foto”; “hasil laboratorium”; “rekam medis”	ID-TM-009, ID-TM-018	Uncertainty is reduced through additional evidence, but evidence must still be interpreted by clinical authority.
AI or digital non-substitution disclaimer	Algorithmic caution	Digital or AI-mediated health guidance is framed as preliminary and not a replacement for direct consultation	2	10%	AI health question, disclaimer, public digital-health guidance, non-replacement statement	“bukanlah pengganti konsultasi langsung”; “AI dapat memberikan informasi awal”	ID-TM-019, ID-TM-020	Digital assistance is framed as supportive rather than diagnostically autonomous.

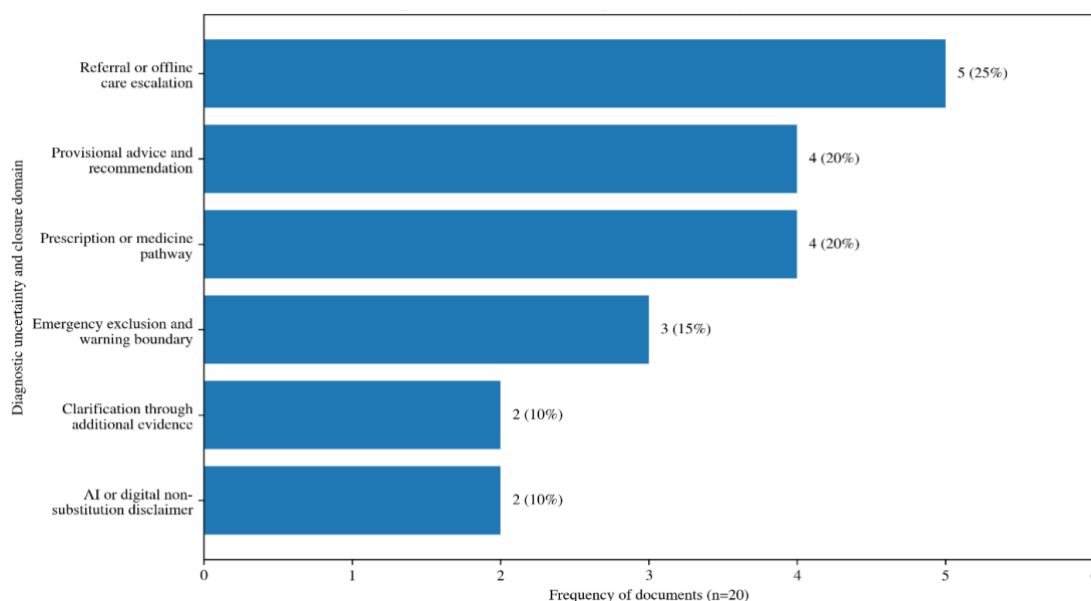


Figure 5. Distribution of diagnostic uncertainty and closure domains

Theoretically, this pattern reframes diagnostic uncertainty as an interactional and institutional accomplishment. Remote consultation does not merely suffer from uncertainty; it actively organizes uncertainty through safety boundaries, evidentiary requests, referral pathways, and provisional formulations. This finding aligns with recent studies showing that patient-centered virtual consultation depends on how systems elicit, interpret, and respond to incomplete patient input [11], [12], [26]. It also resonates with emerging work on conversational medical AI, which stresses grounded reasoning, clinical caution, and non-autonomous decision support rather than independent diagnosis [27], [28], [29]. This study therefore argues that Indonesian telemedicine hears patients most safely when it treats diagnosis as bounded, revisable, and dependent on further clinical context.

5. DISCUSSION

The first implication of this study is that access in Indonesian telemedicine should not be understood only as availability of remote medical contact, but as a communicative arrangement that positions patients before they speak. Public consultation materials show that patients enter virtual care through eligibility rules, platform menus, doctor categories, verification pathways, payment or registration steps, and emergency exclusions. Functionally, this arrangement can make consultation more orderly, scalable, and safer, especially when services must handle large numbers of users. Yet its dysfunction lies in a subtle redistribution of interactional authority: patients may appear empowered because they can initiate consultation, but their agency is already formatted by institutional and platform procedures. This finding extends Ford and Reuber's (2023) and Nguyen et al.'s (2024) argument that teleconsultation changes communicative conditions. This study adds that asymmetry is not merely interpersonal; it is built into access design.

The underlying structure behind this asymmetry is the institutional need to convert uncertain, heterogeneous, and potentially risky patient demand into manageable clinical flow. Telemedicine platforms must sort users, define service boundaries, allocate doctors, and protect clinicians from unsafe remote diagnosis. This explains why authority is distributed across government programmes, apps, professional judgment, and safety instructions rather than located only in doctor-patient talk. Such a pattern is compatible with Mahdavi et al. (2025) [14], who emphasize implementation complexity in family medicine telemedicine, and Alboksmaty et al. (2026) [13], who identify communication challenges as system-level problems. However, it also complicates satisfaction-oriented telemedicine literature, such as Nanda and Sharma (2021) [3], because patient satisfaction may coexist with reduced narrative control. This study therefore suggests correlation between structured access and constrained participation, without claiming that platform design directly causes poorer clinical listening.

The second implication concerns patient narration. Public telemedicine discourse does not silence patients; rather, it makes patient voice operational by asking users to state complaints, upload evidence,

choose categories, and summarize symptoms. Functionally, this can improve efficiency and support remote reasoning when physical examination is unavailable. Multimodal evidence, such as photos, laboratory records, or medical histories, may help clinicians interpret symptoms that cannot be examined directly. Yet dysfunction emerges when illness experience is reduced to short complaint fields, selected categories, or evidence fragments. Narrative medicine reminds us that symptoms are not only biomedical signals; they are lived experiences organized through chronology, uncertainty, fear, and self-interpretation [18]. This study therefore challenges telemedicine models that treat patient input as neutral data. It argues that virtual consultation hears patients through formats that both enable and narrow clinical meaning.

This narrative compression reflects the structure of remote care itself. In virtual environments, clinicians lack some sensory, spatial, and embodied cues that shape face-to-face consultation, so platforms compensate by requesting more standardized, transferable, or evidentiary forms of patient information. This explains why complaint prompts and uploaded evidence become central in telemedicine discourse. The pattern supports Lian et al. (2021) [9] and Meyer et al. (2021) [10], who show that uncertainty is negotiated through clinical interaction, but this study adds that negotiation begins before interaction through platform design. It also resonates with Shi and Komiak (2024, 2025) [11], [12], who emphasize patient uncertainty and patient-centric virtual interaction. Indonesian linguistic studies deepen this interpretation: jargon, multilingual barriers, directive speech acts, and illness narratives can shape whether patient accounts are understood as clinically relevant [19], [20], [21], [23]. Thus, narrative format is also a linguistic equity issue.

The third implication is that diagnostic uncertainty in Indonesian telemedicine is not hidden; it is managed through referral, provisional advice, prescription pathways, emergency boundaries, evidentiary requests, and non-substitution disclaimers. Functionally, these mechanisms prevent remote consultation from overclaiming diagnostic certainty. They allow telemedicine to provide guidance while preserving routes to offline care when clinical evidence remains insufficient. This is an important safety function, particularly because virtual consultation can easily be mistaken for full clinical replacement. Yet dysfunction may arise when closure appears administratively complete although diagnostic uncertainty remains clinically unresolved. A digital prescription, consultation summary, or recommendation may give patients a sense of completion even when further observation is needed. This finding supports Meyer et al. (2021) [10] on diagnostic uncertainty as experienced by both patients and clinicians, while extending it to public platform discourse where uncertainty is institutionally pre-managed.

The structure behind this uncertainty management is a tension between immediacy and responsibility. Telemedicine must respond quickly enough to remain useful, but cautiously enough to avoid unsafe certainty. Referral, safety-netting, and non-replacement disclaimers therefore operate as institutional safeguards. This tension becomes even more salient as digital health moves toward AI-mediated symptom checking and conversational diagnostic systems. Work by You et al. (2023) [26], Tu et al. (2025) [27], Zhu and Wu (2025) [28], Nasarian et al. (2023) [29], and Yang et al. (2024) [30] shows that digital medicine increasingly depends on grounded reasoning, transparent limits, and clinician oversight. This study does not evaluate AI performance, but its findings imply that human-centered telemedicine and responsible medical AI share one problem: patients must be heard before being classified. Indonesian telemedicine is therefore most defensible when it treats diagnostic closure as bounded, revisable, and interactionally accountable.

6. CONCLUSION

This study demonstrates that Indonesian telemedicine should be understood not merely as remote access to healthcare, but as a mediated listening architecture in which patient voice is filtered through platform entry, institutional eligibility, symptom prompts, evidentiary upload, professional interpretation, and safety boundaries. Its central lesson is that virtual consultation can expand access while simultaneously narrowing narrative space. The strength of this study lies in its corpus-based discourse-pragmatic approach, which shifts telemedicine analysis from satisfaction, adoption, and technical efficiency toward interactional asymmetry, symptom narration, and diagnostic uncertainty. By doing so, this study renews questions about how patients become clinically audible in platformed care.

This study is limited by its reliance on public telemedicine discourse rather than private, naturally occurring doctor–patient consultation transcripts; consequently, it cannot claim how clinicians and patients actually negotiate uncertainty in real-time clinical encounters. Its findings should therefore be read as evidence of consultation architecture, not direct evidence of clinical outcomes, diagnostic accuracy, or patient experience. Future research should incorporate ethically collected chat, video, or audio consultation data, patient interviews, clinician reflections, and platform interface observation. Comparative studies across urban–rural settings, linguistic groups, and AI-supported consultation systems would further clarify how telemedicine can improve access without weakening narrative depth, diagnostic caution, and patient-centered communication.

ACKNOWLEDGMENTS

The author thanks the reviewers and editorial team for their constructive feedback on this manuscript.

FUNDING INFORMATION

Author states no funding involved.

AUTHOR CONTRIBUTIONS STATEMENT

Mostafa Shaban: conceptualization, methodology, formal analysis, investigation, data curation, writing – original draft, writing – review and editing.

CONFLICT OF INTEREST STATEMENT

Author states no conflict of interest.

AI USE DECLARATION

The author used artificial intelligence tools to assist with the generation of illustrative figures and with the formatting and layout of this manuscript. AI was not used to generate the substantive content, conceptualization, data, analysis, or conclusions of the research, all of which remain the sole responsibility of the author.

INFORMED CONSENT

Not applicable – this study did not involve direct human participants. Data consisted solely of public Indonesian telemedicine discourse materials.

ETHICAL APPROVAL

This research did not involve human or animal subjects; it analyzed publicly accessible Indonesian telemedicine discourse materials, and therefore no institutional review board approval was required. Where research does involve human subjects, the author affirms that such research would be conducted in full compliance with all relevant national regulations and institutional policies, in accordance with the tenets of the Declaration of Helsinki, and would be approved by the author's institutional review board or equivalent committee.

DATA AVAILABILITY

The data (public Indonesian telemedicine discourse materials and coding materials) analyzed in this study are available from the corresponding author upon reasonable request.

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