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Healthcare Trust Under Uncertainty: Psychological and Institutional Pathways Through Which Patients Develop Confidence or Doubt

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Abstract

Healthcare trust becomes most consequential when patients cannot independently verify what clinicians or institutions know, whether recommendations are reliable, or how competing risks should be interpreted. Yet trust is often treated as a stable attitude or a single relational outcome. This conceptual article argues instead that healthcare trust is an uncertainty-sensitive judgment formed across interpersonal and institutional levels. Evidence concerning clinician behavior, participation, communication, organizational reputation, technological governance, prior encounters, and structural treatment provides patients with imperfect signals from which confidence or doubt may develop. The article distinguishes trust from trustworthiness, competence from benevolence and integrity, interpersonal confidence from system trust, and trust from distrust. It further treats information asymmetry and dependence as conditions that simultaneously constrain independent verification and create a need for interpretable evidence of trustworthiness. Building on these distinctions, the article develops a proposed multilevel account of trust formation, updating, rupture, and repair. The framework is explicitly theoretical rather than empirically validated and is bounded by differences in illness, culture, institutional history, digital infrastructure, power, access, and accumulated experience.

Keywords: Healthcare trust, Clinical uncertainty, Institutional trustworthiness, Patient–clinician relationships, Information asymmetry, Medical mistrust

Introduction

Trust is indispensable to healthcare precisely because patients frequently must make consequential decisions without possessing the same information, expertise, access, or institutional authority as those providing care. Despite its importance, physician trust has been measured through heterogeneous instruments and dimensions, complicating assumptions that different trust measures represent one interchangeable construct [1].

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Trust must also be distinguished from **trustworthiness**: a patient's willingness to rely on an organization is not equivalent to evidence that the organization deserves that reliance [2]. This distinction matters whenever healthcare asks patients to accept vulnerability while the quality of the underlying person, process, or institution remains only partly observable.

Trust is also dynamic. Repeated national survey evidence during the COVID-19 pandemic showed that trust in physicians and hospitals varied over time and was associated with health-related behavior, although such associations do not establish a simple causal sequence [3]. A theory of healthcare trust should therefore explain not only why confidence exists, but also how patients interpret new evidence, why doubt can coexist with continued reliance, how experience at one level can

influence another, and why trust may remain difficult to restore after a negative encounter.

This article develops an explicitly **proposed** multilevel account of trust under clinical uncertainty. It treats trust as an evaluative response to vulnerability rather than a synonym for satisfaction, compliance, optimism, or institutional legitimacy. The central argument is that patients develop confidence or doubt by interpreting imperfect signals about competence, benevolence, integrity, accountability, and reliability across clinicians, organizations, technologies, and health systems. These interpretations are conditioned by dependence, participation, prior experience, structural power, and the informational environment.

The nature of trust under clinical uncertainty

Clinical uncertainty is not one undifferentiated condition. It can arise from incomplete diagnosis, uncertain prognosis, variable treatment response, competing evidence, or limited predictability of individual outcomes. Existing scholarship therefore cautions against treating uncertainty as a single exposure with a uniform psychological consequence [4]. For trust formation, the important question is not merely whether uncertainty exists, but what the patient believes the uncertainty signifies.

Explicit acknowledgment of diagnostic uncertainty can alter patient expectations without necessarily destroying confidence. Experimental evidence using hypothetical consultations showed that communicating diagnostic uncertainty could reduce expectations of receiving antibiotics [5]. Relational consequences, however, depend on the manner in which uncertainty becomes visible. In an oncology vignette experiment, pronounced nonverbal uncertainty reduced physician trust, whereas verbal acknowledgment of uncertainty did not produce the same pattern [6]. Reviews of uncertainty communication likewise emphasize that wording, context, clinician behavior, decision stakes, and interpretation influence how uncertainty is received [7].

These findings argue against a simple equation between certainty and trustworthiness. A clinician who communicates unwarranted certainty may appear confident while providing poor epistemic grounds for trust. Conversely, transparent acknowledgment of what is unknown can be compatible with trust when accompanied by an intelligible explanation of what is known, what remains uncertain, and how decisions will be revisited. Across the uncertainty literature, the relationship is therefore conditional rather than intrinsically positive or negative [4, 6, 7].

The article consequently proposes that uncertainty becomes trust-relevant when patients interpret it as evidence concerning another property: competence, candor, commitment, preparedness, or institutional reliability. This proposition does not establish a validated psychological mechanism. It provides a theoretical distinction that can later be tested by separating uncertainty exposure from the meanings patients assign to it.

Interpersonal sources of trust

Interpersonal encounters provide patients with visible but imperfect evidence about whether reliance appears warranted. Relational behavior matters because patients often cannot directly inspect diagnostic reasoning, technical competence, or institutional processes. They instead encounter explanations, responsiveness, listening, respect, willingness to acknowledge limitations, and opportunities to participate.

Perceived clinician humility has been positively associated with patient trust and satisfaction [8]. Humility, however, should not be treated as proof of competence. Its relevance may lie in what it signals: openness to correction, reduced interpersonal dominance, or willingness to recognize informational limits. Patient-centered communication similarly appears to operate through more than information delivery. Among patients with cancer, participation mediated the relationship between patient-centered communication and trust, while preferred decision role modified the participation–trust relationship [9]. Thus, participation is not universally trust-producing; an opportunity valued by one patient may be unwanted or burdensome to another.

Qualitative evidence also shows that patients and caregivers understand safety relationally. Being heard, having access to information, receiving accountability, and participating in decisions were described as components of partnership in care [10]. These experiences are conceptually important because they show how trust can depend on whether vulnerability is accompanied by credible recognition of the patient's perspective.

The proposed interpretation is therefore that interpersonal trust cues operate as evidence about orientation toward vulnerability. Respect or participation may strengthen confidence when they help patients judge that their interests are being competently and sincerely

incorporated into care. Their meaning remains conditional on setting, preference, accessibility, culture, illness burden, and the patient's capacity to participate.

Competence, benevolence, and integrity judgments

Trust judgments can fail analytically when competence, benevolence, and integrity are compressed into a single favorable impression. A clinician may appear technically capable but indifferent to patient priorities; another may appear caring but unable to manage a complex problem. Healthcare technologies further expose these distinctions because responsibility may be distributed among clinicians, algorithms, organizations, and data infrastructures.

In a vignette study, physician use of artificial intelligence influenced dimensions of patient–physician trust, including judgments related to competence, integrity, and benevolence [11]. The significance is not that AI inevitably raises or lowers trust, but that technological mediation can change which actor is perceived as responsible for judgment. Qualitative work examining trust criteria for health AI similarly found that patients and physicians considered epistemic qualities such as accuracy and validity alongside clinician endorsement, personal values, and relational considerations [12].

Trustworthiness can also be assigned to different objects. Focus-group research with racially and ethnically diverse adults considering medical research distinguished qualities of investigators, research settings, and study procedures [13]. Although research participation is not interchangeable with clinical care, this evidence illustrates why a theory of healthcare trust should specify who or what is being trusted.

This article therefore treats competence, benevolence, and integrity as related but non-identical judgments. Their disagreement is theoretically meaningful. Confidence may remain qualified when one dimension is strong and another uncertain, and a patient may trust a clinician while distrusting the organization, technology, or procedure within which that clinician must operate.

Institutional reputation and system-level trust

Clinical relationships are embedded within organizations that allocate time, information, continuity, technology, staffing, complaint mechanisms, and decision authority. Organizational conditions can therefore alter the evidence available for judging even an individually trustworthy clinician. Qualitative work with patient–clinician dyads has shown that organizational factors influence healing relationships and that patients and clinicians may emphasize different qualities when describing trustworthiness [14].

Institutional reputation can also act as a prior context for interpreting new practices. In research on health-system use of AI, general trust in the health system was associated with trust in the system's capacity to use AI, whereas knowledge or health literacy did not account for the same relationship [15]. This suggests that a new technological practice may be evaluated partly through accumulated beliefs about the institution responsible for governing it.

Institutional trust is nevertheless changeable rather than immutable. A nationwide community-engagement initiative in Lao PDR was accompanied by short-term changes in trust among stakeholders and communities, although the design and context do not support claims of universal or durable causal effects [16]. Such evidence is better understood as showing that institutional relationships can be responsive to engagement under particular circumstances.

The proposed theoretical implication is that system trust operates neither entirely upstream nor entirely downstream of interpersonal trust. Organizational reputation can shape how an encounter is initially interpreted, while repeated encounters can supply new evidence about the institution. The direction and magnitude of that transfer remain empirical questions and are likely to vary with continuity, institutional visibility, community history, and whether responsibility for an outcome can be clearly attributed.

Information asymmetry and dependence

Information asymmetry gives healthcare trust its distinctive tension. Patients frequently depend on professionals because they cannot independently reproduce diagnostic reasoning, evaluate every treatment option, inspect institutional safeguards, or determine how data and technologies are being used. Dependence creates a verification constraint, but it also makes signals of trustworthiness unusually consequential.

Digital health illustrates this duality. Trust in healthcare providers has been associated with willingness to share personal health information through electronic health records [17]. Yet willingness to disclose information cannot be interpreted as evidence that privacy concerns have disappeared. A patient may share data because care requires it while remaining uncertain about secondary use, access, governance, or accountability.

Artificial intelligence produces a related problem of distributed expertise. Survey evidence indicates that patients vary in whether and how they expect to be notified when AI is used in healthcare [18]. Transparency may therefore be an important condition for accountable dependence, but disclosure by itself cannot guarantee trust. Information can be available yet incomprehensible, formally disclosed yet practically unactionable, or transparent about use while remaining opaque about responsibility.

Participation offers another potential response to asymmetry, but its effect should not be idealized. A 2025 scoping review of shared decision-making interventions found mixed results for trust, with many included studies not demonstrating significant increases [19]. Ceiling effects, heterogeneity in trust measurement, intervention design, and the fact that trust was often not the primary outcome complicate interpretation. Shared decision-making should consequently be treated as an opportunity to make reasoning and preferences mutually visible, not as a validated universal trust intervention.

The core theoretical distinction developed here is between constraint and opportunity. Asymmetry constrains independent verification of expertise, institutional procedure, and technological reasoning. Simultaneously, dependence creates opportunities for patients to evaluate how uncertainty is explained, whether participation is meaningful, whether data practices are accountable, and whether institutional responsibility is visible. Trust may grow when these signals provide credible grounds for reliance; doubt may persist when signals are conflicting, inaccessible, performative, or impossible to connect to accountable actors.

Because these conditions are difficult to compare in prose, **Table 1** distinguishes forms of dependence by the verification problem they create and the kinds of trust-relevant evidence available to patients.

Table 1. Verification Constraints and Trust-Relevant Opportunities Created by Dependence in Healthcare

Dependence or verification condition	Trust-relevant opportunity or constraint	Judgment consequence	Verification boundary
Dependence condition — Diagnostic and prognostic dependence			
What remains difficult for the patient to verify	Accuracy of reasoning and limits of available knowledge	**Observable basis for judging trustworthiness**	Candor about uncertainty, explanation of evidence, plan for reassessment
Context that changes its meaning	Severity, urgency, continuity, prior expectations	**Competing interpretation or unresolved uncertainty**	Visible uncertainty may represent honesty or may be interpreted as lack of competence
Consequence for confidence or doubt	Confidence depends on whether uncertainty is made intelligible and manageable		
Dependence condition — Decision dependence			
What remains difficult for the patient to verify	Comparative value of options and how preferences enter recommendation	**Observable basis for judging trustworthiness**	Opportunity to ask questions, express priorities, and participate at a preferred level
Context that changes its meaning	Decision preference, cognitive burden, language, accessibility, time pressure	**Competing interpretation or unresolved uncertainty**	Participation may be meaningful, unwanted, superficial, or constrained
Consequence for confidence or doubt	Participation can support confidence when it demonstrates responsiveness rather than merely transferring responsibility		
Dependence condition — Data dependence			
What remains difficult for the patient to verify	Who accesses health information and how it is subsequently used	**Observable basis for judging trustworthiness**	Clear stewardship, understandable privacy practices, identifiable accountability

Context that changes its meaning	Digital infrastructure, sensitivity of information, institutional history	**Competing interpretation or unresolved uncertainty**	Disclosure may reflect necessity rather than confidence in governance
Consequence for confidence or doubt	Data sharing and institutional trust should not be treated as equivalent		
Dependence condition — Technology-mediated dependence			
What remains difficult for the patient to verify	How algorithmic outputs are generated, validated, and incorporated into care	**Observable basis for judging trustworthiness**	Notification, clinician explanation, governance, human responsibility
Context that changes its meaning	Risk level, familiarity with technology, institutional reputation	**Competing interpretation or unresolved uncertainty**	Transparency may disclose use without making reasoning or accountability understandable
Consequence for confidence or doubt	Trust may attach differently to clinician, technology, or institution		
Dependence condition — Organizational dependence			
What remains difficult for the patient to verify	Whether continuity, staffing, escalation and complaint processes will function when needed	**Observable basis for judging trustworthiness**	Consistency, responsiveness, accountability, visible follow-through
Context that changes its meaning	Resource constraints, fragmented care, prior encounters	**Competing interpretation or unresolved uncertainty**	A trustworthy clinician may operate inside an institution perceived as unreliable
Consequence for confidence or doubt	Interpersonal and institutional confidence can diverge		
Dependence condition — Proposed cross-level condition			
What remains difficult for the patient to verify	How responsibility is distributed when several actors or systems contribute to one decision	**Observable basis for judging trustworthiness**	Coherent explanation of roles and responsibility across levels
Context that changes its meaning	Complexity of care and visibility of institutional processes	**Competing interpretation or unresolved uncertainty**	Patients may be unable to identify which actor should receive credit or blame
Consequence for confidence or doubt	Confidence may remain qualified even when one component appears trustworthy		

Note: The final row is an article-proposed synthesis rather than an empirically validated category. The table distinguishes reliance conditions from their interpretation and does not imply a ranking, threshold, prevalence, or causal effect.

A visual representation is also needed because dependence does not operate as one linear pathway. **Figure 1** therefore places the verification gap at the center of several unequal forms of dependence while preserving separate relational and institutional opportunities through which patients may obtain interpretable evidence of trustworthiness.

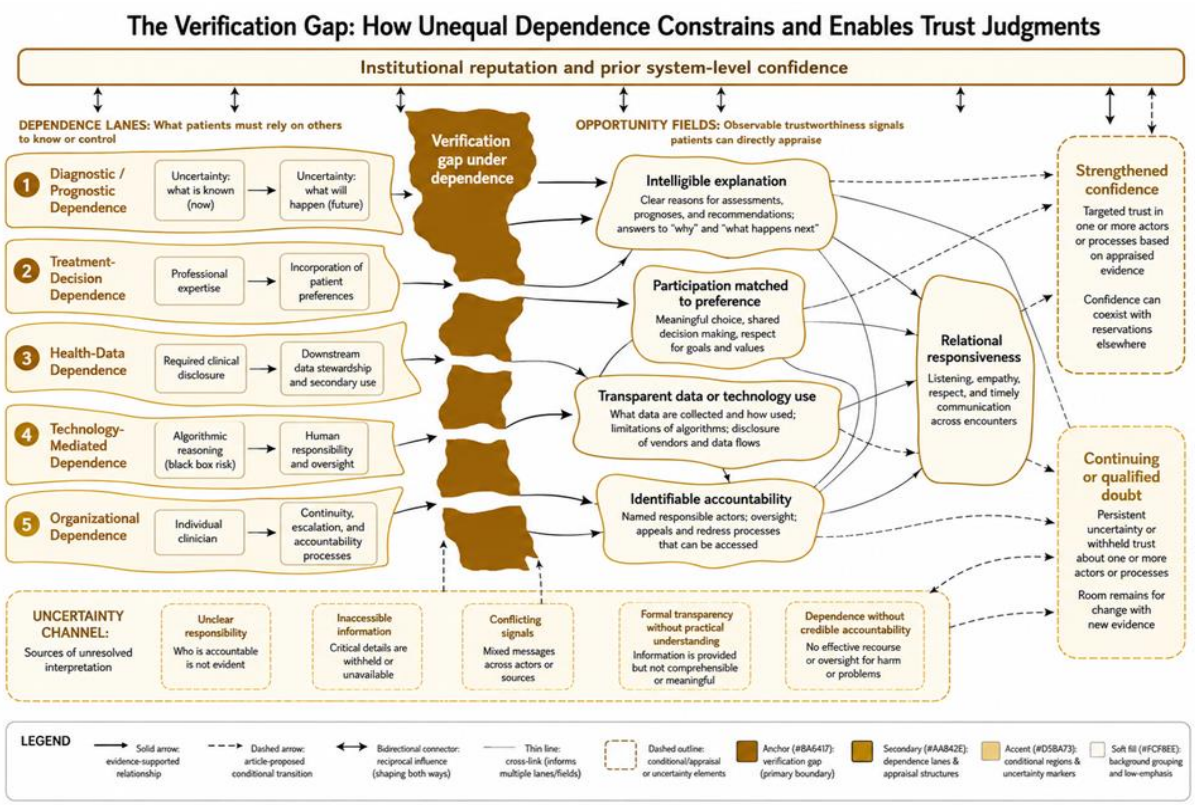

Figure 1. The Verification Gap: How Unequal Dependence Constrains and Enables Trust Judgments

Prior experience and trust updating

Trust judgments occur against a history. Previous encounters may supply evidence about whether explanations are credible, whether concerns are taken seriously, and whether institutions respond consistently. Importantly, this updating process should not be reduced to the assumption that some demographic groups are inherently less trusting.

Among patients with serious illness, discriminatory healthcare experiences were associated with greater medical mistrust [20]. National US survey evidence similarly found an association between perceived discrimination in healthcare and medical mistrust [21]. These findings support treating discrimination as an experienced exposure relevant to trust formation, but their cross-sectional designs do not establish the precise temporal sequence through which mistrust develops.

Observed interaction also complicates any simple continuum from trust to distrust. In audio-recorded cardiology encounters, racial differences appeared in expressions of trust and guardedness, while race was not significantly associated with every measure of expressed distrust [22]. Trust and distrust should therefore be modeled as distinguishable judgments rather than opposite scores on a single axis.

Trust updating can also incorporate information acquired beyond one's own encounter. In transgender and gender-independent adults, experiencing or witnessing discrimination and erasure in healthcare was associated with medical mistrust and patterns of healthcare utilization [23]. In a separate national study, reported racial discrimination was associated with lower health-system trust among adults with and without cancer [24]. Taken together, several populations show associations between discriminatory healthcare experiences and diminished confidence [20, 21, 24], but these findings should not be converted into deterministic assumptions about any individual's trust.

The proposed interpretation is that prior experience changes the evidentiary threshold for later confidence. A history of reliable care may make an ambiguous event easier to interpret benignly; repeated exclusion, discrimination, inconsistency, or unaccountable harm may make reassurance less persuasive. This is a theoretical updating proposition, not a demonstrated universal psychological law. Its validity is likely to depend on recency, severity, repetition, attribution of

responsibility, continuity, and whether later institutions provide credible counter-evidence.

Uncertainty, ambiguity, and suspicion

Uncertainty describes what is not known; ambiguity concerns the possibility of more than one plausible interpretation; suspicion arises when an uncertain situation is interpreted as potentially reflecting concealed motives, unreliable actors, or untrustworthy processes. These states overlap but should not be collapsed.

The information available to patients is increasingly produced outside the consultation. Misinformation, fragmented media environments, algorithmically distributed content, and competing institutional claims can alter the context in which clinical explanations are interpreted. Recent conceptual work therefore argues that the information environment itself deserves consideration as a determinant of health-related trust and behavior [25]. This does not mean that exposure to misinformation automatically produces mistrust. It means that clinical communication enters an already populated interpretive environment.

Suspicion may therefore be reasonable, mistaken, or indeterminate. A patient confronting inconsistent recommendations, opaque institutional decisions, prior discrimination, or unexplained technological involvement may have multiple plausible explanations for what is occurring. Labeling such uncertainty as a patient's psychological deficit would conceal the role of the healthcare environment in producing ambiguity.

This article proposes that suspicion emerges when available evidence fails to resolve a consequential attribution: whether uncertainty reflects unavoidable limits of knowledge, inadequate competence, conflicting interests, lack of candor, organizational failure, or some combination of these. Confidence becomes more difficult when the patient cannot identify which interpretation is warranted or which actor is accountable.

The distinction has an important boundary condition. More information is not always corrective. Additional information can intensify ambiguity when it is contradictory, inaccessible, technically incomprehensible, or disconnected from an accountable source. Trust under uncertainty therefore depends not only on information quantity but on whether patients can interpret the origin, relevance, limits, and responsibility attached to what they are told.

Trust repair after negative encounters

Trust rupture is not simply low trust at a later time point. Negative encounters can alter what later signals mean, especially when patients attribute the event to indifference, incompetence, concealment, stigma, or institutional failure. Persistent-pain and long-term-opioid care illustrates how conflicting goals, fragmented care, and stigma can make restoration of confidence difficult [26]. Organizational response also matters: qualitative work on healthcare complaints shows that formal systems may fail when concerns are not adequately heard, investigated, explained, or connected to learning [27].

This article therefore proposes source-specific repair. If the breach concerns competence, repair requires credible evidence of competence; if it concerns integrity, reassurance without explanation may deepen doubt; if the attributed cause is institutional, interpersonal warmth alone may be insufficient. Continued attendance also cannot be treated automatically as repaired trust because reliance may reflect urgency, scarce alternatives, or dependence.

A multilevel trust-formation model

Healthcare trust is not adequately represented as one attitude toward one clinician. Evidence from fragile healthcare contexts shows that trust and health-seeking can participate in reciprocal interpersonal, institutional, and social relationships [28]. In multimorbidity care, reliance on professional competence and continuity can coexist with autonomy and participation [29]. Dependence therefore does not imply passivity.

The article proposes four interacting functions: prior orientation, encounter appraisal, institutional interpretation, and updating. Prior orientation includes direct and vicarious experience, system reputation, and external information. Encounter appraisal concerns observable signals of competence, benevolence, integrity, explanation, and responsiveness. Institutional interpretation concerns continuity, technology governance, data stewardship, and accountability. Updating is the maintenance, qualification, strengthening, or withdrawal of confidence after new evidence.

These are not fixed stages. System trust can shape interpretation of an encounter, while encounters can revise institutional judgments. The model also permits mixed states: a patient may trust a clinician while doubting data practices, rely on a hospital because

alternatives are scarce, or judge a clinician benevolent while questioning an AI-supported recommendation.

Table 2 preserves these distinctions rather than collapsing them into a single trust score.

Table 2. Distinguishing Trust Objects and Mixed Judgment States in the Proposed Multilevel Model

Judgment object or state	Primary object of evaluation	Patient-observable grounds	Misleading proxy	Boundary or competing interpretation	Proposed model implication
Clinician competence	Ability to reason, treat, and recognize limits	Explanation, consistency, reassessment	Confidence display	Acknowledged uncertainty can coexist with competence	Separate competence from apparent certainty
Clinician benevolence	Orientation toward the patient's interests	Listening, responsiveness, preference-sensitive participation	Friendliness or satisfaction	Warmth does not ensure appropriate action	Keep benevolence distinct from liking
Clinician integrity	Candor and dependability	Consistency, disclosure, follow-through	Disclosure alone	Transparency may be incomplete or performative	Evaluate credibility of commitments
Institutional trustworthiness	Reliability of organizational processes	Continuity, accountability, governance, complaint response	Reputation alone	Strong reputation can coexist with local failure	Separate system grounds from clinician impressions
Technology-related confidence	Reliability and governance of digital or AI-supported processes	Notification, explanation, oversight, accountability	Technology familiarity	Clinician and technology may receive different judgments	Preserve technology as a distinct trust object
Qualified reliance	Continued use despite unresolved concern	Necessity, limited alternatives, specialist dependence	Attendance or adherence	Utilization may reflect constraint	Do not infer confidence from continued care
Proposed cross-level state	Divergent judgments across levels	Conflicting signals from clinician, organization, process, and system	Composite score	Mixed judgments may persist	Preserve cross-level discordance

Note: The final row is an article-proposed synthesis; the matrix does not imply validated categories, thresholds, prevalence, or predictive performance.

Figure 2 represents the same model as a recursive field in which rupture and recovery modify later appraisals rather than resetting them.

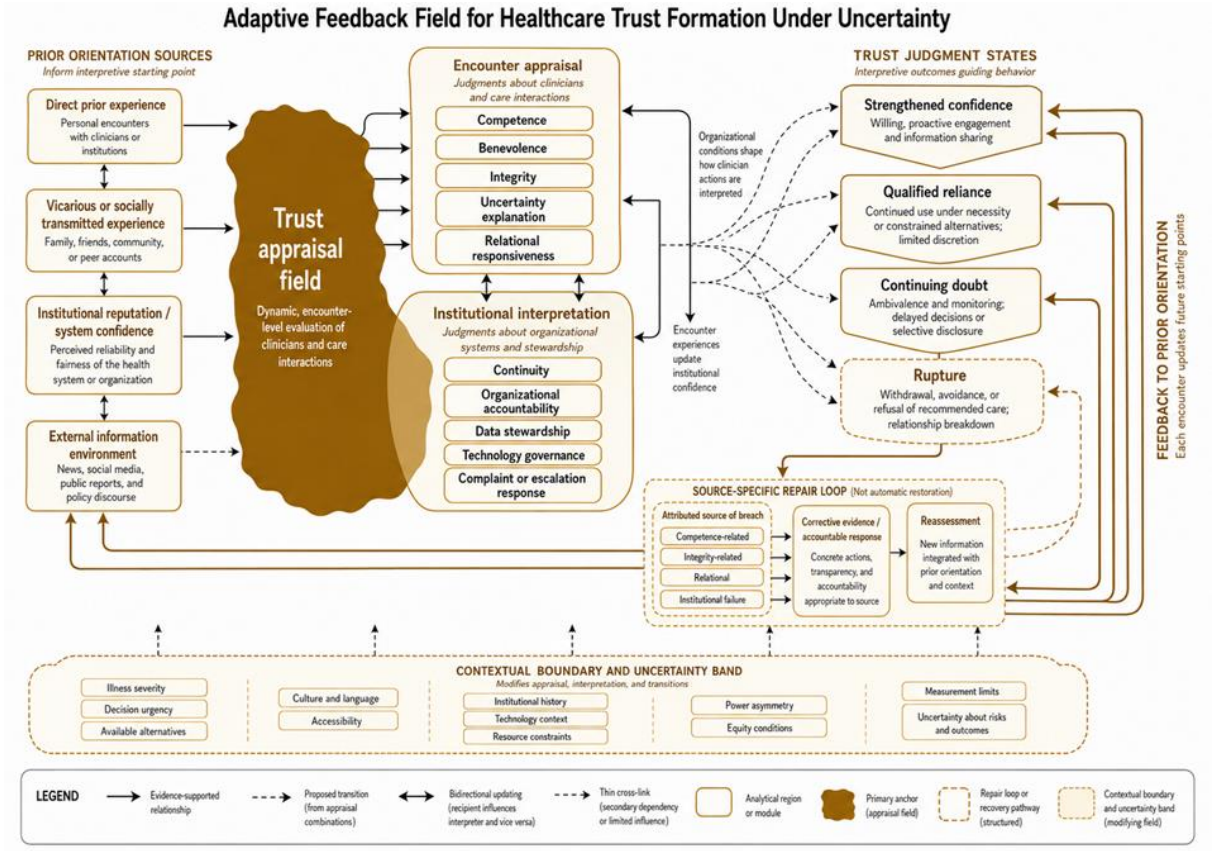

Figure 2. Recursive Trust Updating Across Encounters, Institutions, and Recovery Attempts

Propositions and boundary conditions

The model yields testable propositions, not causal laws. Uncertainty should be less damaging when accompanied by intelligible explanation and a credible reassessment plan [5]. Participation should be most trust-relevant when it matches preferred involvement [9]. Institutional reputation should influence interpretation of unfamiliar technologies, while later encounters should remain capable of revising that prior orientation [15]. Discriminatory experiences should raise the evidentiary threshold for later confidence when subsequent institutions provide no credible counter-evidence [21].

Trust and distrust should not be assumed to change symmetrically [22], and vicarious experience may contribute to updating when patients regard it as relevant to their own likely treatment [23]. Repair should depend on whether corrective evidence addresses the attributed source of breach [27]. Dependence may intensify the stakes of trust without eliminating autonomy [29]. These propositions are bounded by illness severity, continuity, urgency, available alternatives, culture, language, accessibility, technology exposure, institutional history, resources, power, and measurement strategy.

Implications for healthcare organizations

Organizations should assess whether their structures provide credible grounds for trustworthiness, not merely whether patients report high trust [2]. This redirects attention toward accountability, continuity, intelligible explanations, data stewardship, technology governance, complaint response, and meaningful opportunities to participate.

Participation and transparency should not become rituals. Mixed evidence for shared decision-making cautions against treating it as a universally effective trust intervention [19], while notification about AI use should identify responsibility rather than merely disclose that technology is present [18]. Organizations should likewise avoid framing mistrust as an individual deficit when discriminatory or unaccountable care provides plausible grounds for caution. Measurement systems should distinguish clinician trust, institutional trustworthiness, distrust, reliance, and technology-specific confidence

rather than using one favorable score as a substitute for all of them.

Results and Discussion

This article reconstructs healthcare trust as an uncertainty-sensitive, multilevel judgment rather than a stable disposition or generic product of good communication. The evidence requires attention to measurement heterogeneity [1], distinctions between trust and trustworthiness [2], interpersonal and organizational conditions [14], participation versus demonstrated trust change [19], and trust versus distrust [22].

The article's central contribution is the proposed integration of these distinctions into a recursive architecture of confidence and doubt. Patients interpret signals of competence, benevolence, integrity, accountability, and reliability while remaining unable to verify many processes on which care depends. Prior experience, institutional reputation, external information, and structural treatment shape that interpretation, while later encounters can revise it.

The model is not empirically validated. Much supporting evidence is cross-sectional, qualitative, vignette-based, or context-specific. Transfer across AI-enabled care, cancer, serious illness, persistent pain, cardiology, fragile systems, and multimorbidity therefore requires testing. Longitudinal studies should examine cross-level updating, mixed trust–distrust states, source-specific repair, and whether constructs retain equivalent meaning across populations and systems.

Conclusion

Healthcare trust under uncertainty is a conditional judgment about whether vulnerability can reasonably be placed in clinicians, organizations, technologies, and systems whose competence, motives, and processes are only partly observable. Confidence and doubt develop through interpretation of interpersonal signals, institutional conditions, prior experience, external information, and unequal dependence. The proposed model treats these influences as recursive and potentially discordant, distinguishes reliance from confidence, and treats repair as source-specific reassessment rather than simple return. Its contribution is therefore a bounded theoretical architecture for testing how trust forms, changes, and sometimes remains unresolved.

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References

1. Weber LR. Measuring trust in one's physician: A scoping review. PLoS One. 2024;19(5):e0303840. doi:10.1371/journal.pone.0303840
2. Anderson A, Griffith DM. Measuring the trustworthiness of health care organizations and systems. Milbank Q. 2022;100(2):345-64. doi:10.1111/1468-0009.12564
3. Perlis RH, Ognyanova K, Uslu A, Lunz Trujillo K, Santillana M, Druckman JN, et al. Trust in physicians and hospitals during the COVID-19 pandemic in a 50-state survey of US adults. JAMA Netw Open. 2024;7(7):e2424984. doi:10.1001/jamanetworkopen.2024.24984
4. Han PKJ, Babrow A, Hillen MA, Gulbrandsen P, Smets EMA, Ofstad EH. Uncertainty in health care: Towards a more systematic program of research. Patient Educ Couns. 2019;102(10):1756-66. doi:10.1016/j.pec.2019.06.012
5. Sievert EDC, Korn L, Gross M, Santana AP, Böhm R, Betsch C. Communicating diagnostic uncertainty reduces expectations of receiving antibiotics: Two online experiments with hypothetical patients. Appl Psychol Health Well Being. 2024;16(3):1459-78. doi:10.1111/aphw.12536
6. Blanch-Hartigan D, van Eeden M, Verdam MGE, Han PKJ, Smets EMA, Hillen MA. Effects of communication about uncertainty and oncologist gender on the physician-patient relationship. Patient Educ Couns. 2019;102(9):1613-20. doi:10.1016/j.pec.2019.05.002
7. Simpkin AL, Armstrong KA. Communicating uncertainty: A narrative review and framework for future research. J Gen Intern Med. 2019;34(11):2586-91. doi:10.1007/s11606-019-04860-8
8. Huynh HP, Dicke-Bohmann A. Humble doctors, healthy patients? Exploring the relationships between clinician humility and patient satisfaction,

trust, and health status. Patient Educ Couns. 2020;103(1):173-9. doi:10.1016/j.pec.2019.07.022
9. Jiang S, Wu Z, Zhang X, Ji Y, Xu J, Liu P, et al. How does patient-centered communication influence patient trust?: The roles of patient participation and patient preference. Patient Educ Couns. 2024;122:108161. doi:10.1016/j.pec.2024.108161
10. Kuluski K, Asselbergs M, Baker R, Kovacs Burns KK, Bruno F, Saragosa M, et al. 'Safety is about partnership': Safety through the lens of patients and caregivers. Health Expect. 2024;27(1):e13939. doi:10.1111/hex.13939
11. Zondag AGM, Rozestraten R, Grimmelikhuijsen SG, Jongsma KR, van Solinge WW, Bots ML, et al. The effect of artificial intelligence on patient-physician trust: Cross-sectional vignette study. J Med Internet Res. 2024;26:e50853. doi:10.2196/50853
12. Kostick-Quenet K, Lang BH, Smith J, Hurley M, Blumenthal-Barby J. Trust criteria for artificial intelligence in health: Normative and epistemic considerations. J Med Ethics. 2024;50(8):544-51. doi:10.1136/jme-2023-109338
13. Griffith DM, Jaeger EC, Bergner EM, Stallings S, Wilkins CH. Determinants of trustworthiness to conduct medical research: Findings from focus groups conducted with racially and ethnically diverse adults. J Gen Intern Med. 2020;35(10):2969-75. doi:10.1007/s11606-020-05868-1
14. Scotch HT, Baugh CM, Taylor LA, Fish LE, Wynia MK, DeCamp M. Organizational factors that impact trust in healing relationships: A qualitative study. J Gen Intern Med. 2025;40(16):3933-41. doi:10.1007/s11606-025-09783-1
15. Nong P, Platt J. Patients' trust in health systems to use artificial intelligence. JAMA Netw Open. 2025;8(2):e2460628. doi:10.1001/jamanetworkopen.2024.60628
16. Haenssgen MJ, Elliott EM, Phommachanh S, Souksavanh O, Okabayashi H, Kubota S. Community engagement for stakeholder and community trust in healthcare: Short-term evaluation findings from a nationwide initiative in Lao PDR. Soc Sci Med. 2024;354:117079. doi:10.1016/j.socscimed.2024.117079
17. Cherif E, Bezaz N, Mzoughi M. Do personal health concerns and trust in healthcare providers mitigate privacy concerns? Effects on patients' intention to share personal health data on electronic health records. Soc Sci Med. 2021;283:114146. doi:10.1016/j.socscimed.2021.114146
18. Platt J, Nong P, Carmona G, Kardia S. Public attitudes toward notification of use of artificial intelligence in health care. JAMA Netw Open. 2024;7(12):e2450102. doi:10.1001/jamanetworkopen.2024.50102
19. Strokes N, Lloyd C, Girardin AL, Sánchez Santana C, Mangus CW, Mitchell KE, et al. Can shared decision-making interventions increase trust/trustworthiness in the physician-patient encounter? A scoping review. Patient Educ Couns. 2025;135:108705. doi:10.1016/j.pec.2025.108705
20. Brown CE, Jackson SY, Marshall AR, Pytel CC, Cueva KL, Doll KM, et al. Discriminatory healthcare experiences and medical mistrust in patients with serious illness. J Pain Symptom Manage. 2024;67(4):317-26.e3. doi:10.1016/j.jpainsymman.2024.01.010
21. Kaczynski MA, Benitez G, Shehadeh F, Mylonakis E, Fiala MA. Perceived discrimination in the healthcare setting and medical mistrust: Findings from the Health Information National Trends Survey, 2022. J Gen Intern Med. 2025;40(11):2491-8. doi:10.1007/s11606-025-09369-x
22. Hantzmon SV, Davenport CA, Das Gupta MN, Adekunle TA, Gaither SE, Olsen MK, et al. Race differences in patient trust and distrust from audio-recorded cardiology encounters. Patient Educ Couns. 2024;119:108083. doi:10.1016/j.pec.2023.108083
23. Mason KL, Hood KB, Perrin PB, Belgrave FZ, Allison KW, Coston BE. Direct and vicarious exposure to healthcare discrimination and erasure among transgender and gender independent individuals: Testing the indirect effect of mistrust in healthcare on utilization behaviors. Soc Sci Med. 2024;348:116806. doi:10.1016/j.socscimed.2024.116806
24. Brown JA, Taffe BD, Richmond JA, Roberson ML. Racial discrimination and health-care system trust among American adults with and without cancer. J Natl Cancer Inst. 2024;116(11):1845-55. doi:10.1093/jnci/djae154
25. Palmer A, Gorman S. Misinformation, trust, and health: The case for information environment as a major independent social determinant of health. Soc Sci Med. 2025;381:118272. doi:10.1016/j.socscimed.2025.118272

26. Lozano PM, Allen CL, Barnes KA, Peck M, Mogk JM. Persistent pain, long-term opioids, and restoring trust in the patient-clinician relationship. J Pain. 2025;27:104694. doi:10.1016/j.jpain.2024.104694
27. Martin GP, Chew S, Dixon-Woods M. Why do systems for responding to concerns and complaints so often fail patients, families and healthcare staff? A qualitative study. Soc Sci Med. 2021;287:114375. doi:10.1016/j.socscimed.2021.114375
28. Arakelyan S, Jailobaeva K, Dakessian A, Diaconu K, Caperon L, Strang A, et al. The role of trust in health-seeking for non-communicable disease services in fragile contexts: A cross-country comparative study. Soc Sci Med. 2021;291:114473. doi:10.1016/j.socscimed.2021.114473
29. Aarønes TR, Taraldsen K, Kvæl LAH. Relying on trust: A qualitative study on home-dwelling older adults' experiences and preferences with multimorbidity management in municipal healthcare assessments. Health Expect. 2025;28(5):e70445. doi:10.1111/hex.70445