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Communication Inequality in Healthcare: How Language, Literacy, Culture, and Power Influence Understanding and Participation

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Abstract

Communication is often treated as a neutral vehicle through which healthcare information passes from professionals to patients. This view underestimates how opportunities to receive, interpret, question, contest, and use information are distributed unevenly across healthcare encounters and systems. Language discordance, health-literacy demands, cultural expectations, unequal credibility, digital access, and institutional communication practices can each affect participation, yet they operate through distinct mechanisms and should not be collapsed into a single patient-level deficit. This conceptual article defines communication inequality as unequal capacity to participate effectively in healthcare communication under differing linguistic, cognitive, relational, organizational, and technological conditions. It distinguishes information availability from interpretability, speaking from being heard, access from usable access, and patient participation from adherence or preferred decisional control. Evidence across language-concordance research, health-literacy studies, interactional analyses, digital-health research, and shared decision-making interventions is used to identify component processes and their boundaries. The article argues that communication disadvantage can become cumulative when unresolved difficulties at one stage narrow opportunities at later stages, while repair remains possible through relational and organizational adaptation. A communication-inequality pathway model is subsequently proposed to integrate these processes without treating the complete architecture as empirically validated. The framework shifts equity-oriented communication from correcting presumed patient deficits toward matching communicative demands, resources, recognition, and institutional response.

Keywords: Communication inequality, Health literacy, Language discordance, Patient participation, Shared decision making, Health equity

Introduction

Healthcare communication is frequently evaluated through properties of individual encounters: whether information was delivered clearly, whether a patient understood instructions, or whether clinicians demonstrated patient-centered behaviors. These questions are important, but they can obscure a prior issue: patients do not enter communication with equal access to linguistic resources, interpretive support, recognized credibility, technological infrastructure, or opportunities to influence the agenda. Research on communication inequality and communicative vulnerability shows that these conditions are heterogeneous and cannot be represented adequately as one generalized deficit in comprehension [1, 2]. Differences in exposure to health information and in opportunities to reflect on and integrate that information

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can also accompany broader socioeconomic disparities [3].

This article develops communication inequality as a relational and system-level problem rather than a synonym for poor communication. The central claim is that inequality arises when healthcare places different communicative demands on people while providing unequal resources for meeting those demands and unequal recognition of what patients contribute. Language, literacy, culture, power, and digital access therefore matter not because they identify intrinsically "difficult" patients, but because they can alter the conditions under which information becomes understandable, questions become possible, concerns become credible, and participation becomes consequential.

The article first separates the major constructs involved, then considers how they may interact across clinical and digital encounters. The resulting synthesis is explicitly conceptual: component relationships are grounded in the reviewed evidence, whereas the integrated pathway developed later is proposed rather than presented as an empirically validated causal model.

Defining communication inequality in healthcare

Communication inequality is proposed here as systematic inequality in the capacity to access, interpret, question, contribute to, and act within healthcare communication under unequal communicative conditions. This definition is deliberately broader than health literacy and narrower than healthcare inequity as a whole.

The construct requires several distinctions. Information access is not the same as understanding; understanding is not the same as having an opportunity to ask questions; speaking is not the same as being accorded credibility; participation is not equivalent to accepting professional recommendations; and satisfaction with communication does not establish that information or influence was distributed equitably. Likewise, communicative vulnerability should not be treated as a fixed patient characteristic. The same patient may communicate effectively in one setting and encounter substantial barriers in another because terminology, time pressure, interpreter access, decision complexity, institutional routines, or digital systems have changed [2].

Communication inequality is therefore better conceived as a mismatch between communicative demand and available communicative resources, modified by whether the healthcare environment recognizes and responds to the patient's contributions. Resources may include shared language, interpreters, numeracy, prior knowledge, accessible written materials, social support, digital skills, time, and opportunities for clarification. Recognition concerns a different problem: even well-formulated information from a patient may have limited effect if concerns are discounted, questions are not invited, or organizational processes do not produce a meaningful response.

This formulation also prevents an important attribution error. Observed communication difficulty cannot automatically be assigned to individual literacy, culture, motivation, or preference when the encounter itself may generate excessive complexity, inadequate accommodation, or restricted opportunities for participation. Communication inequality is thus an interaction between persons and communicative environments, not an intrinsic property of demographic groups.

Language discordance and interpretation

Language discordance illustrates why communication inequality cannot be represented as a simple presence-or-absence barrier. Partial concordance may create relational benefits through direct speech while leaving clinically important uncertainty about meaning. Evidence from primary care indicates that partial shared language can preserve connection yet still create situations in which interpreter support remains necessary [4, 5]. Interpreter-mediated communication can also change encounter dynamics. Patients, clinicians, and interpreters have described time pressure, greater formality, and reduced opportunity to develop broader social histories, while also distinguishing linguistic problems from cultural ones [5].

These findings suggest that linguistic access has at least three separable dimensions: whether words can be exchanged, whether clinically relevant meaning can be interpreted accurately, and whether the encounter retains sufficient interactional space for patients to elaborate context. Formal availability of interpretation may improve the first two without fully protecting the third.

Outcome evidence also cautions against assuming uniform effects. In a Canadian hypertension cohort, patient-physician language concordance was associated with lower cardiovascular risk among allophone patients, whereas the corresponding comparison among French-speaking patients was not statistically significant [6]. The

finding supports the potential clinical relevance of concordance in some contexts but also demonstrates that language relationships vary by linguistic community and should not be generalized as a single causal effect.

Digital care creates another layer. Patients with limited English proficiency can experience different patterns of telehealth access and use [7]. Language inequality therefore does not disappear when communication moves away from the examination room. Interfaces, instructions, scheduling systems, asynchronous messages, automated content, and available language support can redistribute communicative burden.

For the framework developed here, language discordance is consequently treated as a condition that can increase the cost and uncertainty of communicative participation, not as a binary exposure that automatically produces misunderstanding or poor outcomes.

Health literacy and information processing

Health literacy is often invoked as an explanation for communication difficulty, but the construct contains multiple abilities and should not function as a shorthand for patient competence. Studies relating health literacy to shared decision making show that different dimensions do not behave identically. Across breast-cancer care, general health decision contexts, and older-adult consultations, health-literacy measures have been associated with perceived or observed participation and decisional processes, while the strength and form of those relationships varied by literacy domain, education, age, anxiety, and participation itself [8-10].

The distinction matters because healthcare information requires more than decoding vocabulary. Patients may need to recognize uncertainty, compare probabilities, integrate information with prior experience, judge relevance, and formulate questions under time constraints. Numerical and graphical risk communication creates additional demands. Evidence concerning patients with limited health literacy suggests potential value in carefully designed visual formats such as icon arrays, while also indicating that graph literacy and the limited size of the evidence base constrain general conclusions [11].

Communication adaptation can nevertheless alter defined outcomes when it targets a specific task. In pediatric discharge communication, a health-literacy-informed intervention incorporating pictorial instructions and teach-back/show-back improved medication knowledge and reduced observed dosing errors within that setting [12]. Such findings demonstrate that communication demands can be redesigned rather than simply attributed to patients. They do not establish that the same technique will produce equivalent effects across illnesses, decisions, cultures, or organizational settings.

Information processing also depends on conversational opportunity. Medication discussions involving patients with heart failure were often initiated and dominated by nurses even when patients expressed medication concerns [13]. A patient can therefore possess relevant knowledge or questions while remaining constrained by how the conversational agenda is organized.

The conceptual implication is that communication inequality emerges not from low literacy alone but from a demand-resource mismatch. Complexity becomes inequitable when people facing greater processing demands receive fewer opportunities for clarification, verification, re-expression, or paced decision making. Health literacy should therefore be considered jointly with characteristics of the information environment while remaining analytically distinct from motivation, intelligence, cultural identity, and preferred decisional role.

Cultural meaning and communicative expectations

Culture shapes communication partly through expectations about what constitutes appropriate questioning, legitimate expertise, respect, emotional expression, family involvement, uncertainty, and decision responsibility. Yet culture becomes analytically dangerous when group membership is used as a proxy for an individual patient's beliefs. Language and culture may overlap, but they are not interchangeable; participants in language-discordant care have described cultural barriers that persisted beyond linguistic mediation [5].

Experimental work reinforces the need for non-deterministic interpretation. In simulated primary-care encounters, minority-patient status did not produce a significant overall difference in treatment, while clinicians' intercultural effectiveness remained relevant to communication and clinical assessment [14]. Conversely, patient-informed analysis of cardiology encounters identified behaviors experienced as discriminatory or valuing and detected some differences across racial groups [15]. Taken together, these findings argue against both extremes: cultural or racial differences should neither be presumed to generate inferior communication nor excluded from analysis when patterned differences occur.

The relevant unit is therefore the encounter-specific interpretation of meaning. A clinician's concise recommendation may be experienced as efficient guidance in one context and as exclusion from deliberation in another. A patient's limited questioning may reflect preference, deference, uncertainty, fear of judgment, time pressure, or lack of invitation. Similar observable behavior can therefore arise through different mechanisms.

Table 1 separates these interpretive conditions because cultural meaning cannot be inferred safely from a visible behavior or demographic category alone.

Table 1. Boundary conditions for interpreting culturally situated communication in clinical encounters

Encounter condition	How communicative meaning may shift	Context that changes interpretation	Competing explanation or uncertainty	Boundary for inference	Consequence for participation
Limited patient questioning	Silence may signify deference, uncertainty, satisfaction with explanation, or restricted opportunity	Decision preference, prior relationship, time pressure, perceived status difference	Observed silence does not identify the patient's motive	Do not infer passivity or low interest from question frequency alone	Participation may be adequate, constrained, or intentionally delegated
Reliance on family mediation	Family involvement may support interpretation and continuity but can also alter which concerns are voiced	Family roles, patient preference, illness severity, interpreter availability	Family presence does not establish either support or coercion	Patient preference and communication function must be assessed separately	Voice may be amplified, filtered, or redistributed
Direct clinician recommendation	A strong recommendation may provide valued guidance or narrow deliberative space	Clinical urgency, uncertainty, established trust, desired decisional role	Directive language alone does not reveal whether influence is unwanted	Evaluate invitation to question and ability to disagree	Participation depends on whether recommendation remains contestable
Partial shared language	Direct speech may strengthen rapport while residual linguistic ambiguity persists	Complexity of topic, interpreter backup, familiarity, emotional content	Apparent fluency may conceal clinically important misunderstanding	Conversational ease cannot substitute for verification of meaning	Engagement may increase while interpretive risk remains
Communication behavior experienced as valuing or dismissive	Recognition can affect willingness to elaborate concerns and disclose uncertainty	Previous experiences, relational history, social position, encounter context	Individual behaviors cannot establish a universal cultural response	Interpretation should remain patient- and encounter-specific	Recognition can expand or contract subsequent communicative contribution

Power and voice in clinical encounters

Communication inequality becomes a problem of power when the issue is no longer whether a patient can produce information, but whether that information is recognized as credible and consequential. Qualitative accounts from Black adults with serious illness describe forms of epistemic injustice in which experiential knowledge was perceived as discounted, with implications for trust, communication, and decision making [16]. Such evidence does not permit clinicians' motives to be inferred, but it identifies credibility as a distinct dimension of participation.

Power can persist beyond spoken interaction. Analysis of hospital admission documentation found that notes concerning non-Hispanic Black patients were more likely to contain linguistic expressions of doubt, although the broader comparison involving other minoritized groups did not show the same pattern [17]. Documentation therefore constitutes a communication environment of its own: descriptions can travel between clinicians and potentially shape how later information is approached.

At the same time, authority is not inherently incompatible with patient participation. Conversation analysis in oncology shows how physicians can establish expertise

interactionally while helping patients formulate worries and consider care choices [18]. The relevant distinction is not between authority and equality of professional expertise, but between authority that permits patient knowledge to become decision-relevant and authority that closes opportunities for contribution.

This distinction also clarifies why the quantity of patient speech is insufficient as an equity measure. A patient may speak extensively while having little influence on interpretation or action; another may prefer limited verbal participation yet experience adequate recognition and decisional support. Communication power is therefore proposed as the conversion of communicative contribution into recognized, credible, and potentially decision-relevant information. Unequal voice occurs when that conversion is systematically more difficult for some patients or under some encounter conditions.

Digital and information access

Digital communication can expand opportunities for healthcare participation, but access to a portal, telehealth platform, or messaging system does not establish equal communication. Portal use among adults with chronic conditions varies across patient characteristics, including factors related to health literacy and capacity to navigate healthcare information [19]. Digital inequality therefore begins before any clinical message is exchanged.

A second inequality can arise after entry. Analysis of patient portal messaging showed that overall response patterns can coexist with differences in which members of the care team respond across racial and ethnic groups [20]. This shifts attention from a patient-only model of the digital divide toward a relational model: participation depends both on whether patients can initiate communication and on what the organization does with that communication.

Digital health literacy adds another layer. Work with diverse older adults demonstrates variation in capacity to navigate electronic medical records and digital health functions, including situations in which assistance is needed [21]. A scoping review likewise concludes that digital health technologies have the potential both to reduce and to exacerbate existing inequalities depending on access, implementation, usability, and policy context [22]. Language accessibility must also be retained within this analysis because telehealth experiences differ for patients with limited English proficiency [7].

Digital communication inequality is therefore proposed to involve two broad gates. The first concerns usable entry: connectivity, language, device access, interface accessibility, digital skills, and ability to locate the relevant communication function. The second concerns organizational recognition and response: whether submitted information reaches an appropriate person, receives timely interpretation, and leads to meaningful communication or action.

Table 2 distinguishes these mechanisms because digital access, use, and institutional response should not be treated as interchangeable outcomes.

Table 2. Mechanism–context crosswalk for unequal participation in digital healthcare communication

Communication mechanism	Dependency that can restrict usable entry	Organizational response point	Interpretation boundary	Participation consequence
Digital communication condition — Patient portal availability				
Creates an asynchronous route for questions, updates, records, and requests	Enrollment, authentication, literacy, interface navigation, language accessibility	Routing and prioritization of submitted material	Availability does not establish use or accessibility	Potential opportunity exists without guaranteed participation
Digital communication condition — Successful portal use				
Converts technical access into actual message or information exchange	Confidence, digital skills, comprehension of functions, support from others	Ability of the system to receive and categorize the communication	Use does not establish understanding, preference, or clinical benefit	Patient enters the communication channel but may not influence care
Digital communication condition — Asynchronous patient message				
Allows contribution outside the time limits of a consultation	Ability to formulate concerns in written digital form	Choice of responder, response timing, escalation pathway	A reply is not necessarily equivalent to an appropriate response	Influence depends on how the message is interpreted and acted upon

Digital communication condition — Telehealth encounter				
Extends synchronous communication beyond physical co-location	Connectivity, privacy, audiovisual quality, language support, platform familiarity	Interpreter integration, technical support, appointment workflow	Remote contact does not eliminate linguistic or relational barriers	Access may expand while new communication burdens emerge
Digital communication condition — Digital records and documentation				
Carries interpretations across clinicians and encounters	Patient visibility of records, technical access, ability to contest inaccuracies	Documentation practices and subsequent clinician uptake	Recorded language is not a direct measure of patient understanding or clinician intent	Communicative effects can persist beyond the originating encounter
Digital communication condition — Assisted digital navigation				
Enables access for people who cannot independently complete digital tasks	Availability of trusted helpers and preservation of privacy/autonomy	Design of proxy access and support functions	Assistance can facilitate access without resolving all literacy barriers	Participation can be supported but may become dependent on third parties

Understanding, question-asking, and shared decisions

Understanding is necessary for many forms of participation, but it is not sufficient. A patient who understands clinical information may still lack an opportunity to formulate questions, may expect that questioning is unwelcome, or may receive little response when questions are asked. Conversely, active questioning does not prove adequate understanding.

Data from an online question-prompt tool show that patients identify a wide range of questions they want to raise with clinicians, including issues directly relevant to decisions [23]. Question formulation should therefore be treated as a communicative process in its own right rather than as a by-product of information delivery. Patient-centered communication, participation, and trust have also been associated, but the relationship varies with patients' preferred decisional roles [24]. Greater observable participation should consequently not be treated as a universally superior state independent of preference.

Cross-setting qualitative synthesis identifies recurring patient-reported barriers and facilitators to shared decision making while retaining variation across patient groups and healthcare settings [25]. Intervention evidence makes the same point. A question-prompt intervention increased caregiver question asking overall in pediatric specialty appointments, yet the effect was not observed in the Medicaid/no-insurance subgroup [26]. Providing the same participatory resource can therefore generate unequal benefit when the conditions for using that resource differ.

An additional distinction concerns the clinician response. In an African-American oncology population, a question-prompt list increased prompting for information but did not increase the amount of information supplied by oncologists [27]. Patient activation and professional response are thus separate components of communication. Treating only the first as an intervention target risks relocating responsibility to patients.

Information design remains relevant upstream. A randomized trial of an online plain-language editing tool showed that written health materials could be made objectively simpler while retaining content [28]. However, improved text properties do not establish that every patient will understand the material, have an opportunity to discuss it, or be able to use it in a decision. The proposed pathway therefore treats participation as requiring several potentially separable opportunities: accessing information, interpreting it, identifying uncertainty, formulating a contribution, voicing that contribution, receiving a responsive answer, and having relevant preferences or knowledge incorporated into the decision process. Failure at one stage need not prevent participation completely, and preferences for delegated decision making must remain legitimate. The equity problem arises when the opportunity to move between these stages is distributed unequally because communicative demands, resources, recognition, or organizational responses differ.

Cumulative communication disadvantage

Communication inequalities become cumulative when unresolved difficulty at one stage changes the conditions

of later communication. Language discordance may shorten contextual discussion [5]; limited health-literacy resources can increase processing demands [9]; unequal credibility can affect whether experiential knowledge is incorporated [16]; and digital systems can introduce additional access and response barriers [20]. None of these conditions inevitably produces disadvantage. The proposed concept of cumulative communication disadvantage refers instead to repeated, insufficiently repaired communication friction that progressively narrows later opportunities to understand, question, correct, disclose, or influence care.

Accumulation may occur across a single encounter, across transitions such as discharge, or across documentation and digital channels. A misunderstood medication instruction may be corrected later; a portal message may compensate for insufficient consultation time; an interpreter may repair linguistic uncertainty. Conversely, unresolved ambiguity can travel forward through records, assumptions, or reduced willingness to raise concerns. Question-prompt evidence is instructive because an intervention can increase question asking without necessarily increasing information supplied by clinicians [27]. Communication resources therefore matter partly through the response they receive.

Table 3 uses exceptions and repair conditions first because cumulative disadvantage should not be represented as a deterministic sequence.

Table 3. Conditions that interrupt or permit accumulation of communication disadvantage

Patient or care-context state	Why disadvantage may not accumulate	Failure mode that can carry communication friction forward	Repair opportunity	Inference that must be avoided	Possible effect on later participation
Language uncertainty during a complex discussion	Interpreter support or clarification may restore shared meaning	Residual ambiguity is treated as resolved because conversational fluency appears adequate	Verification of meaning and re-expression in the preferred language	Assuming partial concordance equals full understanding	Later questions may be based on an inaccurate interpretation
High information-processing demand	Pacing, visual support, teach-back, or follow-up may reduce burden	Complexity remains unadjusted and uncertainty is not elicited	Redistribute information across time and formats	Treating difficulty as a fixed patient deficit	Reduced capacity to compare options or identify uncertainty
Patient concern is voiced	Clinician recognition can convert the concern into decision-relevant information	Concern is acknowledged socially but not incorporated clinically	Explicit response, clarification, documentation, or escalation	Equating speaking with influence	Future disclosure may expand or contract
Digital communication is initiated	Appropriate routing can extend participation beyond the visit	Message reaches an unsuitable responder or receives a nonresponsive answer	Clear escalation and responsibility pathways	Treating a transmitted message as completed communication	Digital engagement may continue without meaningful influence
Prior communication rupture	Later encounters can repair misunderstanding or distrust	Previous interpretation is reproduced through records or assumptions	Reassessment, correction, and invitation to contest prior accounts	Assuming disadvantage is irreversible	Participation can recover when repair is credible

A communication-inequality pathway model

The proposed communication-inequality pathway model integrates the preceding domains while preserving their analytical separation. It does not claim that language, literacy, culture, power, or digital access form a universal causal chain. Instead, they operate as partially independent communication conditions that can converge on three intermediate processes: interpretation, recognition, and response.

Interpretation concerns whether clinically relevant meaning can be constructed from available information. Recognition concerns whether a patient's questions, experience, preferences, and uncertainty are treated as credible and relevant. Response concerns whether the clinician or organization produces an answer, accommodation, correction, or action appropriate to that contribution. Participation becomes more feasible when all three processes remain open; inequality can arise when one process repeatedly constrains the others.

The model is recursive. Earlier communication shapes later expectations, disclosure, and willingness to question. Documentation and digital systems can carry interpretations across encounters [17]. Conversely, repair processes—clarification, interpreter use, accessible information, responsive questioning, and organizational redesign—can return a disrupted pathway toward participation. Patient preference remains a boundary condition: choosing to delegate a decision is not communication failure when the choice is informed and genuinely available [24].

Figure 1 makes these distinctions visible while marking the complete pathway architecture as proposed rather than empirically validated.

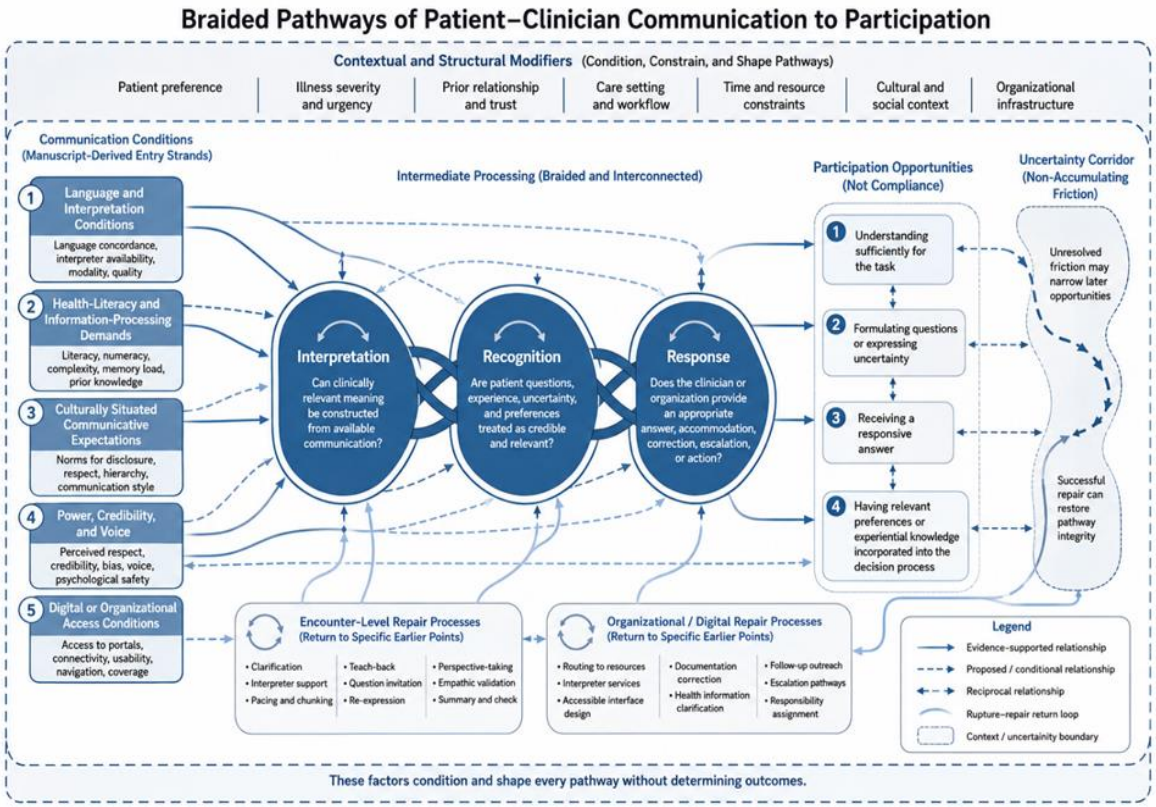

Figure 1. Communication burden, recognition, and repair across the clinical participation pathway

Equity-oriented communication strategies

An equity-oriented communication strategy should target the mechanism producing inequality rather than assume that the patient requires correction. When risk information is difficult to interpret, format and visual design may need adaptation [11]. When discharge communication requires demonstration, teach-back or show-back can address a defined comprehension task [12]. When patients have questions but limited opportunity to raise them, prompt tools may help, although unequal effects across socioeconomic groups caution against assuming equal benefit from equal provision [26].

Digital and organizational interventions require the same logic. A plain-language editing tool can improve measurable properties of written information [28], while organization-wide health-literacy work can improve the understandability and actionability of patient materials [29]. These interventions operate upstream of individual encounters by changing what healthcare organizations produce.

The proposed strategy principle is therefore mechanism matching: identify whether the principal restriction concerns linguistic interpretation, processing demand, recognition of patient knowledge, opportunity to question, digital entry, system response, or accumulated unresolved friction, and adapt the corresponding level. Evaluation should examine not only average improvement but whether previously disadvantaged groups can use and benefit from the intervention.

Results and Discussion

The literature supports abandoning a one-dimensional account of healthcare communication inequality. Language discordance, literacy demands, cultural interpretation, credibility, and digital access are related but noninterchangeable. Their effects also vary across populations and settings. Language-concordance associations were not uniform across linguistic groups [6]; different health-literacy domains showed different relationships with shared decision making [9]; an experimental study did not find an overall minority-treatment difference despite evidence that intercultural effectiveness mattered [14]; and question-prompt interventions produced heterogeneous effects [26].

These boundaries are central to the proposed model. It should not be read as a deterministic cascade in which demographic difference creates communication failure and poor outcomes. Its intended contribution is analytic: to identify where communicative opportunity can be restricted, how different restrictions may interact, and where repair can occur.

Three implications follow. First, measurement should distinguish access, interpretation, voice, recognition, response, participation, and clinical outcomes rather than use them interchangeably. Second, communication interventions should be evaluated at the level they are designed to change. Improved readability, for example, should not be presented as evidence of improved shared decision making unless that later outcome is actually measured. Third, equity assessment should examine distribution. An intervention that improves average communication while leaving the highest-burden group unchanged may increase rather than reduce relative inequality.

The proposed pathway now requires empirical testing. Longitudinal work should examine whether unresolved communication difficulty predicts later narrowing of participation and whether identifiable repair events interrupt that process. Comparative studies should test whether pathway relationships differ across illness severity, linguistic communities, care settings, digital infrastructures, and preferred decisional roles. Measurement studies should also distinguish patient-reported experience from observed interaction and organizational response. Such tests would determine which parts of the model represent durable mechanisms and which remain context-dependent conceptual links.

Conclusion

Communication inequality in healthcare is not adequately explained by patient language, literacy, culture, or digital skill considered separately. It arises when communicative demands, available resources, recognition of patient contributions, and organizational responses are distributed unequally. The proposed pathway model distinguishes interpretation, recognition, response, and participation while allowing for feedback and repair rather than assuming inevitable accumulation. Its practical implication is that communication equity requires adaptation of encounters and systems as well as support for individual patients. Its scientific value will depend on future studies that test the proposed transitions, boundaries, and repair processes without collapsing participation into compliance or demographic difference into deficit.

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