

Patient-Centered Communication Interventions in Healthcare: Evidence on Trust, Shared Decision-Making, and Therapeutic Relationships

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Abstract

To examine how patient-centered communication interventions influence communication behavior, patient participation, shared decision-making (SDM), trust, therapeutic relationships, satisfaction, and downstream psychosocial, behavioral, and clinical outcomes while preserving distinctions among these endpoints. Peer-reviewed literature published from 2017 through 2026 was organized according to intervention target, relational level, communication mechanism, measurement approach, contextual modifier, and inferential strength. Clinician-focused, patient-focused, and dyadic interventions were synthesized separately before examining cross-cutting outcomes. Because the retained public search interfaces did not permit recovery of complete export-level retrieval and deduplication histories, numerical PRISMA counts were not reconstructed. Communication interventions can modify clinician skills, observable interaction, question-asking, agenda setting, preference elicitation, and perceived SDM. Effects on trust, therapeutic relationship, satisfaction, self-management, quality of life, and healthcare utilization are less uniform. Patient preferences, baseline mistrust, health literacy, communication accessibility, disease context, care-partner involvement, digital mediation, and organizational opportunity can alter intervention uptake and interpretation. Patient-centered communication interventions should be evaluated as multilevel relational interventions rather than as a homogeneous intervention class with a single outcome. Communication behavior, participation, SDM, trust, therapeutic relationship, experience, and distal outcomes require separate measurement and appropriately bounded interpretation.

Keywords: Patient-centered communication, Shared decision-making, Patient participation, Trust, Therapeutic relationship, communication intervention

Introduction

Patient-centered communication extends beyond accurate information exchange to whether patient concerns are recognized, emotion and uncertainty are addressed, and clinical decisions accommodate the person's goals and preferences [1]. This breadth helps

explain why training in empathy, compassion, and patient-centered communication produces heterogeneous outcomes across healthcare professions and intervention formats [2]. SDM provides a more specific deliberative structure, but umbrella-level evidence does not support assuming that SDM interventions uniformly improve health outcomes, quality, cost, or consultation efficiency [3].

The central analytical difficulty is that communication-related endpoints are correlated without being interchangeable. Patient-centered communication, SDM, and satisfaction can diverge within the same encounter [4]. In cancer care, patient participation has been implicated in the association between perceived patient-

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centered communication and trust, while preferred decision role modifies that relationship [5]. Medical mistrust introduces a further boundary: communication during one encounter may influence treatment decisions without resolving institutional or historically accumulated sources of mistrust [6]. Standard communication expectations are also poorly transferable to patients with sensory, language, cognitive, speech, or other communication vulnerabilities [7].

Behavioral, informational, and relational effects must therefore remain distinct. Trust and health literacy have been associated with how patients respond to cancer information [8], whereas among older adults literacy, anxiety, education, participation, and decisional conflict interact in ways that can make apparently similar decision encounters psychologically different [9]. Interventions addressing disadvantaged populations likewise require contextual and cultural adaptation rather than assuming that access to more information creates an equal capacity to participate [10].

This review consequently separates three questions: whether an intervention changes communication behavior or capability; whether patients and clinicians use those changes to alter participation or deliberation; and whether trust, therapeutic relationship, satisfaction, or more distal outcomes subsequently change. Clinician-focused, patient-focused, and dyadic interventions are examined separately, with explicit attention to accessibility, power, preference, digital conditions, and organizational constraints.

Materials and Methods

The review addressed interventions intended to alter communication within healthcare encounters or directly support such encounters through preparation, decision support, navigation, or training. Evidence was mapped by intervention target, population, condition, setting, communication function, comparator, measurement approach, outcome family, contextual modifier, and methodological limitation.

Randomized, nonrandomized, observational, qualitative, intervention-development, and review evidence were not treated as methodologically equivalent. Intervention-effect claims were reserved for designs capable of supporting them; observational, qualitative, and conceptual evidence was used primarily to clarify mechanism, measurement, implementation, or boundary conditions.

Protocol and PRISMA 2020 reporting

Reporting was structured according to PRISMA 2020 principles [11]. The intended review-selection sequence comprised identification, duplicate handling, title/abstract screening, full-text eligibility assessment, exclusion-reason coding, and final inclusion.

Complete export-level histories were not retained by the accessible search interfaces, preventing independent reconstruction of source-specific retrieval and deduplication counts. PRISMA numbers were not derived from the final bibliography. Missing selection arithmetic is reported explicitly rather than estimated.

Eligibility criteria

Eligible intervention evidence concerned communication occurring within, immediately before, or directly in support of healthcare encounters. Interventions could target clinician communication skills, patient preparation, agenda setting, question-asking, preference elicitation, decision support, value clarification, care-partner participation, peer navigation, or digitally mediated preparation.

Eligible outcomes included observable communication behavior, participation, SDM, trust or perceived trustworthiness, therapeutic relationship, satisfaction and experience, psychosocial and behavioral outcomes, and downstream clinical outcomes where communication formed a defined intervention component.

Construct-definition, measurement, health-literacy, mistrust, communication-accessibility, co-design, and implementation studies were retained as supporting evidence where required for interpretation. They were not automatically classified as intervention-effect evidence.

Intervention definition and taxonomy

Intervention labels alone were inadequate because programs described as SDM or patient-centered communication often contain substantially different active components. Reviews of SDM models identify recurring elements such as explicit choice awareness, discussion of alternatives, elicitation of preferences, deliberation, and integration of preferences into decisions [12]. The Three-Talk model similarly frames SDM as a staged process of team talk, option talk, and decision talk rather than simple information provision [13].

The present review therefore classifies interventions according to the communication state they attempt to change. These states include insufficient opportunity to

express priorities, unrecognized preference-sensitive choice, communication-access barriers, triadic involvement of care partners, and digital preparation that may or may not be integrated into the consultation. This

taxonomy is a proposed organizing synthesis rather than an established universal classification.

A proposition register makes the resulting distinctions more explicit than a conventional intervention list (**Table 1**).

Table 1. Communication-state taxonomy and testable propositions for patient-centered intervention effects

Intervention function	Reciprocal requirement	Important contextual boundary	Testable interpretation
Encounter state — Patient priorities do not enter the agenda			
Agenda elicitation and question support	Clinician acknowledges and uses elicited priorities	Time, literacy, confidence, expected patient role	Benefit should be greater when raised priorities alter subsequent dialogue
Encounter state — Preference-sensitive choice is insufficiently recognized			
Choice awareness, option discussion, preference elicitation	Alternatives and preferences enter deliberation	Urgency, uncertainty, preference for clinician-led decisions	Information alone should not be classified as complete SDM
Encounter state — Communication access is constrained			
Accessible exchange and comprehension support	Clinician adapts communication to usable access	Language, sensory or cognitive needs, interpreter availability	Apparent low participation should diminish when accessibility is addressed
Encounter state — A care partner participates			
Role clarification and autonomy-supportive triadic communication	Patient, partner, and clinician negotiate speaking and decision roles	Family norms, dependency, confidentiality, caregiver burden	Benefit should depend on alignment with patient-preferred partner involvement
Encounter state — Communication is digitally prepared			
Pre-visit structuring or decision support	Clinician incorporates digitally generated concerns or preferences	Digital literacy, usability, workflow integration	Tool use should not equal relational benefit without encounter-level uptake

Information sources

Evidence identification used PubMed-indexed biomedical literature together with supplementary publisher-indexed searching for directly relevant peer-reviewed records and DOI verification. Citation chaining from relevant systematic, scoping, and umbrella reviews was used to identify intervention, measurement, and contextual studies.

Because complete search exports were not preserved by the interfaces used, the review does not claim recoverable source-specific retrieval totals.

Search strategy

Search concepts combined patient-centered or patient-centred communication, clinician–patient communication, SDM, patient participation, trust, therapeutic relationship, communication training, decision support, agenda setting, question prompts, value clarification, and implementation with intervention-related terms and the 2017–2026 publication period.

Searches were broadened where necessary to identify evidence concerning communication vulnerability, health literacy, care-partner participation, digital communication, and measurement validity. Direct conceptual or intervention relevance was prioritized over general topical similarity.

Study selection

Candidate records were evaluated for whether communication constituted an explicit intervention target or an indispensable component needed to interpret an intervention effect. Intervention studies were separated from contextual, measurement, and methodological evidence.

Eligibility required a definable healthcare communication process and an interpretable communication, participation, relational, experiential, behavioral, or clinical outcome. Evidence retained solely to establish a boundary condition was coded accordingly

rather than being treated as proof of intervention effectiveness.

Data extraction

Extraction retained study design, population or evidence unit, condition, country and setting, focal construct, intervention or exposure, comparator, operationalization, outcome family, principal finding, direction or

heterogeneity, equity and context modifiers, available quality information, limitations, and role in the synthesis. Particular attention was given to distinguishing clinician training outcomes from enacted communication, patient participation, relational outcomes, and distal outcomes. The following register identifies conditions that were kept analytically separate during extraction because combining them would distort interpretation (**Table 2**).

Table 2. Boundary conditions retained during extraction of patient-centered communication evidence

Condition	Information preserved separately	Why separation matters	Main threat if collapsed	Synthesis treatment
Preferred involvement	Preference, actual participation, perceived involvement	Maximum participation is not universally desired	Low involvement may be mistaken for communication failure	Interpret participation relative to preferred role
Baseline mistrust	Institutional mistrust, interpersonal trust, communication quality	Trust reflects experience beyond one consultation	Improved communication may be mislabelled as resolution of mistrust	Treat trust as context-sensitive
Communication vulnerability	Accessibility need, literacy, support, participation	Opportunity to speak does not guarantee usable access	Access barriers may be mistaken for low motivation	Preserve accessibility as an equity boundary
Care-partner involvement	Patient role, partner role, clinician response	Partner involvement may support or displace patient voice	More partner activity may be interpreted as greater collaboration	Evaluate role alignment
Digital mediation	Tool function, patient use, clinician uptake	A functioning tool may not alter interpersonal communication	Technology use may be equated with relational effectiveness	Require evidence of encounter-level integration
Organizational conditions	Workflow, time, staffing, implementation support	Communication behavior depends on opportunity structures	Individual clinicians may be blamed for system constraints	Interpret effects within implementation context

Outcome classification

Outcome classification addressed an important measurement problem: instruments labelled as SDM do not necessarily capture the same construct. A content review of observer coding schemes demonstrated substantial variation in coverage of core SDM components and disproportionate emphasis on information provision [14].

Outcomes were therefore separated into communication behavior, patient participation, SDM, trust, therapeutic relationship, satisfaction or experience, psychosocial and behavioral outcomes, and clinical or utilization outcomes. Observed and patient-reported measures were also distinguished. Increased question-asking, for example, indicates changed interaction but does not establish improved trust. Similarly, clinician confidence after training does not establish that patients experienced more patient-centered communication.

Risk-of-bias assessment

Methodological limitations were interpreted according to design rather than reduced to a single cross-design quality score. Randomized studies were considered in relation to allocation, attrition, outcome measurement, and intervention fidelity; nonrandomized studies in relation to confounding and selection; qualitative studies in relation to sampling and analytic transparency; and reviews in relation to search completeness, appraisal, and synthesis methods.

This approach prevented qualitative, cross-sectional, intervention, and review evidence from acquiring equivalent inferential status merely because each addressed communication.

Synthesis methods

Quantitative pooling was not imposed across studies with materially different interventions, populations,

measurement systems, and outcome distances. The SWiM reporting framework supports structured synthesis where meta-analysis is inappropriate, emphasizing grouping logic, direction, heterogeneity, and limitations rather than artificial numerical precision [15].

The synthesis was therefore organized sequentially around changes in communication capability or behavior, changes in participation or decision processes, and subsequent relational or distal outcomes. Contextual modifiers were examined at each stage.

Results and Discussion

The reviewed evidence base encompassed interventions aimed at clinician capability, patient preparation, dyadic

deliberation, care-partner participation, and digital support. Outcomes ranged from clinician knowledge and self-efficacy to observer-coded communication, patient participation, SDM, trust, satisfaction, self-management, and clinical outcomes.

This diversity was treated as analytically meaningful. A positive proximal training outcome does not demonstrate changed patient experience, and greater participation does not necessarily establish increased trust or satisfaction.

Because the underlying export-level search history did not permit reconstruction of the present review's retrieval and deduplication totals, numerical selection values are not inferred. **Figure 1** makes that evidentiary boundary explicit.

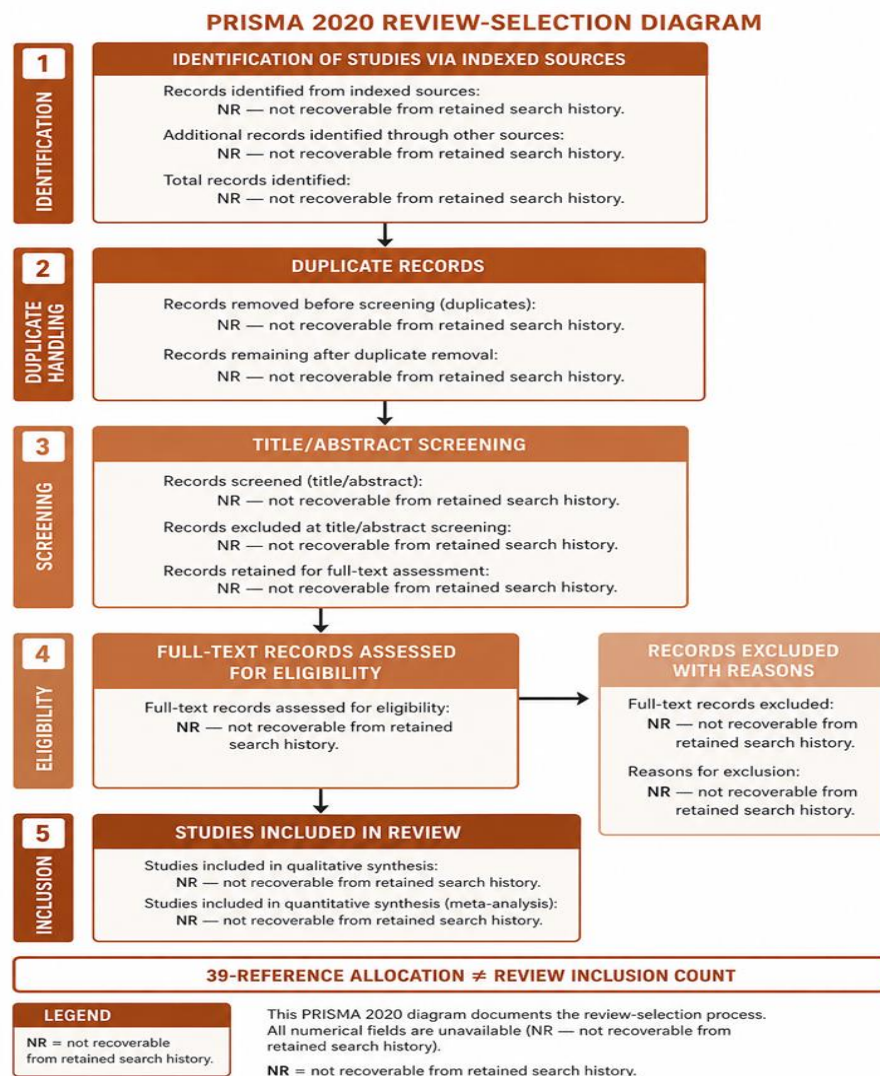


Figure 1. Evidence-selection reporting boundary for the patient-centered communication intervention review

Study selection

Selection distinguished intervention evidence from supporting construct, measurement, equity, and implementation literature. No proportion of screened records excluded and no prevalence of particular study designs in the search universe is reported because those calculations would require unavailable denominator data. The synthesis instead characterizes the retained evidence according to what each design can legitimately establish.

Study characteristics

Studies differed substantially in who was expected to change, what communication process was targeted, and

what constituted success. Clinician-focused interventions often measured competence, confidence, or observed behavior. Patient-focused studies more commonly assessed preparation, question-asking, agenda articulation, or participation. Dyadic interventions addressed deliberation, values, or reciprocal decision support.

Measurement choice therefore changed the interpretation of apparent benefit. Incomplete SDM instruments can disproportionately reward information provision while underrepresenting preference-sensitive deliberation [14]. For this reason, **Table 3** maps major outcome families to the inference that each can and cannot support.

Table 3. Measurement consequences for interpreting benefit from patient-centered communication interventions

Evidence pattern	Construct actually captured	Supported inference	Unsupported inference	Synthesis consequence
Clinician knowledge or confidence increases	Proximal professional capability	Training changed a clinician-level learning outcome	Patients experienced different communication	Classify as proximal training effect
Observer-coded behavior improves	Enacted communication	Specified communication behaviors changed	Patients necessarily valued or trusted the interaction	Keep separate from relational outcomes
Patient participation increases	Contribution to dialogue or decisions	Opportunity or enacted involvement increased	Participation matched the patient's preferred role	Interpret relative to preference and accessibility
Patient-reported SDM improves	Perceived involvement in decision processes	Decisions were experienced as more collaborative	Objective decision quality or clinical outcomes improved	Keep distinct from satisfaction
Trust improves	Relational confidence or trustworthiness appraisal	The encounter or clinician was evaluated more trustfully	Institutional mistrust was resolved	Treat as a conditional relational outcome
Satisfaction improves	Global encounter evaluation	Patients evaluated aspects of care more favorably	Complete SDM or greater participation occurred	Do not use as an SDM surrogate
Behavioral or clinical outcomes improve	Distal consequences	Communication may have contributed to a broader pathway	Communication was the sole cause	Apply strongest causal caution

Clinician-focused communication interventions

Clinician-focused interventions primarily targeted the capability to perform relational or decision-oriented communication. A scoping review of SDM education found that training commonly improved short-term knowledge, confidence, attitudes, or skills, while evidence concerning longer-term transfer and patient outcomes remained less developed [16]. A systematic review of resident training similarly identified major variation in educational quality; role-play and feedback

were common, but stronger evidence for clinical transfer was limited [17].

Delivery modality also requires separate evaluation. Motivational-interviewing research has examined whether both communication skills and the relational orientation associated with motivational interviewing can be developed online [18]. In oncology, the eTRIO intervention targeted professionals' confidence in communicating with carers, showing that

communication interventions may extend beyond the conventional patient-clinician dyad [19].

Interprofessional SDM training has been evaluated in mental-health services, where communication competence is partly distributed across teams [20]. Focused resident workshops have likewise improved selected counseling attitudes, communication skills, and risk-benefit discussion [21]. These outcomes are important but remain proximal: improved clinician competence should not be interpreted automatically as improved trust, therapeutic relationship, or clinical outcome.

The evidence therefore supports a transfer distinction. Training must first alter clinician capability, then be expressed in actual encounters, then be perceived and usable by patients, before more distal relational consequences can plausibly be attributed to it.

Patient-focused communication interventions

Patient-focused interventions attempt to increase the opportunity or capability to contribute to encounters. Co-design work emphasizes agency, shared ownership, reciprocal learning, and recognition of patient knowledge, thereby challenging intervention models that define activation entirely from professional expectations [22].

In ovarian cancer care, development of a Collaborative Agenda-Setting Intervention addressed mismatch between what patients considered important and what entered consultation dialogue [23]. Encounter-preparation approaches similarly aim to help patients formulate questions, communicate priorities, and understand their role as participants rather than passive recipients [24].

A pilot randomized intervention among adolescents with type 1 diabetes combined a question-prompt list with video preparation and increased question-asking and provider education during encounters [25]. The finding demonstrates altered communication behavior without establishing broad downstream clinical benefit.

Digital mediation introduces additional uncertainty. Patient-portal and chatbot presentation methods can alter how patients interact with information, but successful interface use is not equivalent to a strengthened therapeutic relationship [26]. Peer navigation in mental-health care provides a different form of relational scaffolding by supporting engagement and patient-clinician communication outside the focal consultation [27].

These studies collectively suggest that participation is not simply an individual patient characteristic. Whether preparation translates into a more patient-centered encounter depends on the communication opportunity created by clinicians, technologies, care partners, organizational routines, accessibility, and expectations about legitimate patient roles.

Dyadic and shared interventions

Dyadic interventions coordinate changes across participants rather than expecting either patients or clinicians to transform the encounter alone. In early-phase cancer trials, value-clarification tools have been developed alongside communication training because eliciting values does not itself guarantee deliberation; how values are framed and subsequently incorporated by clinicians remains consequential [28].

Conversation Cards used during diabetes visits illustrate the same distinction. They could add structure and help patients raise topics that might otherwise remain unspoken, while quantitative survey comparisons did not demonstrate significant between-group differences [29]. Qualitative usefulness and measurable intervention effect therefore cannot be treated as equivalent evidence.

Technology-supported SDM similarly depends on interaction among patient, clinician, and tool. A systematic review of randomized trials in chronic conditions found that technologies commonly provided information or decision support, but their contribution to SDM depended on how the resulting information entered collaborative decision processes [30].

Communication may also be triadic. Training for cancer care partners has targeted autonomy-enhancing behaviors during accompanied consultations, recognizing that family involvement can support or displace patient voice according to how roles are negotiated [31]. In pediatric inflammatory bowel disease, a multicomponent intervention combining pre-visit support, SDM materials, and follow-up provided preliminary evidence of improved SDM and feasibility, while its pilot design limits stronger claims of effectiveness [32].

Across dyadic and shared interventions, reciprocal uptake emerges as the critical proposed condition. Patient preparation, value clarification, decision aids, partner involvement, and clinician training become relational interventions when information or preferences made visible by one participant materially change how another participant responds. This distinction provides the basis

for the subsequent analysis of communication behavior, participation, SDM, trust, therapeutic relationship, satisfaction, and downstream outcomes.

Communication behavior outcomes

Communication behavior was the most proximal outcome family and therefore the least appropriate surrogate for relational or clinical benefit. Training could improve risk-benefit discussion and counseling behaviors [21], while patient preparation could increase question-asking and clinician provision of education [25]. Conversely, analysis of consultations for self-limiting conditions showed that clinically relevant natural-history and “wait-and-see” communication may remain uncommon [33].

Behavior quality also depended on response type. When patients expressed emotion, engaged clinician responses were associated with more favorable communication ratings than passive responses [34]. Observable behavior therefore provided evidence that an interaction changed, but not that the change necessarily produced trust, preferred participation, or improved health.

Patient participation

Participation depended on both opportunity and preference. In cancer care, participation partly explained the association between perceived patient-centered communication and trust, but this relationship varied according to preferred decision role [5]. Among older adults, literacy, anxiety, and education were related to participation and decisional conflict [9].

Preparation interventions can increase patients' capacity to enter dialogue [24], and adolescent question-prompt interventions can increase active question-asking [25]. Peer navigation may provide additional relational support outside the encounter itself [27]. However, greater involvement cannot automatically be interpreted as better care. In diabetes, perceived collaboration, autonomy support, satisfaction, and adherence did not move uniformly together [35]. Large outpatient data similarly showed that better communication could coexist with little change in perceived decision involvement [36].

Shared decision-making

SDM was treated as a deliberative process rather than as information provision alone. Core models emphasize recognition of choice, discussion of alternatives, preferences, and deliberation [12], while staged consultation models make reciprocal decision work

explicit [13]. Measurement remains problematic because observer instruments differ substantially in their coverage of those elements [14].

Interventions therefore varied in completeness. Value-clarification tools can help articulate priorities but still depend on clinician uptake [28]. Technology-supported approaches likewise require coordination among patient, clinician, and decision-support system [30]. Pilot multicomponent interventions suggest that structured pre-visit and encounter support can increase SDM in specific settings [32]. In advanced cancer, however, intervention and measurement heterogeneity limits confident generalization across programs [37].

Trust and perceived trustworthiness

Trust emerged as a relational appraisal rather than an automatic downstream consequence of communication. Patient participation can contribute to trust, but its influence is modified by decision-role preference [5]. Baseline medical mistrust introduces an additional layer that cannot be assumed to disappear after a high-quality consultation [6].

Information behavior may also involve trust together with health literacy [8]. In specialist outpatient care, trust was associated with both participation and satisfaction even where communication quality itself was not associated with greater involvement [36]. These findings support treating trust as a distinct, context-sensitive outcome influenced by the encounter while remaining connected to experiences beyond it.

Therapeutic relationship outcomes

Therapeutic relationship outcomes depended on how communication was interpreted, not merely on the amount of communication delivered. When emotion was expressed, explicit engagement was associated with more positive patient assessments than passive clinician responses [34]. Encounters involving disagreement further demonstrate that relational quality may depend on how differences are negotiated rather than whether patient and clinician begin with concordant preferences [38].

Thus, patient-centered communication cannot be reduced to agreement. Recognition, responsiveness, respectful disagreement, and preservation of the patient's legitimate role in deliberation are relational processes in their own right.

Satisfaction and experience

Satisfaction was related to patient-centered communication and SDM but remained analytically distinct from them [4]. Conversation Cards, for example, produced qualitative reports of additional structure and opportunities to raise overlooked issues despite no significant between-group survey differences [29].

In diabetes, autonomy support and perceived SDM showed different associations with satisfaction and adherence [35]. Similarly, large outpatient data indicated that favorable communication could strongly accompany satisfaction without necessarily increasing decision involvement [36]. Satisfaction therefore captures an important appraisal of care but should not be used as a substitute for participation, SDM, or trust.

Psychosocial, behavioral, and clinical outcomes

Evidence became less consistent as outcomes moved farther from the interaction itself. Umbrella-level SDM evidence generally ranged from neutral to positive, with considerable uncertainty for several health, quality, cost, and consultation outcomes [3]. Communication may influence information behavior through trust and literacy-related pathways [8].

Specific interventions can alter behavioral processes, such as adolescent question-asking [25], while associations with self-management can differ according to the communication construct examined [35]. The VOICE randomized trial further illustrates why proximal communication effects and quality-of-life or utilization outcomes require separate interpretation [39]. Distal outcomes are multiply determined and should not be attributed to communication interventions without appropriately designed evidence.

Differential effects by population and setting

Communication interventions operate within unequal capacities to speak, understand, trust, and influence care. Pre-existing mistrust may change how communication is interpreted [6], while communicative vulnerability can make conventional consultation structures inaccessible [7]. Literacy, anxiety, age, and education can influence

participation [9], and interventions for disadvantaged populations frequently require cultural and contextual adaptation [10].

Developmental stage also matters, as illustrated by adolescent diabetes interventions [25]. Digital tools create additional differences in usability and opportunity [26]. Coping resources and preferred involvement can further alter associations between collaboration, SDM, satisfaction, and behavior [35].

These factors are conditions of intervention operation rather than decorative subgroup caveats. They also caution against interpreting demographic characteristics themselves as proxies for motivation, trust, empowerment, or preferred decision roles.

Intervention components associated with benefit

No single communication component emerged as universally sufficient. Training syntheses emphasize repeated practice, feedback, experiential learning, and longitudinal development rather than isolated information delivery [2]. SDM education likewise shows stronger evidence for proximal learner outcomes than for durable patient-level effects [16], and educational-quality reviews identify incomplete transfer-to-practice design as a recurring limitation [17].

At the encounter level, agenda-setting can make priorities visible [23], question prompts can increase active communication [25], and value clarification can structure preference articulation [28]. Conversation aids may help patients raise issues even when conventional quantitative outcomes remain unchanged [29]. Digital decision support appears most credible when patient-generated information is actually incorporated by clinicians [30]. Advanced-cancer evidence also suggests that clinician training may be particularly important where SDM behavior itself is the target [37]. Emotional responsiveness illustrates that the form of clinician engagement matters as well as its presence [34].

The component evidence is better represented as conditional pathways than as a ranked list of techniques (Table 4).

Table 4. Context-sensitive communication pathways through which intervention components may produce benefit

Interactional work required	Enabling condition	Common failure pathway	Most defensible proximal interpretation
Component configuration — Rehearsal, feedback, and experiential clinician training			
Translate learned skills into real encounters	Repeated practice and organizational opportunity	Competence remains confined to training	Improved communication capability
Component configuration — Agenda-setting or question prompting			

Patient priorities become visible and receive a response	Sufficient time and permission to raise concerns	Priorities are elicited but not incorporated	Increased opportunity for participation
Component configuration — Values clarification			
Preferences become usable within deliberation	Genuine choice and clinician engagement	Values are collected without affecting discussion	Better articulation of preference-sensitive concerns
Component configuration — Decision-support technology			
Information is integrated into reciprocal discussion	Usability, accessibility, and workflow fit	Tool completion becomes an endpoint in itself	Supported preparation for SDM
Component configuration — Care-partner involvement			
Roles are negotiated without displacing patient voice	Patient-preferred partner participation	Partner activity substitutes for patient autonomy	Expanded relational support when role-aligned
Component configuration — Emotion-responsive communication			
Clinician recognizes and meaningfully engages affect	Attention, relational skill, psychological safety	Passive acknowledgement terminates discussion	Greater relational responsiveness
Component configuration — Accessible communication adaptation			
Interaction becomes usable for the individual patient	Language, sensory, cognitive, and literacy support	Apparent nonparticipation persists because access remains constrained	Improved communicative opportunity

The synthesis supports a layered relational interpretation in which interventions first create communication opportunities, those opportunities must be enacted

reciprocally, and relational outcomes subsequently depend on interpretation and context (**Figure 2**).

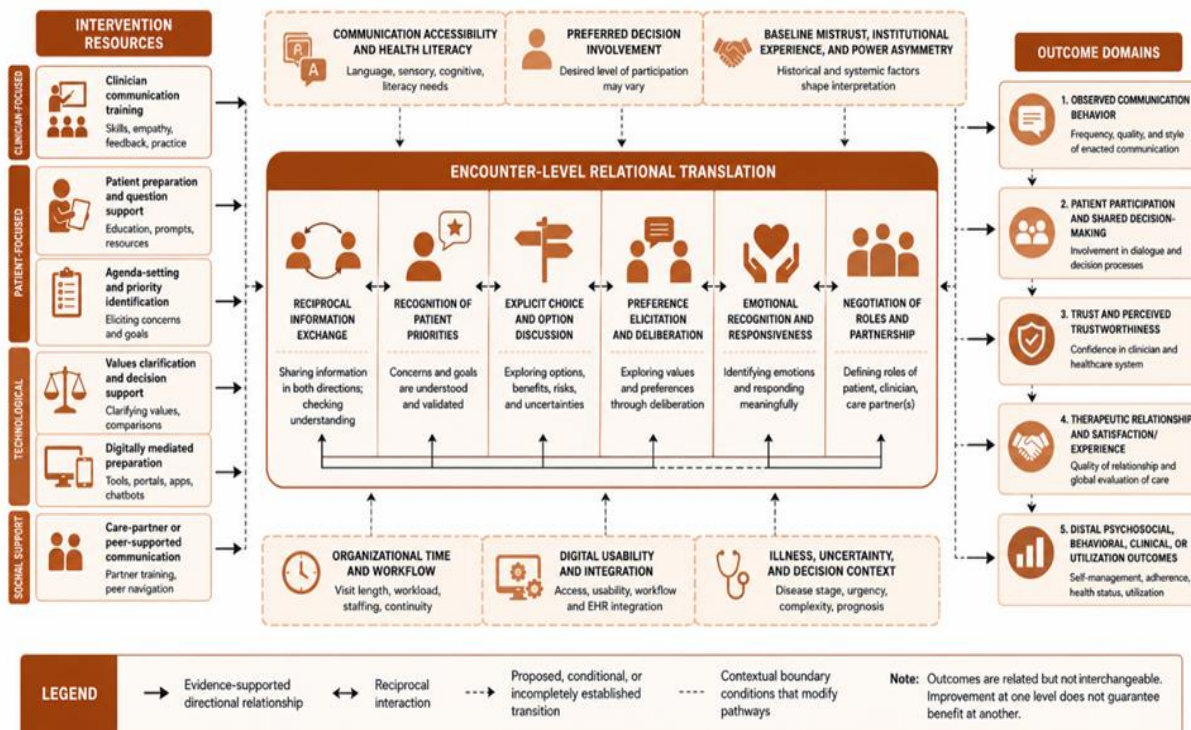


Figure 2. Relational translation of communication intervention components into participation, trust, and therapeutic outcomes

The evidence does not support treating patient-centered communication as a single intervention acting through a single outcome pathway. Clinician training can modify capability, patient preparation can modify opportunities to participate, and dyadic tools can structure deliberation, yet each step can fail to translate into the next. This helps reconcile apparently discordant findings across communication behavior, SDM, satisfaction, and trust. Measurement further contributes to heterogeneity. SDM instruments vary in whether they capture choice awareness, preference elicitation, deliberation, or mainly information provision [14]. Large observational evidence demonstrates that communication, participation, satisfaction, and trust may dissociate within the same care setting [36]. Randomized intervention evidence similarly warns against inferring broad downstream benefit solely from improved communication processes [39].

The principal synthesis proposed by this review is therefore relational and conditional: interventions create resources or opportunities; reciprocal encounter processes determine whether they are enacted; patient interpretation and context influence relational outcomes; and increasingly distal outcomes require progressively stronger evidence before attribution to communication is justified.

Mechanisms linking communication to relational outcomes

Several plausible mechanisms recur. Participation can connect perceived patient-centered communication with trust, but only conditionally on preferred involvement [5]. Pre-existing mistrust may shape how otherwise similar communication is interpreted [6]. Trust and literacy can influence information-related behavior [8]. Autonomy support, SDM, satisfaction, and self-management may also diverge [35], reinforcing that empowerment cannot be inferred from one measure. Relational responsiveness to emotion provides another pathway through which the manner of communication may influence patient experience [34].

These mechanisms remain partly proposed because much of the relevant mediation evidence is observational. Future studies should temporally separate intervention exposure, enacted communication, patient interpretation, relational outcomes, and downstream behavior.

Clinical implementation

Implementation should therefore focus on communication systems rather than isolated techniques. Training is more credible when it contains practice, feedback, and reinforcement [2]. Accessibility needs must be anticipated rather than treated as exceptional adaptations [7]. Literacy interventions similarly demonstrate the importance of cultural and contextual fit [10].

Education should be designed for transfer into clinical work rather than competence testing alone [16], and educational-quality limitations should be addressed explicitly [17]. Co-design can identify priorities that professional-only intervention development may miss [22]. Digital tools require usability and workflow integration [26], while technology-supported SDM requires active coordination between the patient, clinician, and tool [30].

Strengths and limitations

A strength of this review is the deliberate separation of communication behavior, participation, SDM, trust, therapeutic relationship, experience, and downstream outcomes. Measurement heterogeneity identified in existing SDM instruments supports this approach [14]. Structured synthesis also avoids imposing pooled precision where interventions and outcomes are not sufficiently comparable [15].

Important limitations remain. Educational interventions frequently emphasize proximal outcomes [17]. Some mixed-method studies produce qualitative evidence of utility without statistically significant between-group differences [29]. Cross-sectional associations involving SDM, trust, satisfaction, or adherence cannot establish directionality [35]. Large observational samples remain vulnerable to the same causal limitation [36], and disease-specific randomized trials may not transfer to other settings [39].

Most importantly, complete export-level retrieval and deduplication histories were not recoverable. The review therefore does not report fabricated PRISMA counts, and its selection transparency is weaker than a prospectively registered review with archived database exports.

Future research

Future communication-intervention research should measure the full transfer chain rather than stopping at clinician confidence or patient satisfaction. Training studies need longer follow-up and direct assessment of

real encounter behavior [16]. Educational programs should also test which combinations of practice, feedback, reinforcement, and organizational support are necessary for transfer [17].

Research should include patients with communication vulnerabilities [7], culturally and linguistically diverse populations [10], and digital contexts in which technology may either expand or constrain participation [30]. Component-dismantling designs are needed to determine whether agenda-setting, value clarification, question support, emotional responsiveness, or clinician training independently contribute to benefit.

Trust deserves especially careful longitudinal measurement because institutional mistrust and encounter-specific trust are not equivalent constructs. SDM studies should also use measures that capture deliberation rather than information provision alone [37]. Finally, distal clinical claims require trials designed specifically to test whether communication-mediated relational changes produce behavioral or health effects rather than assuming that proximal communication improvement is sufficient [39].

Conclusion

Patient-centered communication interventions are best understood as attempts to reshape relational conditions within healthcare encounters. Their effects cannot be represented adequately by a single construct such as satisfaction, participation, shared decision-making, or trust.

Interventions may improve clinician capability, patient preparation, reciprocal deliberation, or emotional responsiveness, but movement from these proximal changes toward trust, therapeutic relationship, behavior, and clinical outcomes is conditional. Preferred involvement, communication accessibility, prior mistrust, care-partner roles, digital design, organizational opportunity, and clinical context influence whether communication resources become meaningful relational change.

Evaluation should therefore preserve distinctions among what clinicians learn, what happens during encounters, how patients participate, how relationships are experienced, and what subsequently happens to health or behavior. This evidence-bounded approach provides a more credible basis for designing communication interventions that are relationally responsive, measurable, and equitable.

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