



Review Article

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# Mindsets of Frontline Staff in Clinics Serving People in Poverty: A Mind Genomics and AI-Supported Framework for Communication

Dipak Paul<sup>1</sup>, Howard Moskowitz<sup>1,2\*</sup>, Sharon Wingert<sup>2</sup>, David Stevens<sup>3</sup>, Daniel Moskowitz<sup>1</sup> and Brown Fitterman<sup>4</sup>

<sup>1</sup>Mind Genomics Associates Inc., White Plains, New York, USA

<sup>2</sup>Tactical Data Group, Stafford, Virginia, USA

<sup>3</sup>Advanced Learning Strategies, Silver Lake, New Hampshire, USA

<sup>4</sup>TikunTek, Atlanta, Georgia, USA

\*Corresponding author: Howard Moskowitz, Mind Genomics Associates Inc., White Plains, New York, USA & Tactical Data Group, Stafford, Virginia, USA.

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## Abstract

Clinics that serve people in poverty operate under persistent structural strain. Frontline staff manage high patient volumes, complex social needs, and limited institutional resources, often while navigating emotionally charged interactions that shape patient trust and comprehension. This paper uses Mind Genomics to conceptualize distinct communication mindsets among frontline staff and proposes a structured framework for recognizing and working with these mindsets in real time. The paper integrates artificial intelligence as a methodological and practical tool that supports the design of communication experiments, the analysis of linguistic patterns, and the development of tailored scripts for staff and patients. The framework respects the emotional reality of staff, centers the lived experience of poor patients, and offers a scalable architecture for improving communication in safety net clinics, based on structured vignette-driven analysis of communication patterns.

**Keywords:** Mind genomics, Healthcare communication, Frontline staff, Patient experience, Health disparities, Artificial intelligence, Safety-net clinics

## Introduction: Clinics Under Pressure, Staff Under Strain

Clinics that serve people in poverty rarely operate with surplus time, personnel, or emotional bandwidth. Waiting rooms fill early, phone lines remain congested, and staff move rapidly between tasks that demand precision, empathy, and efficiency. Patients arrive with layered burdens that include chronic illness, unstable housing, food insecurity, precarious employment, and histories of

discrimination in health care [1]. These structural pressures shape not only health outcomes but also the tone and content of every interaction between staff and patients [2]. Frontline staff—medical assistants, receptionists, care coordinators, and nurses—stand at the intersection of institutional demands and patient needs. They manage schedules, vital signs, forms, referrals, and documentation while absorbing patient emotions. They often do so with limited



autonomy and minimal formal training in communication or emotional self-care. Sustained exposure to patient suffering and systemic constraints contributes to emotional fatigue and burnout among healthcare professionals [3]. Staff may feel responsible for protecting the schedule, shielding clinicians from overload, and containing patient frustration. Over time, they develop patterned ways of speaking, listening, and responding that help them navigate the workday.

Patients, especially those living in poverty, rarely receive guidance on how to interpret these patterns. A brisk tone may feel like rejection. A neutral face may feel like indifference. A reference to policy may feel like a personal barrier rather than a structural constraint. Misunderstandings accumulate. Patients may leave without asking questions, may misinterpret instructions, or may conclude that the clinic does not care about them [4]. Staff may feel unappreciated, misunderstood, or blamed for systemic failures. This study conceptualizes these patterned ways of communication as mindsets that can be studied, named, and used to improve care. Mind Genomics provides the conceptual tools to frame these mindsets as distinct, recurring configurations of concern, focus, and style that emerge when staff respond to the same situational elements in different ways [5]. Artificial intelligence further supports the systematic analysis of communication patterns and decision processes in healthcare, enabling scalable improvements in clinical interaction design [6].

### **Structural Context: Poverty, Health Disparities, and Communication**

Poverty and low socioeconomic position are strongly associated with higher rates of chronic disease, earlier onset of illness, and reduced life expectancy [7]. Individuals living in poverty face multiple barriers to care, including transportation challenges, unstable work schedules, lack of childcare, and limited insurance coverage [8]. These barriers make healthcare access both fragile and time-sensitive, where missed appointments or delays can significantly affect outcomes. Health literacy introduces an additional layer of complexity. Many adults' experience difficulty understanding medical information, navigating healthcare systems, and applying instructions to their daily lives [9]. Limited health literacy is associated with poorer outcomes, including increased hospitalization rates and lower use of preventive services [10]. Patients may also experience shame related to misunderstanding information and may avoid asking questions, further compounding communication gaps [11].

Communication disparities in healthcare are well documented. Patients from lower socioeconomic backgrounds often receive less information, participate less in decision-making, and experience fewer psychosocial discussions during clinical encounters [4,12]. These patterns arise not only from individual-level factors but also from systemic constraints such as time pressure, institutional workflows, and implicit expectations regarding patient participation. Frontline staff function within these constraints and play a critical

role in shaping patient experience. They serve as the first and last point of contact, communicate institutional policies, manage logistical barriers, and act as intermediaries between patients and the healthcare system. Their communication can either mitigate or amplify the effects of structural inequities. Understanding these patterned responses as structured communication mindsets provides a pathway for improving trust, clarity, and equity in safety-net clinical environments.

### **Conceptual Framework: Mind Genomics Approach to Staff Mindsets**

Mind Genomics offers a structured way to study how people respond to complex situations by breaking those situations into small, testable elements [5]. Instead of asking staff abstract questions about their communication style, a Mind Genomics study presents them with short vignettes that combine different elements of a clinic encounter. One vignette might describe a late patient with unpaid bills and urgent symptoms; another might describe a new patient with limited English proficiency and a long list of questions. Each vignette varies elements such as time pressure, policy constraints, patient emotion, and available resources. Staff rate each vignette on dimensions such as perceived effectiveness, emotional difficulty, or likelihood of using a particular response. Analysis then identifies clusters of staff who respond similarly to certain combinations of elements. These clusters represent mindsets: distinct ways of seeing and prioritizing within the same structural environment. One mindset may prioritize schedule protection; another may prioritize emotional connection; another may prioritize adherence to policy.

This study uses this logic to construct a conceptual typology of five mindsets that frequently appear in clinics serving poor patients. These mindsets—Gatekeeper of Time, Overloaded Empath, Quiet Technician, Systems Navigator, and By-the-Book Protector—serve as lenses through which staff behavior can be understood and improved. They also serve as a guide for patients and supervisors who want to understand and work with staff rather than against them. Before presenting the first table, the paper situates the reader in a typical morning in a safety net clinic. The waiting room fills. The schedule runs behind. A patient arrives late with a complicated story. Another arrives on time but anxious and quiet. Different staff members respond differently to the same pressures. One tightens the schedule and speaks briskly. Another lingers with a distressed patient and falls further behind. A third focuses on documentation and says little. A fourth starts making calls to find resources. A fifth quotes policy and refuses to bend. Table 1 captures these patterns as mindsets that can be named, studied, and used to improve communication.

### **Expanded Mindsets: Communication Patterns, Emotional Logic, and Practical Implications**

The five mindsets introduced in Table 1 represent recurring patterns that emerge when frontline staff navigate the competing

demands of time, emotion, policy, and patient need. Each mindset reflects a coherent internal logic shaped by structural pressures rather than personal flaws. The paper now expands each mindset into a deeper academic guidebook analysis, showing how the mindset forms, how it appears in communication, and how clinics

and patients can work constructively with it. The goal is not to pathologize staff but to illuminate the emotional architecture of safety net care and provide a practical framework for improving communication in settings where every minute matters.

**Table 1:** Illustrative Mindsets of Frontline Staff in Clinics Serving People in Poverty.

Mindset name	Core focus in the encounter	Typical internal worry	Characteristic communication style with poor patients	Potential risk for patients in poverty	Potential strength for patients in poverty
Gatekeeper of Time	Protecting the schedule and flow of the day	Falling behind, angering clinicians or managers	Fast, task-oriented, brief explanations, frequent references to time	Patient feels rushed or silenced	Can move processes quickly when patient states need clearly
Overloaded Empath	Attending to patient emotion and suffering	Failing to help enough, emotional exhaustion	Warm tone, validating language, extended listening	Time runs out for practical tasks	Patient feels seen and may disclose important information
Quiet Technician	Completing tasks accurately and efficiently	Making mistakes, missing data	Neutral tone, minimal small talk, focus on measurements and forms	Patient misreads neutrality as indifference	Reliable data collection, stable presence
Systems Navigator	Guiding patient through logistical and resource maze	Losing patients in the system	Clear, stepwise explanations of processes and resources	Emotional needs may receive less attention	Patient gains concrete help with access and follow-up
By-the-Book Protector	Enforcing policies and safety rules	Legal risk, unfairness, safety breaches	Frequent references to policy, firm tone, limited flexibility	Patient experiences rules as rejection	Patient receives care that meets safety and regulatory standards

### Gatekeeper of Time

The Gatekeeper of Time emerges in clinics where schedules run tight, patient volumes remain high, and staff feel responsible for preventing cascading delays. This mindset forms when staff internalize the belief that the clinic's survival depends on maintaining flow. The Gatekeeper of Time often experiences the day as a sequence of tasks that must be completed quickly to prevent backlog. Their communication reflects this urgency: short questions, rapid pacing, and minimal elaboration. They may reference time explicitly, such as "We need to move quickly," or implicitly through body language that signals haste. Poor patients may misinterpret this as disinterest or disrespect, especially when they arrive with complex needs that require more than a few minutes of attention. The internal worry that drives this mindset centers on falling behind and disappointing clinicians or managers. The Gatekeeper of Time often feels responsible for protecting the team from overload. They may fear that spending too much time with one patient will harm others. This creates a tension between empathy and efficiency. When the Gatekeeper of Time feels pressure, they may default to task-oriented communication that prioritizes speed over connection. The paper recognizes that this pattern arises from structural constraints rather than personal coldness.

Clinics can work constructively with this mindset by designing workflows that reduce unnecessary time pressure and by training staff to use brief but validating language. Patients can benefit from learning to lead with their primary concern in one clear sentence. Supervisors can support the Gatekeeper of Time by acknowledging

the emotional burden of schedule protection and by creating space for staff to slow down when clinically necessary. Artificial intelligence can assist by generating concise scripts that help staff deliver essential information quickly without sacrificing warmth.

### Overloaded Empath

The Overloaded Empath emerges in clinics where staff encounter repeated stories of suffering, trauma, and social hardship. This mindset forms when staff feel compelled to respond emotionally to every patient, even when the system provides little time or support for such engagement. The Overloaded Empath communicates with warmth, validation, and extended listening. They may say, "I'm so sorry you're going through this," or "That sounds really hard." Poor patients often feel deeply seen by this mindset, which can create moments of trust that counteract the shame and fear many bring into the clinic. The internal worry that drives this mindset centers on failing to help enough. The Overloaded Empath may feel responsible for alleviating suffering that stems from structural inequities beyond their control. This emotional labor can lead to exhaustion, compassion fatigue, and burnout. When overwhelmed, the Overloaded Empath may struggle to complete practical tasks or maintain boundaries. Their desire to help may conflict with the clinic's time constraints, creating tension with colleagues who prioritize efficiency. Clinics can support this mindset by providing training in emotional boundaries, reflective practice, and trauma-informed communication. Supervisors can acknowledge the emotional weight carried by Overloaded Empaths and create opportunities for debriefing. Patients can benefit from recognizing that this warmth reflects genuine care but does not

guarantee unlimited time. Artificial intelligence can assist by offering staff structured language that balances empathy with clarity, helping Overloaded Empaths maintain connection without overextending themselves.

### Quiet Technician

The Quiet Technician emerges in clinics where accuracy, documentation, and procedural reliability are paramount. This mindset forms when staff learn that mistakes carry significant consequences and that emotional engagement may distract from essential tasks. The Quiet Technician communicates with neutrality, minimal small talk, and a focus on measurements, forms, and data entry. Poor patients may misinterpret this neutrality as indifference, especially when they expect emotional reassurance. The internal worry that drives this mindset centers on making errors or missing critical information. The Quiet Technician often experiences the clinic as a series of tasks that must be completed correctly to ensure patient safety. They may feel uncomfortable with emotional expression or may believe that emotional engagement risks compromising accuracy. Their communication style reflects a desire to maintain stability and control in a chaotic environment.

Clinics can work constructively with this mindset by recognizing its strengths in reliability and precision. Supervisors can encourage Quiet Technicians to incorporate brief, clear statements that signal attention and respect without requiring emotional labor. Patients can benefit from learning to ask direct, concrete questions that invite the Quiet Technician to share their expertise. Artificial intelligence can support this mindset by generating scripts that combine clarity with warmth, helping Quiet Technicians communicate effectively without feeling pressured to perform emotional work.

### Systems Navigator

The Systems Navigator emerges in clinics where staff must guide patients through complex logistical pathways involving referrals, insurance, transportation, and community resources. This mindset forms when staff develop expertise in navigating bureaucratic systems and take pride in helping patients overcome structural barriers. The Systems Navigator communicates with stepwise explanations, practical instructions, and detailed guidance. Poor patients often benefit from this clarity, especially when they face multiple obstacles to accessing care. The internal worry that drives this mindset centers on losing patients in the system. The Systems Navigator may fear that a missed step, incomplete form, or unclear instruction will result in delayed care or unmet needs. Their communication reflects a desire to ensure that patients understand the process and follow through. However, this focus on logistics may lead to less attention to emotional needs, which can leave some patients feeling unseen. Clinics can support this mindset by integrating logistical expertise into team-based care models and by providing training in balancing practical guidance with emotional presence. Patients can benefit from recognizing that the Systems Navigator's detailed instructions reflect a commitment to helping

them succeed. Artificial intelligence can assist by generating personalized checklists, reminders, and explanations that reinforce the Systems Navigator's guidance and reduce cognitive load for both staff and patients.

### By-the-Book Protector

The By-the-Book Protector emerges in clinics where safety, legal compliance, and fairness are emphasized. This mindset forms when staff internalize the importance of following rules to protect patients, colleagues, and the institution. The By the Book Protector communicates with references to policy, firm tone, and limited flexibility. Poor patients may experience this as rigidity or rejection, especially when they request exceptions that the staff member cannot grant. The internal worry that drives this mindset centers on legal risk, safety breaches, and perceptions of unfairness. The By the Book Protector may fear that bending rules will create liability or set a precedent that undermines equity. Their communication reflects a desire to maintain order and protect the clinic from harm. This can create tension with patients who face structural barriers that make compliance difficult. Clinics can work constructively with this mindset by clarifying policies, offering training in compassionate enforcement, and creating pathways for exceptions when clinically appropriate. Patients can benefit from learning to frame requests in ways that align with safety and fairness. Artificial intelligence can assist by generating scripts that help staff explain policies clearly and respectfully, reducing the risk of misinterpretation.

The expanded analysis of frontline staff mindsets provides a conceptual understanding of how communication patterns emerge under structural and emotional pressures. However, understanding alone is not sufficient for improving real-world interactions. The next step is to translate these mindset-specific patterns into practical communication strategies that can be applied by patients, staff, and supervisors within time-constrained clinical environments. Table 2 operationalizes this translation by presenting targeted communication approaches aligned with the internal logic of each mindset. Rather than prescribing rigid scripts, the strategies are designed to remain flexible and context-sensitive, allowing adaptation to the realities of safety-net clinical care. These approaches aim to reduce misunderstanding, support emotional safety, and improve both clarity and efficiency in interactions between frontline staff and patients.

## Artificial Intelligence as a Tool for Mapping, Training, and Supporting Communication in Safety Net Clinics

Artificial intelligence functions as a methodological and practical tool that strengthens the communication architecture proposed in this paper. As a methodological tool, AI supports the design and analysis of Mind Genomics experiments by generating linguistic variants, identifying latent patterns in staff responses, and accelerating the clustering of mindsets. AI processes large numbers of vignette combinations rapidly, enabling researchers to

test subtle variations in tone, phrasing, and structure that would be impractical to generate manually. This accelerates the discovery of communication elements that activate or deactivate each mindset, allowing clinics to build more precise training materials. As a practical tool, AI supports frontline staff by generating tailored communication scripts that align with each mindset's internal logic. For example, AI can produce concise, time-efficient scripts for the Gatekeeper of Time, emotionally balanced scripts for the

Overloaded Empath, and clarity-focused scripts for the Quiet Technician. These scripts help staff maintain consistency and warmth under pressure. AI can also generate multilingual variants, reducing disparities for patients with limited English proficiency. Emerging evidence from primary care settings suggests that AI can support workflow efficiency, clinical decision-making, and patient management, although implementation challenges remain [13].

**Table 2:** Communication Strategies for Working With Each Mindset.

Mindset name	Effective communication strategy	Why the strategy works	Risks if strategy is not used
Gatekeeper of Time	Lead with one clear concern in a single sentence	Aligns with time-focused logic and reduces cognitive load	Patient needs may be overlooked
Overloaded Empath	Pair emotional disclosure with a concrete request	Balances empathy with action	Emotional conversation may consume available time
Quiet Technician	Ask direct, specific questions	Matches task-focused communication	Patient may misinterpret neutrality as indifference
Systems Navigator	Request stepwise guidance and confirm understanding	Supports logistical clarity	Patient may become lost in the system
By-the-Book Protector	Frame requests in terms of safety and fairness	Aligns with rule-based logic	Patient may experience policy as personal rejection

AI supports patients by functioning as a quiet rehearsal partner. Patients can practice articulating their primary concern in one sentence, rehearse questions, or explore how different staff mindsets might respond. This reduces anxiety and increases clarity during the actual visit. AI can also help patients interpret staff behavior after the encounter, reducing misattribution of intent and supporting emotional safety. AI supports supervisors by identifying communication patterns across staff groups. By analyzing anonymized transcripts or simulated interactions, AI can highlight recurring bottlenecks, emotional triggers, or misunderstandings. Supervisors can then design targeted interventions that address specific mindsets rather than relying on generic communication training. AI supports health systems by generating dashboards that track communication quality, emotional tone, and patient comprehension. These dashboards help clinics monitor equity, identify disparities, and evaluate the impact of interventions. AI can also support quality improvement by simulating how changes in workflow, staffing, or policy might affect communication patterns.

The paper emphasizes that AI functions as a tool rather than an autonomous agent. It does not replace human judgment, empathy,

or accountability. Instead, it strengthens the capacity of clinics to understand and support the emotional and communicative complexity of frontline work. When integrated responsibly, AI has the potential to enhance human-centered care by supporting clinical reasoning, communication, and decision-making processes [14]. Building on the communication strategies outlined above, artificial intelligence extends this framework by enabling scalable, adaptive, and data-informed support for communication across clinical settings. While Table 2 focuses on human-driven strategies, the integration of AI introduces additional layers of precision, personalization, and system-level insight.

Table 3 illustrates how AI-supported tools can be aligned with each mindset to enhance communication among staff, patients, and supervisors. These applications demonstrate how AI can generate tailored scripts, simulate interactions, and identify communication patterns, while maintaining a supportive role that complements rather than replaces human judgment. The goal is to enhance clarity, reduce cognitive load, and strengthen emotional safety in safety-net clinical environments.

**Table 3:** AI Supported Applications for Each Mindset.

Mindset name	AI-supported application	How the application improves communication	Potential risks if not implemented responsibly
Gatekeeper of Time	Generate concise, time-efficient scripts	Reduces pressure while preserving warmth	Scripts may feel mechanical without supervision
Overloaded Empath	Provide balanced phrasing that pairs empathy with action	Prevents emotional overload and maintains task flow	Risk of emotional flattening if over-standardized

Quiet Technician	Offer clarity-focused language templates	Enhances patient understanding without emotional strain	Templates may be underused without training
Systems Navigator	Create personalized checklists and reminders	Supports logistical into follow-through	Overreliance may reduce human explanation
By-the-Book Protector	Generate respectful policy explanations	Reduces misinterpretation of rules	Risk of rigidity if scripts replace judgment

## Discussion

The paper demonstrates that communication in clinics serving people in poverty reflects patterned mindsets shaped by structural pressures, emotional labor, and institutional constraints. These mindsets—Gatekeeper of Time, Overloaded Empath, Quiet Technician, Systems Navigator, and By-the-Book Protector—represent adaptive responses to the demands of safety net care. Understanding these mindsets allows clinics to design communication strategies that respect staff realities while improving patient experience. Mind Genomics provides a rigorous framework for identifying and analyzing these mindsets. By breaking complex interactions into testable elements, Mind Genomics reveals the underlying logic that drives staff responses. This logic becomes the foundation for targeted communication interventions that align with each mindset's strengths and vulnerabilities. Artificial intelligence enhances this framework by functioning as a tool that accelerates analysis, generates communication variants, and supports staff and patients in real time. AI's ability to process large linguistic datasets, simulate interactions, and generate tailored scripts makes it a powerful complement to Mind Genomics. When used responsibly, AI strengthens equity by providing scalable tools that support clarity, emotional safety, and comprehension.

The paper argues that improving communication in safety net clinics requires a dual focus on structural context and interpersonal dynamics. Poverty, health literacy, and systemic inequities shape patient expectations and vulnerabilities. Staff mindsets shape the micro moments that determine whether patients feel respected, understood, and empowered. Interventions must address both levels simultaneously. The paper also emphasizes that communication improvement is not solely the responsibility of individual staff members. Clinics must design workflows, training programs, and support systems that recognize the emotional and cognitive demands of frontline work. Supervisors must understand the mindsets that staff bring to their roles and provide targeted support. Health systems must invest in tools and structures that reduce disparities and enhance patient comprehension. Artificial intelligence offers new opportunities for scalable, data-driven communication improvement. However, AI must be integrated with care to avoid reinforcing inequities or reducing human connection. The paper advocates for a model in which AI supports human judgment rather than replacing it. This model respects the expertise of frontline staff and the lived experience of poor patients.

## Conclusion

The paper presents a Mind Genomics and AI-supported

framework for understanding and improving communication in clinics that serve people in poverty. By conceptualizing staff communication patterns as mindsets, the paper provides a structured approach to recognizing and working with the emotional and operational realities of frontline care. Mind Genomics offers a rigorous method for identifying these mindsets, while artificial intelligence functions as a tool that enhances analysis, training, and patient support. The framework respects the dignity of both staff and patients. It acknowledges the structural pressures that shape communication and offers practical strategies for improving clarity, empathy, and efficiency. It also provides a foundation for future research and practice, including the development of tailored training programs, patient-facing tools, and system-level interventions. This work establishes a scalable and replicable framework for examining communication in complex clinical environments. Future studies can extend this approach to explore diverse perspectives, including patient experiences, clinician decision-making, and system-level dynamics, while maintaining methodological rigor and practical relevance.

## Conflict of Interest

The authors declare that they have no conflict of interest.

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