

Research Article

The Temporal Ethics of Nursing Care: A Mind Genomics and AI Supported Framework for Understanding How Waiting, Delays, and Time Scarcity Shape Poor Patients' Clinical Experience

Dipak Paul¹, Howard Moskowitz^{1, 2 *}, Sharon Wingert², David Stevens³, Daniel Moskowitz¹, Brown Fitterman⁴

¹Mind Genomics Associates Inc., White Plains, New York, USA

²Tactical Data Group, Stafford, Virginia, USA

³Advanced Learning Strategies, Silver Lake, New Hampshire, USA

⁴TikunTek, Atlanta, Georgia, USA

Corresponding author

Howard Moskowitz Mind Genomics Associates Inc., White Plains, New York, USA & Tactical Data Group, Stafford, Virginia, USA

Received: 12 April 2026

Accepted: 17 April 2026

Published: 13 May 2026

Copyright

©2026 Howard Moskowitz

OPEN ACCESS

Abstract

Time is one of the most powerful and least examined ethical forces in safety net nursing care. Poor patients experience waiting rooms, delays, rushed interactions, long pauses, and rapid transitions not merely as logistical events but as emotional and moral signals. The paper examines the temporal ethics of nursing and nursing aide care in clinics that serve people living in poverty, arguing that time functions as a form of communication that shapes dignity, trust, and comprehension. Using the logic of Mind Genomics, the paper proposes distinct patient mind sets that interpret temporal cues differently, from those who see delays as disrespect to those who interpret rushed pacing as danger. Artificial intelligence-informed approaches may support the design, analysis, and operationalization of temporal ethical strategies in real clinical environments. The framework offers a rigorous, warm, and actionable approach to understanding how the management of time becomes a central determinant of patient experience in poverty shaped care.

Keywords: Temporal ethics; Nursing communication; Patient experience; Safety-net clinics; Mind Genomics; Artificial intelligence

Introduction : Time as an Ethical Language in Nursing Care

Nursing care is often described in terms of tasks, competencies, and interpersonal communication. Yet for poor patients, the meaning of nursing care is shaped just as powerfully by time: how long they wait, how quickly they are spoken to, how abruptly they are moved from one space to another, how long a nurse pauses before responding, and how much time is allocated to questions. These temporal cues carry ethical weight because they signal respect, disregard, urgency, or dismissal. They shape whether patients feel valued or invisible, safe or threatened, included or excluded.

Time is not neutral in safety-net clinics. It is a scarce and constrained resource shaped by high patient volumes, staffing limitations, and broader structural inequalities within healthcare systems [1,2]. Poor patients often arrive with complex medical and social needs, histories of institutional mistrust, and limited resources for follow-through [3]. Within this context, temporal decisions acquire ethical significance.

Empirical research shows that waiting time, as well as how delays are communicated, significantly influences patient satisfaction and perception of care [4,5]. Perceived fairness and interpretation of waiting are also closely linked to trust and service evaluation [6]. As a result, prolonged or unexplained waiting may be experienced as neglect, while rushed explanations may be perceived as disrespect. In contrast, even brief moments of attentive and unhurried interaction are associated with enhanced perceptions of dignity and care quality [7].

Temporal ethics refers to the moral significance of how time is allocated, paced, and communicated during clinical encounters. These decisions are often subtle and unfold in seconds: a nurse deciding whether to pause before asking a question, a nursing aide deciding whether to explain a delay, or a clinician adjusting communication when a patient appears confused. Evidence from communication research indicates that such micro-level interactional behaviors play a central role in shaping understanding, trust, and patient experience [8-10].

The paper argues that temporal ethics is not an abstract philosophical concept but a practical framework for improving nursing communication in safety-net clinics. By examining waiting, pacing, delay explanation, temporal transparency, and temporal attunement, the paper provides a structured approach to understanding how time functions as a form of ethical communication. Mind Genomics offers a systematic method for identifying patient mindsets that respond differently to temporal cues [11]. Artificial intelligence has the potential to support the design and implementation of communication strategies in real clinical environments [12].

Structural Context: Why Time Hurts More in Poverty Shaped Care

Safety-net clinics operate under chronic temporal strain. High patient volumes, limited staffing, and unpredictable clinical demands shape the pace and structure of nursing work [1]. At the same time, broader structural inequalities—including poverty, transportation barriers, and unstable work conditions—shape how patients experience time within healthcare sys-

tems [2,13]. These conditions make time a scarce and emotionally charged resource.

Waiting is not experienced equally across socioeconomic groups. Evidence suggests that structural disadvantage and experiences of marginalization shape how patients interpret healthcare interactions, including delays and waiting [14]. In service and healthcare research, both actual waiting time and its perceived fairness influence patient satisfaction and trust [5,6]. When delays are not explained, they may be experienced as neglect, whereas clear and timely communication can mitigate negative perceptions [4].

Temporal inequity also shapes comprehension. Patients with low health literacy rely heavily on pacing, clarity, and communication structure to process medical information [15,16]. Rapid explanations may overwhelm patients, while poorly timed pauses may create confusion. Evidence from patient-centered communication research shows that mismatches between clinician pacing and patient needs can contribute to misunderstanding, mistrust, and reduced engagement [8].

Within this context, temporal decisions—waiting, pacing, pausing, delaying, and accelerating—carry ethical significance because they shape both the emotional and cognitive meaning of care. The paper therefore positions temporal ethics as a structured and improvable dimension of clinical communication. Frameworks such as Mind Genomics and emerging AI-informed approaches provide opportunities to systematically study and improve these temporal dimensions of care [11,12].

Mind Genomics as a Framework for Temporal Ethical Elements

Table 1. Temporal Ethical Patient Mind Sets in Response to Nursing and Nursing Aide Care

Temporal ethical mind set name	Core temporal sensitivity	How temporal cues are interpreted	Primary risk	Primary opportunity
Respect Through Time Seeker	Time as a signal of dignity	Long waits feel disrespectful; unhurried presence feels honoring	Feeling devalued by delays	Brief unhurried moments build dignity
Delay Sensitive Evaluator	Explanation of delays	Silence during delays feels like abandonment	Mistrust of clinic workflow	Transparent delay explanations build trust
Pacing Dependent Learner	Speed of information delivery	Rapid speech overwhelms; slow pacing supports comprehension	Missing critical instructions	Stepwise pacing improves understanding
Pause Interpreter	Meaning of silence and pauses	Pauses signal care or confusion depending on context	Misreading silence as disinterest	Intentional pauses support emotional safety
Temporal Transparency Seeker	Clarity about timing and sequence	Uncertainty about timing creates anxiety	Feeling lost in the process	Clear timelines reduce stress

From Temporal Ethics to Practice: Why These Mind Sets Matter

These temporal ethical mind sets illustrate that poor patients do not simply receive nursing care; they interpret time through ethical lenses shaped by vulnerability, history, and context. A nurse’s decision to explain a delay may feel routine to the nurse but deeply meaningful to the Delay Sensitive Evaluator. A nurse’s decision to slow down may feel unnecessary to the nurse but essential to the Pacing Dependent Learner. A nurse’s decision to pause may feel ordinary to the nurse but transformative to the Pause Interpreter.

Understanding these mind sets matters because temporal interpretation drives behavior. Patients who feel disrespected by time may disengage from care. Patients who feel abandoned during delays may develop mistrust. Patients who feel overwhelmed by rapid pacing may miss critical instructions. Conversely, patients who experience temporal alignment are

Mind Genomics breaks complex interactions into small, testable elements and recombines them into short vignettes that reveal how people respond to different combinations of cues [11]. Applied to temporal ethics, Mind Genomics can present patients with vignettes that vary temporal elements such as waiting time, pacing, delay explanation, pause length, and temporal transparency.

For example, one vignette might describe a nurse who explains a delay, sits down, and speaks slowly. Another might describe a nurse who arrives abruptly, speaks quickly, and moves on without checking for understanding. Patients rate each vignette on dimensions such as feeling respected, feeling safe, or feeling understood.

Analysis reveals clusters of patients who respond similarly to certain temporal cues. These clusters represent temporal ethical mind sets: distinct ways of interpreting time in clinical encounters. The paper proposes five illustrative temporal ethical mind sets: the Respect Through Time Seeker, the Delay Sensitive Evaluator, the Pacing Dependent Learner, the Pause Interpreter, and the Temporal Transparency Seeker.

Introducing the Temporal Ethical Mind Sets: A Structured Conceptual Overview

Before presenting the first table, the paper invites the reader to imagine a poor patient navigating a safety net clinic. They wait for 45 minutes without explanation. A nursing aide calls them abruptly. A nurse speaks quickly while typing. Another nurse pauses, looks up, and says, “Thank you for waiting; I know your time matters.” Each temporal decision carries ethical weight. Each is interpreted through the patient’s temporal ethical mind set. Table 1 summarizes these mind sets in a structured format.

more likely to trust, understand, and follow through with care recommendations.

Deepening the Temporal Ethical Mind Sets: Waiting, Pacing, Pausing, and Delay Interpretation in Poor Patients’ Nursing Encounters

The five temporal ethical mind sets introduced in Table 1 represent patterned ways in which poor patients interpret the timing of nursing interactions. These mind sets arise from the intersection of structural vulnerability, emotional history, and the immediate pressures of the clinical environment. The paper expands each mind set to examine how it shapes the interpretation of waiting, pacing, pausing, and delay explanation, and how clinical responses can be adapted accordingly.

Temporal ethical interpretations are not random or idiosyncratic; rather, they are patterned and grounded in lived experience. Recognizing these

patterns allows nursing staff to adapt temporal decisions in ways that support dignity, comprehension, and emotional safety within resource-constrained clinical environments.

The Respect Through Time Seeker

The Respect through Time Seeker interprets time as a direct signal of dignity. This mindset often forms in patients who have experienced institutional disregard, long waits in public systems, or chronic delays in accessing services. Evidence suggests that patients exposed to structural marginalization may interpret waiting as a signal of social value, particularly in settings where they already feel disadvantaged [14]. For this mindset, time is not merely logistical; it is symbolic.

This mindset interprets temporal cues through a moral lens. Long waits may feel disrespectful. Abrupt transitions may feel dismissive. A nurse who slows down for even a few seconds signals that the patient's presence matters. A nurse who acknowledges the wait signals recognition. The internal narrative centers on dignity: "Please show me that my time matters."

Clinics can support this mindset by training nursing staff to use brief but meaningful temporal acknowledgments. Even under time pressure, a single sentence such as "Thank you for waiting; I know your time is valuable" can transform the emotional meaning of the encounter. Artificial intelligence may support such communication strategies by enhancing patient-centered interactions and helping clinicians maintain relational quality even in time-constrained settings [12].

The Delay Sensitive Evaluator

The Delay Sensitive Evaluator is highly attuned to whether delays are explained. This mind set often forms in patients who have experienced abandonment, bureaucratic opacity, or unpredictable service environments. Evidence suggests that structural disadvantage can shape how patients interpret healthcare interactions, and unexplained delays may be perceived as signs of institutional indifference or lack of responsiveness [13]. For this mind set, silence during delays is not neutral; it is threatening.

This mind set interprets temporal cues through a transparency lens. A delay without explanation may feel like disregard, whereas a delay with explanation may feel respectful. A nurse who says, "It will be about ten more minutes; thank you for your patience," signals reliability, while silence may be interpreted as neglect. The internal narrative centers on transparency: "Please tell me what is happening."

Clinics can support this mind set by embedding delay explanation practices into routine workflow. Nursing aides can be trained to provide brief updates at predictable intervals. Evidence from healthcare communication research suggests that timely information and clear explanations can improve patient satisfaction and reduce negative perceptions of waiting [4]. Patient-centered communication approaches further emphasize the importance of transparency and responsiveness in building trust during clinical encounters [8].

The Pacing Dependent Learner

The Pacing Dependent Learner is highly sensitive to the speed of information delivery. This mind set often forms in patients with low health literacy, cognitive overload, or high stress. Research shows that health literacy strongly influences how patients process medical information, and that

limited literacy is associated with reduced comprehension of complex instructions [15,16]. For this mind set, pacing is not stylistic; it is functional.

This mind set interprets temporal cues through a cognitive lens. Rapid speech may feel overwhelming. Dense explanations delivered quickly may be difficult to follow. Slower pacing and stepwise delivery can support comprehension and retention. The internal narrative centers on understanding: "Please go at a pace I can follow."

Clinics can support this mind set by training nursing staff to use stepwise pacing, plain language, and brief pauses between concepts. Visual aids and written summaries can reinforce understanding. Evidence from patient-centered communication research suggests that aligning communication style with patient needs can improve comprehension, engagement, and adherence [8].

The Pause Interpreter

The Pause Interpreter is highly sensitive to the meaning of silence. This mind set often forms in patients who rely on nonverbal cues to interpret emotional tone, particularly when verbal communication has been inconsistent or difficult to follow in past encounters. Research suggests that silence in clinical interactions can signal empathy, reflection, or disengagement depending on context [9,10]. For this mind set, pauses are not empty; they are communicative.

This mind set interprets temporal cues through an emotional interpretive lens. A pause before speaking may feel thoughtful. A pause after a question may feel attentive. A pause without eye contact may be interpreted as disinterest. A nurse who uses intentional pauses may signal care, whereas the absence of pauses may signal haste. The internal narrative centers on meaning: "Please let silence help me understand you."

Clinics can support this mind set by training staff to use intentional pauses paired with supportive nonverbal cues, such as eye contact and attentive body language. Communication research emphasizes that silence, when used appropriately, can function as a therapeutic tool that supports emotional processing and understanding [10].

The Temporal Transparency Seeker

The Temporal Transparency Seeker is highly sensitive to clarity about timing and sequence. This mind set forms in patients who have experienced chaotic or unpredictable service environments. Research shows that uncertainty about timing increases anxiety and reduces trust, especially among patients with limited control over their schedules [3]. For this mind set, temporal clarity is essential.

This mind set interprets temporal cues through a predictability lens. Uncertainty about when the nurse will return creates stress. Unclear sequencing of steps creates confusion. A nurse who outlines the timeline reduces anxiety. A nurse who leaves without explanation increases it. The internal narrative centers on predictability: "Please tell me what will happen next."

Clinics can support this mind set by training staff to provide brief temporal roadmaps: "First I'll take your vitals, then the nurse practitioner will come in, and then I'll return with your paperwork." Artificial intelligence can generate standardized temporal roadmap scripts that staff can adapt to different workflows [12]. These tools reduce uncertainty and support emotional safety.

Table 2. Temporal Ethical Elements and Mind Set Specific Nursing Strategies

Before presenting Table 2, the paper emphasizes that temporal ethical strategies must align with each patient mind set's internal logic. The table does not prescribe rigid scripts but offers flexible approaches that help nursing staff adapt temporal decisions to patient needs. These strategies aim to reduce misunderstanding, support emotional safety, and improve comprehension in clinics that serve people in poverty.

Temporal ethical mind set	Effective temporal behavior	Why the behavior works	Risk if behavior is not used
Respect Through Time Seeker	Brief unhurried presence	Signals dignity and value	Patient may feel devalued
Delay Sensitive Evaluator	Transparent delay explanations	Reduces uncertainty and mistrust	Patient may feel abandoned
Pacing Dependent Learner	Slow, stepwise pacing	Supports comprehension	Patient may miss critical information
Pause Interpreter	Intentional pauses with eye contact	Enhances emotional safety	Patient may misread silence
Temporal Transparency Seeker	Clear timeline and sequence	Reduces anxiety	Patient may feel lost in the process

From Temporal Ethics to Practice: Why These Strategies Matter

These temporal ethical strategies illustrate that poor patients do not simply receive nursing care; they interpret time through ethical lenses shaped by vulnerability, history, and context. A nurse's decision to explain a delay may feel routine to the nurse but deeply meaningful to the Delay Sensitive Evaluator. A nurse's decision to slow down may feel unnecessary to the nurse but essential to the Pacing Dependent Learner. A nurse's decision to pause may feel ordinary to the nurse but transformative to the Pause Interpreter.

Understanding these mind sets matters because temporal interpretation drives behavior. Patients who feel disrespected by time may disengage. Patients who feel abandoned during delays may mistrust care. Patients who feel overwhelmed by rapid pacing may miss critical instructions. Conversely, patients who experience temporal alignment are more likely to trust, understand, and follow through.

Artificial Intelligence as a Tool for Operationalizing Temporal Ethical Nursing Care

Artificial intelligence has the potential to strengthen the temporal ethical framework presented in this paper by supporting nursing staff, patients, and supervisors in navigating the timing, pacing, delays, and temporal transparency of care. Rather than replacing human presence or moral judgment, AI-informed approaches may enhance the consistency and adaptability of communication in safety-net clinics [12].

AI-informed tools can assist in identifying patterns in patient communication that reflect different temporal ethical mind sets, helping staff adjust pacing, delay explanation, and communication style accordingly. These approaches may support training by enabling structured practice of temporal ethical communication, allowing staff to adapt their responses to different patient needs.

AI-informed systems may also support patients by improving clarity before and after clinical encounters, particularly for those with low health literacy who rely on pacing and structured explanations to understand care processes. In addition, system-level applications may help identify patterns in waiting times, communication gaps, and temporal transparency, supporting efforts to improve equity in care delivery.

The paper emphasizes that AI should be integrated cautiously and responsibly. AI-informed approaches should support, not replace, human connection; enhance clarity without reducing emotional nuance; and reduce cognitive burden without introducing additional complexity. When used appropriately, these approaches may strengthen the ability of nursing staff to respond to diverse temporal ethical needs while preserving the central role of human care [12].

Discussion

The paper demonstrates that temporal ethical decisions—waiting, pacing, pausing, delay explanation, and temporal transparency—shape the poor patient's experience of nursing and nursing aide care in safety net clinics. These temporal decisions carry ethical weight because they occur in contexts marked by structural inequity, emotional vulnerability, and time pressure. The paper conceptualizes five temporal ethical mind sets—Respect Through Time Seeker, Delay Sensitive Evaluator, Pacing Dependent Learner, Pause Interpreter, and Temporal Transparency Seeker—that represent distinct ways of interpreting temporal cues Mind Genomics provides a rigorous framework for identifying and analyzing these temporal ethical mind sets. By breaking temporal interactions into testable elements, Mind Genomics reveals the underlying logic that drives patient interpretations. This logic becomes the foundation for targeted temporal ethical interventions that align with each mind set's sensitivities and vulnerabilities.

Artificial intelligence enhances this framework by functioning as a tool that accelerates analysis, generates temporal ethical communication variants, and supports staff and patients in real time. AI-informed approaches may assist in analyzing linguistic patterns, supporting temporal-ethical communication, and generating adaptable scripts, making them a useful complement to Mind Genomics. When used responsibly, such approaches may support equity by offering scalable tools that enhance emotional safety, comprehension, and trust.

The paper argues that improving temporal ethical nursing communication in safety net clinics requires a dual focus on structural context and interpersonal nuance. Poverty, health literacy, and systemic inequities shape patient expectations and vulnerabilities. Temporal ethical decisions shape the emotional and cognitive meaning of each interaction. Interventions must address both levels simultaneously.

The paper also emphasizes that temporal ethical excellence is not solely the responsibility of individual nurses or aides. Clinics must design workflows, training programs, and support systems that recognize the emotional and cognitive demands of temporal ethical care. Supervisors must understand the temporal ethical mind sets that patients bring to their encounters and provide targeted support. Health systems must invest in tools and structures that reduce disparities and enhance temporal ethical consistency.

Artificial intelligence offers new opportunities for scalable, data driven temporal ethical 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 nursing staff and the lived experience of poor patients.

Conclusion

The paper presents a Mind Genomics and AI supported framework for understanding and improving the temporal ethical dimensions of nursing and nursing aide care in safety net clinics. By conceptualizing patient interpretations as temporal ethical mind sets, the paper provides a structured approach to recognizing and working with the timing, pacing, delay interpretation, and temporal transparency that shape poverty shaped care. Mind Genomics offers a rigorous method for identifying these mind sets, while artificial intelligence functions as a tool that enhances analysis, training, and patient support.

The framework respects the dignity of both patients and nursing staff. It acknowledges the structural pressures that shape temporal ethical decisions and offers practical strategies for improving pacing, delay explanation, pause timing, and temporal transparency. It also provides a foundation for future research and practice, including the development of tailored temporal ethical training programs, patient facing tools, and system level interventions.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

1. Aiken LH, Sloane DM, Bruyneel L, et al. (2014) Nurse staffing and education and hospital mortality in nine European countries: a retrospective observational study. *Lancet*. 383: 1824–1830.
2. Marmot M. (2005) Social determinants of health inequalities. *Lancet*. 365: 1099–1104.
3. Braveman P, Gottlieb L. (2014) The social determinants of health: it's time to consider the causes of the causes. *Public Health Rep*. 129: 19–31.
4. Thompson DA, Yarnold PR, Williams DR, et al. (1996) Effects of actual waiting time, perceived waiting time, information delivery, and expressive quality on patient satisfaction in the emergency department. *Ann Emerg Med*. 28: 657–665.
5. Bleustein C, Rothschild DB, Valen A, et al. (2014) Wait times, patient satisfaction scores, and the perception of care. *Am J Manag Care*. 20: 393–400.
6. Pruyn A, Smidts A. (1998) Effects of waiting on satisfaction with the service: beyond objective time measurements. *Int J Res Mark*. 15: 321–334.
7. Beach MC, Sugarman J, Johnson RL, et al. (2005) Do patients treated with dignity report higher satisfaction, adherence, and receipt of preventive care? *Ann Fam Med*. 3: 331–338.
8. Levinson W, Lesser CS, Epstein RM. (2010) Developing physician communication skills for patient-centered care. *Health Aff (Millwood)*. 29: 1310–1318.
9. Street RL Jr. (2013) How clinician–patient communication contributes to health improvement: modeling pathways from talk to outcome. *Patient Educ Couns*. 92: 286–291.
10. Back AL, Arnold RM, Tulsy JA. (2009) *Mastering Communication with Seriously Ill Patients: Balancing Honesty with Empathy and Hope*. Cambridge: Cambridge University Press.
11. Gofman A, Moskowitz HR. (2012) *Rule Developing Experimentation: A Systematic Approach to Understand and Engineer the Consumer Mind*. Bentham Science Publishers.
12. Topol E. (2019) *Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again*. New York: Basic Books.
13. Bailey ZD, Krieger N, Agénor M, et al. (2017) Structural racism and health inequities in the USA: evidence and interventions. *Lancet*. 389: 1453–1463.
14. Williams DR, Mohammed SA. (2013) Racism and health I: pathways and scientific evidence. *Am Behav Sci*. 57: 1152–1173.
15. Berkman ND, Sheridan SL, Donahue KE, et al. (2011) Low health literacy and health outcomes: an updated systematic review. *Ann Intern Med*. 155: 97–107.
16. Nutbeam D. (2008) The evolving concept of health literacy. *Soc Sci Med*. 67: 2072–2078.

Cite this article: Dipak Paul, Howard Moskowitz*, Sharon Wingert, David Stevens, Daniel Moskowitz, Brown Fitterman. (2026) The Temporal Ethics of Nursing Care: A Mind Genomics and AI Supported Framework for Understanding How Waiting, Delays, and Time Scarcity Shape Poor Patients' Clinical Experience. *Japan Journal of Medical Science* 7 (2): 371-375.

Copyright: ©2026 Howard Moskowitz. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.