

## Contextual Errors in Medical Decision Making: Reclaiming the Human Situation in Clinical Care

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### ABSTRACT

*William Osler's attributed assertion that "the good physician treats the disease; the great physician treats the patient who has the disease" captures an enduring tension in clinical practice: the distinction between addressing pathophysiology and attending to the person who embodies it. Despite widespread recognition that effective care requires understanding patients' life circumstances—their contexts—the implications of failing to do so remain understudied. Weiner and Schwartz's concept of "contextual errors" names a form of medical failure that occurs when clinicians overlook patient circumstances essential to appropriate care planning, even when their biomedical reasoning is sound. This article explores contextual errors as both ethical failures and practical obstacles to effective care, examining their cognitive origins, health equity implications, educational dimensions, and systemic enablers. Drawing on empirical evidence from unannounced standardized patient studies and real patient encounters, alongside theoretical insights from narrative medicine and virtue ethics, this analysis argues that contextualization represents not an adjunct to evidence-based medicine but its necessary corrective—the means by which medicine reclaims its human center.*

### Keywords

Contextual errors, Patient-centered care, Medical decision-making, Clinical reasoning, Health equity, Narrative medicine, Evidence-based medicine.

### Introduction

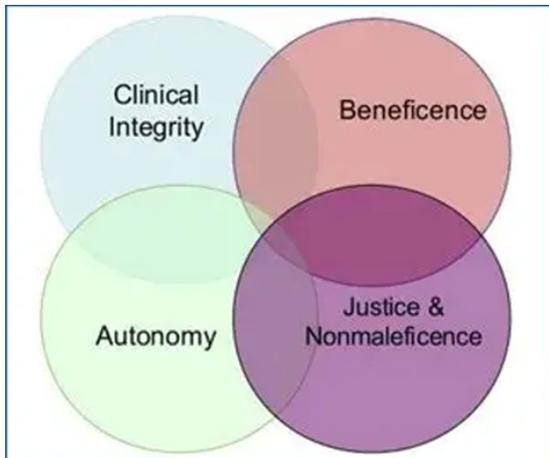
Contemporary medicine operates within a paradox of precision and disconnect. We possess unprecedented ability to diagnose disease at the molecular level, yet systematic failures persist in translating biomedical knowledge into effective care for actual patients. A diabetic patient leaves the clinic with a prescription for insulin but no means to refrigerate it. An elderly man receives dietary counseling without anyone asking whether he has access to food. A woman working night shifts is told to take medication three times daily with meals—a schedule fundamentally incompatible with her life.

These scenarios represent what Weiner and Schwartz term "contextual errors"—failures that occur not because clinicians lack medical knowledge but because they apply that knowledge

without attending to the circumstances that determine whether care plans will succeed or fail [1]. As they observe, "what is lacking is a performance measure for physician attention to such contextual factors. In short, while we assess physicians in their performance at following guidelines, we are not assessing whether they know when not to, or when following them is not enough, and what to do instead" [1]. This gap between what evidence recommends and what patients can realistically accomplish represents one of medicine's most consequential blind spots.

clinical decision-making, derives recommendations from randomized controlled trials that establish efficacy under controlled conditions. Yet as Weiner and Schwartz note, "that research evidence is intrinsically devoid of patient context. While a particular medication may outperform placebo in a randomized controlled trial, it may be of no benefit to subgroups of patients who can't afford it, don't understand how to take it, or have competing responsibilities that preclude adherence to the studied dosing schedule" [1]. The guideline-concordant prescription becomes functionally incorrect when context renders it unworkable.

This article examines contextual errors across multiple dimensions: their conceptual architecture and distinguishing features, the cognitive mechanisms underlying their occurrence, their disproportionate impact on vulnerable populations, their costs to health systems and patients, the educational reforms necessary to address them, and the organizational transformations required to make contextualization systematic rather than exceptional. Throughout, the analysis draws on Weiner and Schwartz's empirical work while situating it within broader conversations about narrative medicine, practical wisdom, and the moral purposes of clinical care.



### Conceptual Foundations: Defining the Invisible Error What Makes an Error Contextual?

The Institute of Medicine defines medical error as "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim" [1]. Contextual errors fall within the latter category: they represent wrong plans—plans that are biomedically appropriate yet situationally inappropriate, technically correct yet practically unworkable.

Consider Weiner's paradigmatic case from 2004: a middle-aged woman with obesity, diabetes, and hypertension was referred for bariatric surgery after unsuccessful conservative management [1,2]. The biomedical reasoning was sound—research evidence supported surgery given her condition and prior treatment failures. Her stated preference aligned with the recommendation. Yet when the physician explored an offhand comment about wanting to "better take care of her son," a different reality emerged. The patient had sole responsibility for lifting, bathing, and feeding a young man with end-stage muscular dystrophy, while also caring for an eight-year-old daughter and tolerating an abusive, alcoholic husband whose disability income she needed [1]. The surgery would leave her unable to lift her son for weeks, risking wound dehiscence and leaving him without essential care. Once this context surfaced, the care plan changed—the patient canceled the surgery. A contextual error had been narrowly averted.

What distinguishes this from other medical errors? Unlike diagnostic mistakes, the physician correctly identified the

clinical problem. Unlike procedural errors, no technical failure occurred. Unlike communication breakdowns, information was eventually transmitted. The near-error stemmed from what Weiner terms "inattention to patient context"—the failure to explore circumstances essential to care planning until a chance comment prompted inquiry [1].

Weiner and Schwartz define patient context as "all that is expressed outside the boundaries of a patient's skin that is relevant to planning the patient's care" [1]. This encompasses at least ten broad domains: competing responsibilities, social support, access to care, financial situation, skills and abilities, emotional state, cultural perspective and spiritual beliefs, attitude toward illness, relationship with healthcare team members, and environment [1,2]. Critically, context includes not just objective circumstances (income, housing) but subjective dimensions—emotional states, spiritual beliefs, attitudes—that, while originating internally, manifest as behaviors and actions requiring clinical attention.

### The Architecture of Contextualizing Care

Weiner and Schwartz conceptualize contextualizing care as addressing four sequential questions during clinical encounters. First: Are contextual red flags present—clues suggesting that context essential to care planning may exist? In the bariatric surgery case, the patient's comment about her son was a red flag. Second: If a red flag is present, did the clinician explore it through contextual probing? The physician's follow-up question—"What's wrong with your son?"—constituted probing. Third: Did probing reveal contextual factors essential to care planning? The patient's caregiving responsibilities emerged as a crucial factor. Fourth: Was the care plan adapted to address those factors? Canceling the surgery represented contextualized planning.

This framework provides operational specificity often lacking in discussions of patient-centered care. Rather than vague exhortations to "consider the whole person," Weiner and Schwartz offer concrete, observable behaviors: recognizing linguistic cues, asking follow-up questions, documenting revealed circumstances, modifying plans accordingly. Table 1 in their 2016 article provides exemplars across all ten contextual domains, illustrating how red flags might present, what probing questions could elicit, what factors might be revealed, and how plans could adapt [1]. Importantly, they argue against comprehensive contextual assessment for every patient, which they view as impractical and analogous to the exhaustive review of systems taught to medical students but soon abandoned for hypothesis-driven approaches. Not all care requires contextualization—an insured woman with uncomplicated cystitis may simply need an antibiotic. But when red flags emerge—when a pregnant patient hints she may not take prescribed antibiotics—clinicians must probe the domains of skills and abilities (does she understand the consequences?) and cultural beliefs (does she favor traditional remedies?) to determine whether contextual factors complicate straightforward care.

### Why Contextual Errors Elude Detection

A defining feature of contextual errors is their invisibility to

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traditional quality assessment methods. As Weiner and Schwartz emphasize, "detecting its presence usually requires listening in on the visit". Chart review cannot identify what was never documented. Mortality and morbidity conferences cannot discuss errors that remain unrecognized. Automated surveillance systems flagging guideline non-adherence miss cases where guidelines were followed yet care failed because context was ignored.

The bariatric surgery case illustrates this perfectly. Had the patient proceeded with surgery and suffered complications, a standard review would likely attribute the problem to surgical risks or patient factors (obesity, diabetes) rather than recognizing that the plan was contextually inappropriate from the outset. The contextual dimension—the impossibility of postoperative mobility restrictions given caregiving obligations—would remain invisible unless someone happened to know about the son's condition and connected it to the surgical decision.

This invisibility has profound implications. Medical errors drive quality improvement primarily when they're detected, analyzed, and addressed. Diagnostic errors trigger teaching conferences. Medication errors prompt system redesigns. But contextual errors slip through accountability mechanisms because they masquerade as patient "noncompliance" or "treatment failure" rather than planning failures. The patient who doesn't fill an expensive prescription appears nonadherent; rarely does anyone ask whether cost rendered the prescription fundamentally inappropriate. The diabetic patient whose control deteriorates seems unmotivated; seldom does anyone probe whether vision loss prevents accurate insulin dosing.

### **The Empirical Evidence: How Common Are Contextual Errors?**

#### **The Unannounced Standardized Patient Study**

To determine whether physicians make contextual errors when opportunities arise, and to benchmark contextual error rates against biomedical error rates, Weiner and colleagues conducted a landmark study using unannounced standardized patients (USPs)—actors portraying patients without physicians' knowledge. From April 2007 to April 2009, they sent USPs to 111 internal medicine practices across Chicago and Milwaukee, presenting with one of four clinical scenarios: asthma, adjustment disorder with depressed mood, unexplained weight loss, or uncontrolled diabetes [1,3].

Each scenario had four variants. The "uncomplicated" variant required simply following clinical guidelines. The "biomedically complex" variant included a complicating biomedical factor (untreated gastroesophageal reflux worsening asthma, for example). The "contextually complex" variant featured a contextual barrier: inability to afford medications, low health literacy requiring simplified instructions, nutritional deprivation causing weight loss, or caregiving responsibilities interfering with diabetes management. The "combined" variant incorporated both biomedical and contextual complexity [1,3].

USPs were trained to provide red flags—subtle cues signaling

underlying problems—but to reveal details only if physicians probed. For instance, a USP presenting with poorly controlled asthma might say, "It's been tough since I lost my job," but would explain insurance loss and medication unaffordability only if the physician asked follow-up questions about job loss [1,3]. Encounters were audio-recorded for later analysis by research team members who coded whether physicians detected red flags, probed appropriately, identified complicating factors, and adapted care plans accordingly.

The findings were striking. Across 399 visits to 111 attending physicians at 14 diverse practices—including academic clinics, community-based primary care networks, safety net providers, and U.S. Department of Veterans Affairs centers—physicians provided error-free care in 73% of uncomplicated encounters—a respectable baseline. Performance plummeted, however, with complexity. In biomedically complex encounters, only 38% of care was appropriate. In contextually complex encounters, appropriate care occurred in merely 22% of cases. Most alarmingly, when both biomedical and contextual complexity were present, appropriate care emerged in just 9% of encounters.

The data revealed systematic biomedical bias: physicians probed biomedical red flags 63% of the time but contextual red flags only 51%—a statistically significant difference ( $P < 0.05$ ). Even when physicians successfully probed and learned about contextual factors, there was no guarantee they would adapt care appropriately. In more than 50% of cases where physicians learned patients couldn't afford asthma medications, they prescribed higher dosages rather than switching to cheaper generics. The knowledge of the barrier didn't automatically translate into contextually appropriate action.

#### **Time and Contextualization: A Surprising Finding**

Perhaps the most unexpected result challenged assumptions about time constraints as the primary obstacle to contextual care. Encounters in which physicians probed contextual red flags, identified factors, and adapted plans were not, on average, longer than encounters where they did not [1]. This counterintuitive finding becomes comprehensible when examining high-performing physicians' communication patterns.

When a patient mentioned job loss, contextually adept clinicians immediately asked, "How has that been tough for you?"—a five-second probe that often revealed insurance problems and medication unaffordability. These physicians then quickly pivoted to discussing generic alternatives, a conversation no longer than explaining dosage increases. The entire contextualization process—probe, reveal, adapt—added minimal time [1]. By contrast, physicians who missed contextual cues often spent equivalent or greater time pursuing biomedically focused discussions that ultimately proved futile because they didn't address the actual barrier to care.

This suggests that contextual competence is less about having more time than about using available time differently—recognizing signals, asking targeted questions, and responding pragmatically to revealed barriers. As Weiner and Schwartz observe,

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"contextualizing care is not necessarily a longer process, but it requires sensitivity and responsiveness to contextual information".

### **The Economic Costs of Contextual Errors**

Beyond clinical appropriateness, contextual errors carry measurable economic consequences. In a secondary analysis of the USP data, researchers computed the costs of errors—both contextual and biomedical [4]. The median cost of biomedical errors was \$30 per encounter with errors. For contextual errors, the median cost was \$231—nearly eight times higher.

This differential stems from the nature of the errors. A biomedical mistake might involve prescribing a slightly suboptimal medication that still provides some benefit. A contextual error, however, often results in completely futile interventions. The elderly man with weight loss due to malnutrition provides a stark example. Physicians who identified the underlying social cause referred him to Meals on Wheels—a low-cost social service intervention. Those who missed the contextual red flags ordered extensive cancer workups, including imaging and endoscopies, pursuing malignancy that wasn't present [1,4].

These findings challenge the notion that contextual care is economically inefficient—a "luxury" when resources are constrained. Rather, decontextualized care proves wasteful precisely because it generates interventions patients never complete, tests that don't alter management, and treatments that fail because they're incompatible with patients' lives. Contextual care, by aligning medical recommendations with patient realities, concentrates resources on interventions patients can actually implement.

### **Real Patients, Real Consequences: The Observational Study**

While the USP study demonstrated that physicians make contextual errors under controlled conditions, questions remained about frequency in actual practice and impact on real outcomes. To address this, Weiner's team recruited 426 actual patients at two Veterans Affairs internal medicine clinics to carry concealed audio recorders into their appointments [5]. From July 2009 to November 2012, they recorded 774 encounters with 139 physicians—all resident physicians in internal medicine training programs—analyzing them using the Content Coding for Contextualization of Care (4C) framework that assessed red flag presence, probing, factor identification, and plan adaptation [1,5,6].

The prevalence of contextual complexity was higher than anticipated: among these 774 encounters, there were 548 contextual red flags present—appearing in 52% of all encounters—suggesting that context frequently matters to care planning in real-world primary care [1,5]. Among encounters with red flags, coders confirmed that 208 revealed genuine contextual factors essential to appropriate care planning. Care was contextualized—appropriately adapted to revealed factors—in only 59%, meaning contextual errors occurred in 41% of cases where context was essential to effective planning [1,5].

The clinical consequences were substantial and prospectively documented. Following index visits where physicians' contextual performance was measured, outcomes were tracked for nine months using individualized outcome measures based on the presenting red flag. For a patient presenting with rising hemoglobin A1c, the outcome was whether diabetes control improved; for a patient with hypertension and loss of medication coverage, the outcome was blood pressure control [5]. Among 157 encounters with outcome data available, clinical improvement occurred in 71% of cases where care had been contextualized but only 46% of cases where contextual errors occurred—a statistically significant 25-percentage-point difference ( $P=0.002$ ) [1,5]. This prospective observational design, with outcome coders blinded to whether physicians had contextualized care, provides compelling evidence that contextual errors are not merely theoretical concerns or ethical lapses but practical obstacles with measurable health consequences [5].

### **Cognitive and Behavioral Dimensions: Why Contextual Errors Occur**

#### **The Biomedical Bias**

The USP study documented not just error rates but a striking pattern: when both biomedical and contextual factors were present, physicians consistently prioritized biomedical information even when both were equally essential to appropriate care [1]. This "biomedical bias" manifests in differential probing rates—63% for biomedical red flags versus 51% for contextual ones—but extends deeper into clinical reasoning patterns.

Medical training creates powerful cognitive schemas organized around diseases, symptoms, diagnostic algorithms, and treatment protocols. These schemas enable rapid pattern recognition for biomedical information, allowing experienced clinicians to quickly formulate differential diagnoses and treatment plans. Contextual information, however, doesn't fit these established schemas as readily. When patients mention work schedules or family responsibilities, these details may register as peripheral "social" information rather than clinically relevant data requiring integration into medical decision-making [1].

This cognitive architecture reflects the "hidden curriculum"—implicit values transmitted through institutional practices, role modeling, and evaluation systems [7]. When medical education focuses overwhelmingly on mastering pathophysiology and therapeutics while giving comparatively little attention to exploring life circumstances, students internalize that biomedical factors constitute "real medicine" while contextual factors are supplementary concerns, perhaps worthy of social work referral but not central to physician responsibility [1].

The bias appears strikingly in how physicians respond to revealed contextual barriers. Even after learning that patients cannot afford prescribed medications—information explicitly communicated—many physicians proceed to discuss dosage increases or additional prescriptions rather than addressing affordability [1]. The contextual information is heard but not processed as requiring

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modification of the biomedical plan. The schema for "uncontrolled asthma" activates treatment intensification protocols; the schema doesn't include affordable alternatives as the primary response even when cost is the identified barrier.

### **Premature Closure and Contextual Oversight**

Premature closure—the tendency to stop considering alternative explanations once an initial diagnosis seems plausible—is a well-documented cognitive error in diagnostic reasoning [8]. A parallel phenomenon affects contextual reasoning: once the biomedical problem is identified and standard treatment selected, clinicians may mentally close the case before considering whether treatment fits the patient's circumstances [1].

This manifests particularly clearly in the unexplained weight loss scenario. The biomedical schema for weight loss in elderly patients includes malignancy, hyperthyroidism, depression, and other organic causes. When physicians encounter an older man losing weight, this schema activates automatically, prompting questions about appetite, bowel changes, night sweats, and consideration of diagnostic workup. The contextual possibility—nutritional deprivation due to poverty—may not be represented in the schema at all or may appear only peripherally. Unless red flags are strong enough to interrupt the biomedical reasoning pathway, extensive cancer evaluation proceeds without anyone asking whether the patient has adequate food [1,3].

The phenomenon reflects what cognitive psychologists call "availability heuristic"—the tendency to rely on information that is cognitively salient or easily recalled. Biomedical facts saturate medical training: pathophysiology lectures, clinical case discussions, examination questions, journal articles. Contextual factors, while acknowledged as important, rarely receive equivalent emphasis in formal curricula. When cognitive resources are taxed by clinical complexity and time pressure, physicians default to what is most available—the biomedical framework they've practiced applying thousands of times [1].

### **The Skills of Contextual Attention**

Despite these cognitive barriers, Weiner's research demonstrates that contextual competence is learnable. In a randomized trial, fourth-year medical students received either four hours of intensive contextualization training or usual education during a subinternship rotation [9]. Training taught students to recognize common contextual barriers, identify linguistic red flags, formulate appropriate probe questions, and adapt care plans to accommodate revealed barriers. Students were then assessed using standardized patients presenting scenarios identical to those in the USP study, with SPs and assessors blinded to student training status.

Students receiving contextualization training appropriately contextualized care in 69% of encounters versus only 22% for control group students—a dramatic, statistically significant difference [1,9]. This demonstrates that with explicit instruction, deliberate practice, and feedback, clinicians can develop skills to recognize and respond to contextual complexity. The competencies

are not innate traits some possess and others lack, but rather teachable capabilities improved through training.

Unfortunately, follow-up research revealed a sobering reality: skills demonstrated with standardized patients in controlled settings did not automatically transfer to actual clinical practice. When residents who had completed similar training were assessed with both SPs and real patients, they showed improved performance in the simulation center but no improvement with actual patients in clinic [1,8]. Four hours of education proved insufficient to override deeply ingrained habits and practice patterns shaped by years of biomedical emphasis and institutional cultures that systematically deprioritize contextual attention.

This suggests that addressing contextual errors requires more than brief educational interventions. Sustainable change demands longitudinal training integrated throughout medical education, reinforcement through role modeling and institutional practices, and accountability mechanisms that make contextualization measured, valued, and rewarded in actual practice settings.

### **Narrative Medicine and the Interpretive Foundation Context as Story**

Rita Charon's concept of narrative medicine provides crucial interpretive grounding for understanding contextual care. Charon argues that effective clinical practice requires "narrative competence"—the ability to absorb, interpret, and act upon patients' stories of illness [10]. This competence involves more than information extraction; it requires interpretive skill, recognizing meanings embedded in how patients describe experiences, the metaphors they employ, the emotions that surface, the silences they maintain.

Contextual errors represent failures of narrative competence. When physicians reduce patients to disease categories—"a diabetic," "an asthmatic"—they confuse plot for character, symptom for story. The decontextualized physician hears "I have diabetes" but misses the fuller narrative: "I'm a home health aide working evening shifts with no breaks, I'm afraid of losing the job I desperately need, and I'm skipping insulin doses during work hours because I have nowhere to store it and can't risk a hypoglycemic episode while caring for my client." The contextual information exists not as discrete, readily extractable data points but woven throughout the patient's story—implicit in word choice, visible in tone, revealed through elaboration [10].

Consider how contextual red flags typically present. Patients rarely announce, "I cannot afford this medication" directly. More often, they signal obliquely: "That sounds expensive," "I'll have to see," "Do I really need that?", or they ask about generic alternatives [1]. These linguistic markers require interpretive attention—recognizing that hedging language, expressions of uncertainty, or questions about necessity may encode financial concerns that the patient hesitates to state explicitly, perhaps from shame, fear of judgment, or uncertainty about whether physicians can or should address such matters.

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The narratively competent physician practices what Charon calls "close reading"—interpretive attention to nuance, ambiguity, and subtext. When a patient says "I'm trying to take the medication" with a particular inflection, the skilled listener hears not confirmation of adherence but a signal that something complicates the effort. The word "trying" implies struggle; the tone may carry frustration, defeat, or apology. Rather than accepting the surface statement and moving on, the attuned clinician probes: "Tell me more about what makes it difficult" [10].

### **Empathy as Interpretation**

From this perspective, clinical empathy is fundamentally interpretive work—the ability to recognize the symbolic grammar of patients' lives and the meanings they assign to illness experiences. When a patient repeatedly misses appointments, multiple interpretations are possible: resistance to treatment, ambivalence about diagnosis, inability to take time off work, transportation barriers, fear of medical settings, or resignation that nothing will help. Each interpretation suggests different responses, and discerning which applies requires inquiry guided by empathic imagination—the capacity to generate plausible hypotheses about what might be happening in another person's life [10,11].

Weiner describes contextual inquiry as "contextual probing"—asking follow-up questions when patients signal difficulties: "You mentioned you work nights—does that affect when you can take this medication?" "I hear you saying the cost is a concern—should we look at less expensive alternatives?" [1]. These probes reflect interpretive empathy: recognizing that surface statements carry implications for care planning that require explicit exploration. They transform empathy from a vague emotional disposition into concrete communicative practice [11,12].

Importantly, this form of empathy doesn't require sharing patients' experiences or emotional states, which may be impossible across differences of class, culture, or life circumstance. Rather, it requires what philosopher Edith Stein called "empathic understanding"—the imaginative recognition that the other person has a complex inner life, operates within constraints and possibilities that shape their choices, and makes sense in their own terms even when those terms differ radically from one's own. The physician need not have experienced homelessness to recognize that someone who is homeless cannot reliably refrigerate insulin; imagination and inquiry suffice.

### **Documentation and Narrative Preservation**

If contextual understanding depends on narrative competence, documentation practices must preserve narrative richness rather than reducing it to coded data elements. Current documentation systems, dominated by structured templates and required checkboxes, systematically strip context from clinical stories. Electronic health records excel at storing laboratory values and vital signs but struggle with the narrative dimensions that make context comprehensible [1].

Consider how typical documentation transforms the bariatric

surgery patient's story. Her situation—sole caregiver for a son with muscular dystrophy, supporting a young daughter, tolerating an abusive husband for economic survival, wanting surgery to better care for her son but unable to manage postoperative lifting restrictions—might appear in the record as: "62 yo F, BMI 42, DM2, HTN, s/p cholecystectomy with adhesions, referred for bariatric surgery. Patient concerned about postoperative recovery. Surgery canceled per patient request." The contextual dimension vanishes entirely or appears so compressed as to be meaningless to anyone reading the note later [1,9].

Weiner and Schwartz observe that detecting contextual errors "usually requires listening in on the visit" precisely because relevant information often remains undocumented or appears in free-text notes buried under templates [1]. Some healthcare systems are experimenting with narrative fields in EHRs—dedicated spaces for contextual reflection separate from problem-oriented documentation. These fields allow clinicians to document the contextual narrative while maintaining structured data for administrative purposes. Early evidence suggests such fields increase documentation of contextual factors and facilitate care coordination, though implementation faces challenges in time-constrained environments [1].

The challenge extends beyond format to epistemology: what counts as medical information worthy of documentation? If contextual factors are viewed as "social" rather than "medical," they may be noted informally but not recorded as integral to the clinical assessment. Normalizing contextual documentation as essential clinical information—as important as listing active medications or documenting allergies—requires cultural shifts in how medicine defines its proper domain and responsibilities.

### **Ethics, Justice, and the Moral Dimensions of Contextual Error as Ethical Failure**

At its core, contextual error represents not just technical oversight but ethical failure—a violation of medicine's foundational commitment to act in patients' best interests. Edmund Pellegrino and David Thomasma articulate medicine as fundamentally a "moral community" oriented toward the good of the patient in his or her concrete particularity [13]. The physician's obligation is to this patient, this person, in this situation—not to disease in the abstract or guidelines in the aggregate. When treatment plans ignore circumstances that determine whether care can succeed, they fail to serve patients' actual good regardless of biomedical appropriateness [13].

This ethical dimension distinguishes contextual errors from other medical mistakes. A diagnostic error may reflect cognitive limitation or inadequate information; while unfortunate, it doesn't necessarily implicate the clinician's moral orientation. Contextual errors, however, often stem from inattention—from not asking, not listening, not caring enough to understand the person beyond the diagnosis. The contextual information is frequently available if someone bothers to inquire. Its absence from care planning reflects not inevitable limitations but choices about what matters,

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what counts as relevant medical information, what falls within professional responsibility [1].

Consider the Aristotelian concept of *phronesis*—practical wisdom that integrates general principles with particular circumstances through moral perception and judgment [13]. The physician who prescribes effective but unaffordable medication demonstrates *techné* (technical knowledge) without *phronesis* (practical wisdom). Technical mastery exists, but moral perception is absent—the failure to recognize that biomedical correctness matters only insofar as it translates into actual benefit for actual patients, which requires understanding and accommodating their circumstances.

Contextual care embodies what Pellegrino calls fidelity—faithfulness to the patient as a particular person rather than an instance of a disease category [13]. Fidelity requires understanding not just what is wrong biomedically but what matters to the patient, what constraints they face, what resources they possess, what trade-offs they are willing to make. This understanding develops through relationship, through encounters where trust is established, stories are told, and mutual understanding deepens. Decontextualized care, even when technically proficient, fails to honor this relational foundation [1,13].

### **Health Equity and the Distribution of Contextual Burden**

Perhaps the most ethically urgent dimension of contextual errors concerns justice. Contextual barriers to care—poverty, housing instability, limited education, linguistic obstacles, social isolation, discrimination—concentrate among marginalized and disadvantaged populations. These groups experience both higher disease burden (social determinants of health) and greater difficulty navigating healthcare systems and implementing treatment recommendations [14]. The intersection creates compound disadvantage: those who most need effective care face the greatest obstacles, while simultaneously being most likely to encounter decontextualized care that ignores their circumstances [1,15].

Michael Marmot's extensive research on health inequities demonstrates that disparities arise substantially from unequal distribution of resources and opportunities shaping people's ability to maintain health and access care [14]. Contextual errors amplify these inequities. Consider two patients with hypertension: one a middle-class professional with flexible work hours, reliable transportation, and comprehensive insurance; the other a low-wage worker with no sick leave, unreliable bus access, and high-deductible insurance. A physician who prescribes identical medication to both, without considering that the second patient cannot afford it or take time off for follow-up, perpetuates structural inequities. The intervention—biomedically identical—is contextually appropriate for one patient and contextually inappropriate for the other [1,14].

Weiner's VA study population—many veterans experiencing poverty, homelessness, mental illness, and social isolation—

exemplifies groups for whom contextual factors most profoundly affect care feasibility [8]. Yet these are precisely the patients whose contextual needs may be least likely to receive attention. Research on implicit bias suggests clinicians may unconsciously attribute nonadherence among marginalized patients to lack of motivation rather than structural barriers, leading to judgmental rather than exploratory responses when contextual issues surface [1]. Linguistic and cultural barriers further impede the nuanced communication necessary for contextual understanding.

Contextual care thus becomes an equity strategy—a means of leveling an uneven playing field. Systematic contextualization redistributes clinical attention toward those whose circumstances present the greatest barriers, directing enhanced focus toward the most vulnerable. As Weiner emphasizes, contextualizing care is a "moral act"—an expression of respect and solidarity particularly meaningful for patients accustomed to feeling invisible or devalued in clinical settings [2].

### **Structural Competency and Systemic Change**

While contextualization helps individual clinicians respond to patient circumstances, addressing root causes of contextual barriers requires structural change. Jonathan Metzl and Helena Hansen's concept of "structural competency" calls for clinicians to recognize how institutional and policy factors create health inequities, and to work toward structural solutions rather than merely adapting to unjust circumstances [1,14].

This suggests operating at multiple levels simultaneously. Individual level: training clinicians in contextual competence so they recognize and respond to barriers in their own practice. Organizational level: designing healthcare delivery systems that facilitate rather than impede contextual care. Community level: partnering with community organizations to address contextual barriers beyond healthcare's capacity to solve alone—transportation, food access, housing. Policy level: advocating for structural changes that would reduce contextual burden—affordable medications, paid sick leave, universal insurance, income support [1,14].

A comprehensive approach recognizes that while clinicians cannot solve poverty or structural racism, they can avoid perpetuating their effects through decontextualized care. They can also advocate for policy changes that would reduce contextual barriers for their patient populations. Contextualization thus encompasses both direct clinical practice—adapting individual care plans to accommodate barriers—and collective action to dismantle the structural conditions producing those barriers in the first place [1,2].

### **Educational Transformation: Teaching Contextualization The Hidden Curriculum and Contextual Neglect**

Medical education's underemphasis on contextual reasoning reflects what Frederic Hafferty terms the "hidden curriculum"—implicit values transmitted through institutional practices, role modeling,

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and reward structures that often contradict explicit curricula [7]. While schools may teach about taking social histories and patient-centered communication, the hidden curriculum teaches different lessons. When attending physicians conduct rounds focused exclusively on differential diagnosis without asking about patient circumstances, students learn that contextual factors are medically peripheral. When time pressure forces abbreviated encounters, students internalize that efficient information extraction matters more than relational depth. When evaluation focuses on biomedical knowledge, students prioritize what will be tested [1,7].

This hidden curriculum begins early and intensifies throughout training. First-year students learn exhaustive pathophysiology but minimal content on exploring life circumstances. Clinical rotations emphasize diagnostic acumen and treatment protocols, with contextual considerations appearing as afterthoughts if at all. Residency's intense time pressure and productivity demands further deprioritize contextual attention. By the time physicians enter independent practice, biomedical bias is deeply ingrained—a habitual cognitive pattern reinforced through years of training [1].

Weiner and Schwartz argue for explicitly countering this hidden curriculum by making contextualization a measured, valued, rewarded competency throughout training. This requires more than adding lectures on social determinants or communication skills. It demands fundamental reorientation of how medicine conceives clinical competence: not just diagnostic accuracy and therapeutic knowledge, but the integrative capacity to align biomedical understanding with patients' lived realities [1].

### Practical Strategies for Teaching Contextualization

Several educational approaches show promise for developing contextual competence. Weiner and colleagues' randomized trial demonstrated that focused training—teaching recognition of common barriers, identification of linguistic red flags, formulation of probe questions, and adaptation of care plans—significantly improved students' contextual performance with standardized patients [9]. The intervention used case-based learning, video analysis of high-performing clinicians, and deliberate practice with feedback [1,9].

Key elements included:

**Pattern recognition training:** Teaching students to anticipate common contextual barriers (financial constraints, work schedules, caregiving responsibilities, health literacy limitations) and recognize linguistic markers that signal them ("That sounds expensive," "I work nights," "I'll have to see") [1].

**Probe question formulation:** Practicing targeted follow-up questions that invite contextual disclosure without requiring exhaustive social histories for every patient. Examples: "How has that been difficult for you?" "Tell me more about what makes that challenging." "What concerns do you have about this plan?" [1].

**Care plan adaptation:** Generating alternatives when standard recommendations prove contextually inappropriate—generic

medications when cost is a barrier, flexible dosing when work schedules conflict with standard regimens, simplified instructions when health literacy is limited [1].

**Video-based learning:** Analyzing recordings of encounters where contextual factors emerged, identifying points where clinicians did or didn't probe red flags, discussing alternative approaches, and comparing high-performing and low-performing examples [1].

The challenge lies in making skills developed in controlled educational settings transfer to actual clinical practice. As Weiner's research revealed, residents who performed well with standardized patients showed no improvement with real patients in busy clinics [8]. This suggests the need for practice-based learning—developing contextual competence within actual clinical settings where time pressure, multiple competing demands, and institutional cultures either support or undermine contextual attention.

### Integrating Contextualization Throughout Medical Education

Weiner and Schwartz propose that contextualization should be incorporated from the beginning of medical education, woven throughout the curriculum rather than confined to discrete communication skills courses. They envision every teaching case including a contextual dimension on which appropriate care might hinge. In pharmacology, when students identify the preferred therapeutic option, they would then be told it was ineffective for this particular patient and challenged to determine why—prompting inquiry that reveals the patient couldn't afford the medication. In pathophysiology, cases would include not just disease mechanisms but the life circumstances that make standard treatments unworkable for specific individuals [1].

This approach makes contextual reasoning integral to clinical reasoning rather than a separate skill set. Students would learn to automatically ask: "Is this plan feasible for this patient?" alongside "Is this plan biomedically correct?" The cognitive habit of contextualization would develop through repeated practice across diverse clinical scenarios, becoming as automatic as considering drug interactions or contraindications [1].

Assessment must align with this emphasis. Currently, most clinical evaluations focus on biomedical knowledge (written exams) and technical skills (OSCEs, procedural checklists). Contextual reasoning remains largely unmeasured and therefore undervalued. Weiner and colleagues have developed assessment methods specifically for contextual competence: standardized patient encounters featuring contextual red flags with assessors rating recognition and response; video review of clinical encounters analyzed for contextualization behaviors; portfolio-based assessment with reflective narratives describing encounters involving contextual complexity; and multi-source feedback from patients, nurses, and team members regarding trainees' contextual attention.

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## **Organizational and Systems Dimensions Time, Productivity, and Structural Constraints**

While Weiner's research surprisingly found that contextualizing care need not extend visit duration, this finding requires careful interpretation. The time-neutrality of contextual care applies when contextual factors are relatively straightforward and clinicians possess the skills to recognize and address them efficiently. A quick probe revealing medication cost concerns, followed by switching to a generic alternative, may indeed take no longer than discussing dosage increases.

However, many contextual situations involve profound complexity requiring sustained attention: patients experiencing homelessness needing referrals to housing services; individuals with severe mental illness requiring care coordination across multiple systems; families facing language barriers necessitating interpreter services and culturally adapted explanations. These situations demand time, resources, and interdisciplinary collaboration that many healthcare systems are not structured to provide.

Moreover, even when individual encounters need not extend, the aggregate time required for population-level contextualization may be substantial. If half of patients present contextual red flags requiring exploration (as Weiner's VA study found), and a significant proportion reveal complex barriers needing multimodal interventions, the cumulative time demand becomes considerable [8]. Systems operating under productivity pressures that allow 15-minute appointments may not accommodate this reality, forcing clinicians to choose between contextual attention and meeting volume targets.

Organizational structures either facilitate or obstruct contextualization. Healthcare systems designed around biomedical encounters—specialty siloes, fragmented care, limited care coordination, inadequate social services integration—create barriers. Team-based models offer potential for distributing contextual work across multiple professionals (social workers, pharmacists, community health workers, care coordinators) but require explicit protocols for how contextual information flows between team members and informs shared decision-making.

## **Performance Measurement and Accountability**

Weiner and Schwartz argue that what gets measured gets valued, and what gets valued gets done. Currently, quality metrics focus overwhelmingly on process measures (guideline adherence) and outcome measures (disease control), which cannot distinguish contextual success from failure [1,16]. Two physicians may have identical hypertension medication prescribing rates, yet one explores cost and switches to affordable alternatives when necessary while the other prescribes without inquiry, resulting in unfilled prescriptions and uncontrolled blood pressure. Traditional metrics capture process (both prescribed) but miss the crucial distinction in contextual performance.

Weiner's team has pioneered performance measures specifically

for contextual behaviors: contextual probe rate (frequency of explicit inquiry about barriers), red flag response rate (proportion of patient-initiated cues triggering follow-up), care plan adaptation rate (frequency with which documented factors lead to modified plans), and contextualization quality (expert rating of whether plans adequately address barriers) [1,6].

Implementing such measures requires different data sources than traditional assessment. Since contextual reasoning occurs primarily through conversation, evaluation typically requires direct observation through audio-recorded encounters or sophisticated analysis of clinical documentation. This presents practical challenges but also opportunities: recorded encounters enable detailed communication analysis, and natural language processing algorithms may eventually automate contextual assessment from clinical notes.

## **Audit and Feedback for Continuous Improvement**

Weiner's team has piloted an "audit and feedback" approach at VA hospitals in Illinois, where patients volunteer to audio-record their care. Every one to two months, clinicians and care teams receive aggregate data on their contextual performance: proportion of red flags probed, proportion of factors addressed, representative examples of effective contextualization and contextual errors. The strategy provides data clinicians need to understand where they perform well and where they fall short, driving iterative improvement [1,18,19].

This approach operationalizes continuous quality improvement principles for contextual care. Rather than one-time educational interventions showing limited sustained impact, ongoing measurement with feedback creates accountability and motivation for sustained behavior change [18]. Clinicians see their performance relative to peers, identify specific improvement opportunities, and receive recognition for contextual excellence. Early data suggest modest but meaningful improvements in contextual attention, though the program remains in pilot stages [1,18].

The model assumes clinicians want to contextualize care and need primarily feedback and support to do so consistently. This may be optimistic—some physicians may view contextual factors as outside their responsibility or lack intrinsic motivation to address social issues. However, the approach aligns with principles of professional self-regulation and continuous improvement that characterize medicine at its best.

## **Economic Dimensions: Value and Efficiency The Costs of Contextual Errors**

Weiner's economic analysis revealed contextual errors are not just ethically problematic but economically wasteful. The median cost differential—\$231 for contextual errors versus \$30 for biomedical errors—reflects the futility generated by decontextualized care. When plans are biomedically appropriate but contextually impossible, resources are consumed without producing benefit [1,4].

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The elderly man with unexplained weight loss illustrates this vividly. Contextually appropriate care—social services referral, arranging Meals on Wheels or food bank access—costs relatively little and directly addresses the problem. Decontextualized care—extensive cancer workup with imaging, endoscopy, biopsies—costs thousands of dollars while failing to address actual need. The patient remains malnourished after expensive evaluation pursuing nonexistent malignancy. Both approaches consume resources, but only one produces value.

Contextual errors generate multiple forms of waste: medications prescribed but never filled, therapies recommended but never completed, diagnostic tests ordered repeatedly because underlying problems go unaddressed, emergency department visits and hospitalizations resulting from inadequately managed outpatient conditions. Each represents resources consumed without corresponding health benefit.

### **Value-Based Care and Contextual Alignment**

These economic realities align contextual care with value-based payment models that emphasize outcomes per dollar spent rather than volume of services. From a value perspective, a contextually appropriate lower-cost medication that patients actually take provides greater value than an expensive guideline-preferred agent patients cannot afford. The metric shifts from protocol compliance to effective treatment.

Weiner's VA study demonstrated this directly: patients whose physicians more frequently contextualized care had better outcomes and lower total costs over 12-month follow-up [5]. High-contextualizing physicians' patients showed improved adherence, fewer complications, and reduced healthcare expenditures compared to low-contextualizing physicians' patients. The differences weren't trivial—contextual attention predicted meaningful improvements in both clinical and economic outcomes [1,8].

This challenges assumptions that contextual care is inefficient or that addressing social factors diverts scarce resources from "real medicine." Rather, decontextualized care proves inefficient precisely because it generates futile interventions. Contextual care, by focusing resources on treatments patients can implement, maximizes return on healthcare investment. The "soft skills" of empathy and contextual attention thus have hard economic value.

### **Implications for Healthcare Financing**

If contextual care improves outcomes while reducing costs, payment models should incentivize it. Fee-for-service systems that reimburse discrete procedures but not time spent understanding patient circumstances create perverse incentives—physicians are paid to prescribe and test but not to explore whether prescriptions will be filled or tests are addressing actual problems.

Alternative payment models—capitation, bundled payments, value-based purchasing—theoretically align incentives with

contextualization by holding providers accountable for outcomes rather than volume. However, realizing this potential requires measuring contextual performance explicitly. Without direct assessment, these models may inadvertently reward superficial cost reduction (prescribing cheaper medications without exploring whether patients can afford even those) rather than genuine contextual alignment.

Truly supporting contextual care may require dedicated payment for activities currently uncompensated: social work consultations, community health worker home visits, extended appointments for contextually complex patients, care coordination across social services and healthcare systems. These investments should be understood not as charity but as economically rational responses to evidence that contextual attention reduces total costs while improving outcomes.

### **Future Directions: Technology, Research, and Transformation Artificial Intelligence and Contextual Recognition**

Emerging artificial intelligence technologies offer both opportunities and risks for contextual care. Natural language processing algorithms could potentially analyze clinical conversations, identify contextual cues, flag missed opportunities for inquiry, and suggest appropriate responses. Machine learning trained on recordings of high-contextualizing clinicians might recognize linguistic patterns associated with effective contextual exploration [19].

Eric Topol's vision of "deep medicine" imagines AI augmenting human capacity for relationship by automating routine tasks, freeing clinicians' attention for contextual engagement [19]. An AI assistant might analyze patient narratives in real-time, flagging potential contextual concerns for clinician follow-up; search medical records for documented contextual factors and prompt their consideration during care planning; suggest adaptive strategies based on successful contextualization patterns in similar cases; and identify community resources matching documented contextual needs [1,19].

However, significant concerns accompany these possibilities. AI systems risk reifying reductionist approaches if they treat context as discrete data points rather than emerging through relationship. Algorithms trained on biased data may perpetuate rather than reduce disparities. Over-reliance on technological prompts could atrophy clinicians' own contextual awareness. Most fundamentally, the relational core of contextualization—genuine human connection, empathy, moral attention—cannot be automated.

The appropriate role for AI may be supporting rather than replacing human contextualization: handling information retrieval and pattern recognition while preserving space for the interpretive, relational work only humans can do. Technology should enhance rather than supplant the human encounter that remains central to healing [19].

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## Research Priorities

Despite growing recognition of contextual errors, significant research gaps remain. Weiner and Schwartz identify multiple priorities: large-scale epidemiological studies characterizing prevalence across clinical settings and populations; validated tools for assessing contextual competence; rigorous intervention trials evaluating training programs and system-level changes; implementation science examining barriers to translating principles into routine practice; mechanisms research investigating cognitive and organizational factors enabling or impeding contextual reasoning; equity research examining how errors vary across populations and whether interventions reduce disparities; and economic analyses detailing cost-effectiveness of contextual care programs.

Such research would strengthen the evidence base and accelerate integration into mainstream practice and policy. Current evidence, while compelling, remains relatively limited—several studies from one research group, concentrated in VA settings, using specific methodologies. Broader investigation across diverse populations, healthcare systems, and international contexts would establish generalizability and identify context-specific adaptation needs.

## Toward Cultural Transformation

Ultimately, reducing contextual errors requires cultural transformation—fundamental reorientation of medicine toward patients as situated persons rather than disease-bearing organisms. This transformation builds on multiple convergent movements: patient-centered care emphasizing preferences and values, value-based payment creating incentives for effective rather than voluminous care, social determinants of health recognition that medical care occurs within and must address social conditions, narrative medicine recovering interpretive dimensions of practice, and health equity commitment to reducing disparities [1,10,14].

Contextual care synthesizes these movements, providing conceptual clarity (defining contextual errors), practical methods (recognition, inquiry, integration), and outcome measures (does context shape planning?). It offers a unifying framework for reforms sharing the conviction that effective medicine must attend to whole persons in their full life situations.

Weiner and Schwartz's contribution has been naming and characterizing a failure that was always present but rarely acknowledged. By making contextual errors visible, measurable, and addressable, they've opened space for systematic improvement—training clinicians differently, measuring performance differently, organizing care differently, and practicing medicine more humanely and effectively.

## Conclusion: The Moral Grammar of Attention

Contextual errors illuminate medicine's fundamental tension between universalizing protocols and particularizing demands of individual lives. This tension cannot be resolved through better guidelines alone. Rather, it requires cultivating in clinicians the capacity to hold dual perspectives simultaneously—knowing what

evidence recommends while remaining attuned to what this patient can actually accomplish. This represents practical wisdom—*phronesis*—increasingly scarce yet essential to medicine's purpose [1,13].

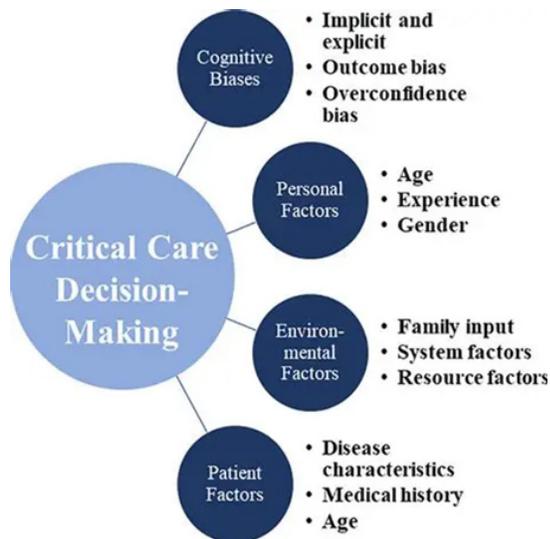
When physicians prescribe treatments patients cannot afford, recommend interventions patients cannot implement, or design plans divorced from lived realities, they fail not in scientific knowledge but in human understanding. The error is inattention—failure to see, ask, listen, adapt. Yet as Weiner and Schwartz demonstrate, this failure is neither inevitable nor intractable. Contextual competence can be taught, measured, and systematically improved. When physicians learn to recognize cues, probe appropriately, and adapt plans, patients achieve better outcomes at lower costs.

Implementing contextual care at scale, however, demands more than individual skill development. It requires organizational restructuring creating systems that facilitate rather than impede contextual attention; cultural transformation valuing relational depth alongside technical proficiency; educational reform training physicians as practical ethicists integrating knowledge with wisdom; and accountability mechanisms measuring contextualization as clinical competence.

Most fundamentally, addressing contextual errors requires reclaiming medicine's human center—recognizing that patients are not primarily disease cases but persons with lives, responsibilities, relationships, constraints, capabilities, hopes, and fears. Effective care begins not with protocols but with understanding. The decontextualized physician treats diseases; the contextualized physician cares for people.

As Weiner and Schwartz observe, a contextual error occurs "when the clinician is treating the disease rather than the patient who has the disease"—when medicine forgets Osler's distinction between good physicians and great ones. Their work reminds us that medicine's failure is not always in facts but in focus, not in knowledge but in attention. Contextual awareness transforms clinical encounters from transactions to relations, restoring patients as the central unit of care—not diseases, not metrics, not protocols.

Ultimately, contextualization is an ethical act: the conversion of data into understanding, of seeing into knowing, of knowledge into wisdom. To contextualize is to heal twice—once the body, once the story. In recognizing this, Weiner and Schwartz invite a paradigm shift: from precision medicine to precision empathy, from standardized care to situated care, from treating diseases to caring for persons. This is medicine as it ought to be—scientifically rigorous and humanly present, technically proficient and morally attentive, evidence-based and context-informed. The work ahead is translating this vision into systematic practice. As their research demonstrates, contextual errors are common, consequential, and correctible. Now we must do the work of correction.



### Addendum: Theological and Hermeneutic Foundations of Contextual Care

The empirical work of Weiner and Schwartz on contextual errors in medical decision-making resonates profoundly with theological and hermeneutic approaches to healing developed in contemporary Jewish mystical thought. Drawing on the framework articulated in Ungar-Sargon's extensive body of work on sacred medicine, we can deepen our understanding of why contextual errors represent not merely technical failures but violations of the sacred dimensions inherent in all healing encounters.

Ungar-Sargon's essay "Hermeneutic Approaches to Medicine: From Objective Evidence to Patient as Sacred Text" provides a philosophical foundation for understanding why contextual attention is not optional but constitutive of authentic healing. When Weiner and Schwartz describe contextual errors as failures to attend to "all that is expressed outside the boundaries of a patient's skin," they implicitly invoke a hermeneutic stance—the recognition that patients present not as objects to be diagnosed but as texts to be interpreted.

This hermeneutic turn has profound implications. Just as sacred texts in the Jewish mystical tradition require *drash* (interpretive exploration) beyond *peshat* (surface meaning), patients' clinical presentations require interpretation beyond biomedical data. The patient who says "I can't take that medication" offers a surface statement (*peshat*), but the contextually competent physician engages in *drash*—probing the deeper meanings: Is this about cost? Side effects? Prior bad experiences? Cultural beliefs? Family dynamics? The statement becomes a text requiring interpretation, and interpretation requires relationship, time, and hermeneutic skill.

The Kabbalistic concept of *tzimtzum*—divine contraction creating space for the other to exist—offers a powerful metaphor for contextual care. As Ungar-Sargon elaborates in "Epistemology versus Ontology in Therapeutic Practice: The Tzimtzum Model and Doctor-Patient Relationships," authentic healing requires

physicians to create space through self-contraction, temporarily suspending their biomedical agendas to allow patients' lived realities to emerge.

Contextual errors, from this perspective, occur when physicians fail to enact *tzimtzum*—when biomedical reasoning expands to fill all available space, leaving no room for the patient's contextual narrative. The physician who prescribes without asking about affordability has failed to contract sufficiently to create space for the patient's economic reality. The physician who designs treatment plans without exploring work schedules has allowed clinical protocols to occlude the temporal structures of the patient's life.

This is not merely poetic language but a precise description of the cognitive phenomenon Weiner documents: premature closure occurs when physicians mentally fill diagnostic and treatment spaces before patients' contextual realities can enter. *Tzimtzum* names the contemplative discipline required to resist this premature filling—to maintain openness, to dwell in uncertainty long enough for fuller truth to emerge.

In "Sacred and Profane Space in the Therapeutic Encounter: Moving Beyond Rigid Distinctions," Ungar-Sargon challenges the artificial separation between sacred (spiritual, relational, meaning-making) and profane (technical, biomedical, scientific) dimensions of healing. Contextual errors exemplify this false dichotomy: they occur precisely when physicians treat medical decision-making as purely technical ("profane") rather than recognizing it as inherently relational and meaning-laden ("sacred").

Consider Weiner's bariatric surgery case: the patient's caregiving responsibilities for her son with muscular dystrophy were not "merely social" factors external to the medical decision—they constituted the sacred ground on which the decision's meaning would be determined. To ignore them was to profane the encounter by reducing the patient to a biological problem divorced from the relational matrix that gave her life meaning.

The sacred-profane dialectic helps explain why contextualization feels like "soft skills" or "extras" in many clinical settings: biomedicine has systematically profaned the healing encounter by defining "real medicine" as technical intervention on biological substrates. Weiner and Schwartz's contribution is demonstrating empirically that this profanation has measurable costs—worse outcomes, higher expenses, perpetuated inequities [1,5]. Ungar-Sargon's contribution is naming the theological stakes: to decontextualize care is to fail to recognize the *imago Dei* (divine image) in the patient, who is never merely a body but always an embodied soul situated in webs of relationship and meaning.

The dialectic of divine presence (*gilui*) and concealment (*hester panim*) provides additional insight into contextual errors. In "Divine Presence and Concealment in the Therapeutic Space," Ungar-Sargon explores how healing occurs at the intersection of revelation and hiddenness—the physician must attend to both what

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is manifest (symptoms, test results) and what remains concealed (fears, meanings, contexts) in the patient's presentation.

Contextual factors typically present in concealed forms—as red flags, indirect allusions, hedging language, behavioral patterns. Weiner's research shows that many physicians fail to recognize or probe these concealments, treating only what is manifestly biomedical [1,3]. From a theological perspective, this represents a failure of *kavvanah* (intentional attention)—the contemplative discipline of attending to the hidden as well as the revealed.

The Talmudic principle *nistar* (the hidden) teaches that what is most essential often remains concealed, requiring active seeking. When patients hint at financial distress ("That sounds expensive") or work conflicts ("I work nights"), they offer glimpses of concealed realities that shape their ability to benefit from care. The physician who probes these hints enacts a form of sacred attention—recognizing that healing truth often hides in margins, silences, and oblique references.

Ungar-Sargon's essay "The Crisis of Language in Therapeutic Practice" addresses a phenomenon central to contextual errors: patients often lack language to articulate contextual barriers clearly, while physicians often lack frameworks to recognize contextual communication when it occurs.

This linguistic crisis manifests in multiple ways documented by Weiner: patients may feel shame about financial limitations and euphemize them; they may lack vocabulary to describe complex social situations; they may fear judgment and therefore communicate obliquely. Physicians, trained in biomedical language, may not recognize contextual communication as clinically relevant information requiring response.

The solution involves what Ungar-Sargon terms "sacred listening"—a contemplative practice of attending not merely to explicit statements but to the silences, hesitations, emotional tones, and narrative structures through which patients communicate meaning. When a patient says "I'll try" with a particular inflection, sacred listening hears uncertainty requiring exploration rather than confirmation of commitment. This is precisely the interpretive skill Weiner identifies as distinguishing contextually competent from contextually blind physicians.

The Kabbalistic concept of *Shekhinah* (divine indwelling presence) offers a theological grounding for why context matters fundamentally. In "The Art of Sacred Listening: Divine Presence and Clinical Empathy," Ungar-Sargon explores how *Shekhinah* represents God's presence-in-particularity—the divine manifested not in abstract universals but in concrete, situated, embodied existence.

To attend to patient context is to honor *Shekhinah*—to recognize that the divine image manifests not in idealized human nature but in this person, in this situation, with these constraints, relationships, and possibilities. Decontextualized care, by contrast, implicitly

denies *Shekhinah*—treating patients as interchangeable instances of disease categories rather than unique embodiments of divine presence.

This theological framework illuminates why contextual errors feel like moral failures even when unintentional: they represent failures to honor the *Shekhinah* dwelling in the patient's particular life circumstances. To prescribe medication without asking whether the patient can afford it is to ignore the economic dimension of the patient's *Shekhinah*-reality. To recommend therapy without exploring whether work schedules permit attendance is to disregard the temporal structure of the patient's *Shekhinah*-existence.

The Lurianic Kabbalistic concepts of *shevirat ha-kelim* (breaking of vessels) and *tikkun* (repair) provide a cosmological context for understanding illness, healing, and contextual care. Ungar-Sargon's work demonstrates how these concepts frame suffering not as random misfortune but as ruptures in the cosmic-personal order requiring repair through acts of attention, presence, and restoration.

Contextual errors perpetuate *shevirat ha-kelim*—they represent additional breakings, further fragmentations of already broken patients. When a physician prescribes treatments patients cannot implement, the result is not merely clinical failure but deepened brokenness: patients experience themselves as failing, as non-compliant, as unable to care for themselves properly. The rupture between biomedical correctness and lived reality creates shame, frustration, and decreased self-efficacy—forms of psychological and spiritual shattering.

Contextual care, conversely, enacts *tikkun*—repair through recognition and adaptation. When physicians explore contextual barriers and adapt care accordingly, they perform acts of cosmic-personal repair: they restore alignment between medical recommendations and lived possibility, thereby healing not just disease but the rupture between idealized treatment and actual life. The patient who receives contextually appropriate care experiences not failure but collaboration, not inadequacy but recognition.

In "The Parabolic World: Integrating Kabbalistic Wisdom with Clinical Hermeneutics," Ungar-Sargon develops the concept that creation itself constitutes a divine parable—a narrative through which transcendent truth manifests in concrete form. This framework suggests that patients' lives, including their contextual circumstances, are themselves divine narratives requiring interpretation.

The patient caring for a son with muscular dystrophy while tolerating an abusive husband for economic survival is not merely presenting biomedical problems (obesity, diabetes) plus "social factors." Rather, her entire narrative—including the caregiving, the abuse, the economic constraints—constitutes the text requiring hermeneutic attention. To reduce her to "candidate for bariatric surgery" is to mistake a sentence for the story, a word for the world. This parabolic understanding transforms how we conceptualize

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contextualization. It is not that context is "added to" biomedical care; rather, biomedical disease manifests within narrative contexts that give it meaning. The physician's task is not to solve a biological problem and then "also consider" social factors, but to interpret the patient's total narrative—of which biology is one dimension—and craft interventions that make sense within that narrative whole.

Ungar-Sargon's concept of "covenantal medicine" provides an ethical framework for understanding physicians' obligations regarding context. In biblical tradition, covenant involves mutual commitment, fidelity, and attention to the particular relationship rather than abstract duty. Covenantal medicine suggests that physicians enter into particular relationships with particular patients, with obligations that transcend protocol compliance.

Contextual fidelity—the commitment to understand and accommodate patients' actual life circumstances—represents a core covenantal obligation. When Weiner's physicians prescribe medications patients cannot afford, they violate contextual fidelity: they treat patients as generic disease-bearers rather than honoring the covenant with this specific person in this specific situation.

This covenantal framework helps explain why patients feel betrayed by contextual errors even when physicians mean well. The patient who cannot fill an expensive prescription experiences not merely technical failure but covenantal breach—the physician made a recommendation without sufficient attention to the particularity of the patient's situation. Healing requires not just biomedical competence but covenantal fidelity: sustained attention to and accommodation of the patient's concrete reality.

The convergence of Weiner and Schwartz's empirical research with Ungar-Sargon's theological-hermeneutic framework reveals contextualization as simultaneously:

*An interpretive practice: Patients are texts requiring close reading, with surface presentations (peshat) concealing deeper meanings (drash) accessible only through skilled interpretation.*

*A contemplative discipline: Contextual attention requires tzimtzum—the self-contraction creating space for the other—and kavvanah—the intentional focus attending to both revealed and concealed dimensions of patient reality.*

*A covenantal commitment: Contextual care enacts fidelity to particular persons rather than abstract protocols, honoring the Shekhinah dwelling in each patient's unique circumstances.*

*An act of tikkun: Appropriately contextualized care repairs the rupture between idealized treatment and lived possibility, healing not just disease but the fragmentation between medical knowledge and life reality.*

*Recognition of the sacred: Contextual attention acknowledges that patients present in sacred space—their narratives are divine parables, their circumstances are not obstacles to care but the*

*ground on which healing occurs.*

This integrated framework suggests that addressing contextual errors requires not merely behavioral training or system redesign—though both are necessary—but a fundamental reorientation toward healing as sacred encounter. The decontextualized physician treats diseases; the contextualized physician attends to *Shekhinah*-in-particularity, interprets sacred texts, enacts *tzimtzum* and *tikkun*, and honors covenantal obligations to this person, here, now.

*Medical education should include training not just in biomedical science but in hermeneutic skills—close reading, interpretive listening, attention to narrative structure and meaning. Students should learn to approach patients as sacred texts requiring interpretation rather than problems requiring solution.*

*Clinical practice should incorporate contemplative disciplines—practices of tzimtzum (self-emptying to create space for the other), kavvanah (focused attention to revealed and hidden), and covenantal fidelity (sustained commitment to this patient's particularity).*

*Healthcare systems should recognize that sacred space cannot be rushed or commodified. Authentic contextual attention requires time, relational depth, and organizational structures that value presence over productivity, depth over volume.*

*Quality measurement should assess not merely protocol compliance but fidelity to patients' lived realities—the degree to which care plans honor patients' actual circumstances rather than imposing idealized interventions.*

*Professional formation should cultivate physicians as contemplatives and interpreters, not just technicians—people capable of dwelling in mystery, attending to hiddenness, recognizing Shekhinah in particularity, and enacting repair through contextual presence.*

The empirical demonstration by Weiner and Schwartz that contextual errors have measurable consequences—worse outcomes, higher costs, perpetuated inequities—validates what theological wisdom has always known: to attend to the particular is not optional kindness but essential to healing [1,5]. Their research provides scientific grounding for practices that spiritual traditions have long understood as sacred obligations.

Conversely, theological-hermeneutic frameworks developed by Ungar-Sargon and others provide depth and meaning to Weiner and Schwartz's empirical findings. Contextual errors are not merely technical failures but violations of the sacred—failures to recognize *Shekhinah*, to enact *tzimtzum*, to honor covenants, to repair brokenness, to interpret texts.

The convergence suggests a vision of medicine as simultaneously scientifically rigorous and spiritually profound—where evidence-based practice incorporates hermeneutic interpretation, where

clinical competence includes contemplative discipline, where quality improvement serves sacred purposes. In this vision, contextual care is not adjunct to biomedical excellence but its necessary completion—the means by which medicine becomes truly healing rather than merely technically correct.

To contextualize care is to practice medicine as sacred art: reading patients as texts, creating space through *tzimtzum*, honoring *Shekhinah* in particularity, enacting *tikkun* through attention and adaptation, maintaining covenantal fidelity across time. This is medicine reclaimed from reductionism—not through rejection of science but through its integration with wisdom traditions that have always known: healing occurs in relationship, in particularity, in sacred space where divine presence dwells in concrete circumstances.

Weiner and Schwartz have demonstrated empirically what mystics have taught spiritually: to see truly is to see particularly, to heal authentically is to heal contextually, to practice medicine faithfully is to recognize the sacred in every patient's unique life situation. The work ahead is integrating these insights—making contextual attention not exceptional but ordinary, not supplementary but essential, not optional but sacred obligation. This is medicine worthy of the divine image it serves.

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