

Trust in Provider Care Teams and Health Information Technology–Mediated Communication

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Physicians are expected to coordinate patient care effectively with other providers in care teams—which might include a mix of other physicians, nurses, trainees, technicians, or physician’s assistants—with different combinations of these other providers when comanaging the care of patients with different needs. Physicians are also often incentivized to use health information technology (HIT) to facilitate team-based care. For example, the patient-centered medical home is a team-based care delivery model that is expected to measure and improve quality, track and coordinate care, and improve patient experience and provider satisfaction while also reducing costs¹; many of these objectives are supported with HIT in the context of face-to-face team-based care.^{2,3} Team-based care and interprofessional consults also increasingly occur in the patient’s absence via phone or HIT systems such as the electronic health record (EHR). Importantly, effective team-based care delivery, which promotes collaboration and high-quality care outcomes, requires trust among its participants.^{4–8} For example, trust is an important construct in explaining relationships and learning between clinicians and staff in practices transitioning to patient-centered medical homes.⁹ Although physicians typically serve as leaders of provider teams, there remains much to learn about how physicians and their fellow providers trust one another. How can we measure trust in care teams? What are the causes and implications of violations of trust, and how can we best rebuild trust when it has been breached? How will trust among provider team members be affected as provider teams increasingly communicate via EHRs and other HIT systems?

Although academic researchers have begun examining the roles of artificial intelligence, telemedicine, and EHR systems on trust between physicians and patients, our review found that trust within provider teams, in addition to how HIT-mediated communication can affect provider team members’ trust in one another, has received considerably less attention.^{10,11} This represents an important gap in our collective understanding of both team-based care models and HIT. In settings where HIT-mediated communication affects trust among provider team members, significant opportunities may exist to improve HIT interfaces or health system policies with the

ABSTRACT

Teams of healthcare providers use health information technology (HIT) to facilitate communication and collaboration. Effective team-based care requires trust, yet we know relatively little about how physicians build and maintain trust with their fellow providers and, further, how HIT affects trust among provider team members. We describe priority areas for advancing our understanding of trust within healthcare teams, which may inform policies and HIT design in efforts to improve clinical decision making, provider satisfaction, quality of care, and patient health outcomes.

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TAKEAWAY POINTS

In the context of team-based care, providers often communicate via forms of health information technology (HIT). Studies of trust within this context can inform provider decision making and collaborative practices, with implications for provider and patient well-being.

- ▶ In the context of team-based care delivery, communication and collaboration increasingly take place using HIT systems (eg, electronic health record notes, interprofessional consults, artificial intelligence); this may affect how providers come to trust one another.
- ▶ Studies of provider team trust that account for trust's multiple dimensions, bidirectionality, and context can present opportunities for improving the quality of providers' team-based care and, ultimately, patient health outcomes.
- ▶ It is important to understand how to measure trust in care teams, violations of trust, and rebuilding of trust, as well as how HIT-mediated communication affects these dynamics.

immediate goals of improving providers' job satisfaction, reducing burnout, and enhancing productivity or efficiency (eg, by cutting out work-arounds or repeated activities).^{12,13} Downstream, the potential benefits of well-managed HIT-mediated communication and the subsequent improved trust in provider teams may be significant in improving clinical decision making and care quality, as well as patient safety and health outcomes—something long promised by HIT advocates.^{12,14-17}

In this commentary, we summarize priority areas for enhancing our understanding of trust among care team providers and the mediating role of HIT, guided by established conceptual models of trust and communication and the findings of our relevant systematic review.¹¹ We offer examples of each priority area, drawing from our ongoing study of the dynamics of physician trust within care teams.¹⁸

Trust Is Multidimensional

Trust is defined as a willingness to be vulnerable to another person performing a given task, based on expectations about another's intentions of behavior.¹⁹⁻²¹ Yet no single measure or characterization fully represents trust in a given relationship; trust is multidimensional and can be described using multiple aspects of the construct (eg, competence, fidelity, integrity). Further examination of how the dimensions that may be most relevant in forming trust among providers may be modified as the mode of communication changes (eg, in person, over the phone, through HIT systems) is greatly needed.¹¹ For example, physicians may have fewer opportunities to observe another provider's thought process—a measure of trustworthiness by virtue of competence—when they communicate via HIT versus when meeting in person.

Trust Is Bidirectional

It is important to examine trust as a bidirectional phenomenon to avoid reinforcing asymmetry between team members. A trustor, such as a physician, may trust another individual—a trustee—such as a nurse. However, the nurse—in the converse role as the trustor—may not trust the physician likewise. This could also be in part a result of the hierarchical nature of the relationship. Future studies of trust dynamics in healthcare settings should assess trust from

each perspective—the physician as well as the trainee, nurse, or technician. These assessments should also weigh how each experiences trust, or a lack thereof, in the other and how each experiences or perceives being trusted by the other. This can help us to understand the signals and observations that providers use to build and maintain trust that can be used in team formation and to encourage team cohesion.

A research area related to the bidirectionality of trust is asynchronous communication through HIT systems (eg, telemedicine). For instance, when nurses use the HIT tool, they may (1) trust that fellow providers will interpret

their notes accurately and act accordingly and (2) assume that other providers will trust them to input information faithfully into the system.

Trust Is Situational

Defining and measuring trust requires recognizing that it is situational (eg, a physician may trust a trainee in some contexts or to perform some tasks but not others). In different contexts or situations, different dimensions of trust may be more relevant; thus, we need to better understand the role of context in trust to construct meaningful measures. Additionally, when empirical researchers use measures of trust to examine its driving factors or its impact on care processes or patient outcomes, they must account for important features of the study's context to ensure that inferences are appropriate.

How HIT modifies trust dynamics in provider teams can also be situational. For example, in an emergency department with little time for interpersonal interactions, EHRs and patient monitoring tools could be helpful for accessing patient information quickly and may not meaningfully affect providers' trust relationships. In contexts like oncology care, in which teams provide care over an extended period of time, communication via HIT may inhibit trust building by limiting social interactions that promote familiarity and comfort among team members.

Trust May Be Violated

We also know little about the principal causes and implications of violations of trust and how the nature of these violations may affect downstream provider interactions (including approaches to rebuilding trust). Disrespectful challenging by fellow providers, bullying, and dishonesty are some examples of behaviors that may lead to mistrust or distrust within care teams.⁶ In our developing work, physicians described violations of trust stemming from misuse of the EHR (eg, copying and pasting template data over several days without updates) leading to complications or delays in patient care due to inaccuracy.¹⁸ Further, patterns of delayed or absent responses to EHR communications could have both direct effects (eg, clinical decision making based on inaccurate patient

information, negative patient outcomes) and indirect effects through mechanisms of bidirectionally violated trust. For instance, not receiving a response through the EHR may be perceived differently from not receiving a response by phone, perhaps because of the expectations that the EHR should expedite communication and improve coordination overall.

Trust Can Be Rebuilt

A trustor may be willing to rebuild trust in some instances of violation but not others; for example, violated trust resulting in a tragic patient outcome may be handled differently from a violation resulting only in care task redundancies (eg, due to confusion about EHR documentation). Empirical studies of violations and rebuilding of trust should be approached via both cross-sectional and longitudinal studies so that we can gain an understanding of the dynamic nature of trust over time.^{5,6} We need to learn more about (1) when and why one decides to rebuild trust, (2) alternative approaches to rebuilding trust once it is violated and how HIT may enable or disable these approaches, (3) implications of violations of trust in the longer term, and (4) costs of rebuilding trust to prevent these outcomes.

Implications of Trust

There is a need to examine the downstream impacts of trust (and mistrust) on patient care, patient outcomes, and provider well-being measures such as burnout, job satisfaction, and turnover.^{12,13,22,23} We also need to learn more about the longer-term implications of trust when HIT is used to manage relationships or coordinate care. For example, current medical trainees practice medicine exclusively in a context that includes HIT, whereas providers who also practiced medicine prior to the advent of HIT may be more inclined to supplement HIT use with in-person interactions. Consequently, older and younger physicians may build trust and collaborate in team-based care settings differently. Moreover, when trust is violated in these circumstances, preferred approaches for rebuilding trust may vary across care team members, slowing its rebuilding. On the other hand, the advent of HIT may have improved collective trust because of its transparency or its capacity to hasten the production of knowledge and support the use of evidence-based treatment to improve clinical outcomes.

Conclusions

As long as HIT continues to evolve rapidly, providers' use of HIT will evolve likewise. It is critical that we continue to study these developments to optimize providers' communication and collaboration in the context of team-based care. Future research can draw on qualitative methods to identify how HIT influences trust dynamics between physicians and other providers and the rebuilding of trust following violations. These studies can also inform the development of quantitative surveys and new, multidimensional, contextually relevant measures of trust among care team providers.

Such measures could be used to examine both organizational and provider-level factors that foster trust and the relationship between trust and patient outcomes. ■

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