

# Does Missing Trust Lead to Overuse or Underuse of Health Care Services?

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Popular narratives about patient mistrust in health care tend to emphasize the risks of underusing health care services. Underuse was frequently illustrated in media narratives featuring Americans with trust concerns declining medical care or vaccination for COVID-19.<sup>1</sup> Beyond COVID-19, peer-reviewed commentaries and perspective pieces underscore this relationship with titles and theses such as “Mistrust of Health Care Organizations Is Associated With Underutilization of Health Services” and “Underuse of Breast Cancer Adjuvant Treatment: Patient Knowledge, Beliefs, and Medical Mistrust.”<sup>2,3</sup> These concerns are evidence based and legitimate, but a fuller consideration of the trust literature reveals that underuse tells an incomplete story.

Both underuse and overuse are targets of managed care’s attention. Although underuse may appear to be cost saving for risk bearers at first glance, the downstream effects of underusing routine or preventive care can lead to costly health care interactions and diminished health. Meanwhile, overuse is often synonymous with low- or no-value care. Thus, to the extent that bolstering patient trust may facilitate appropriate consumption of health care, understanding the complexity of the relationship between trust and utilization should be a core concern for managed care.

Our goals here are 3-fold: (1) to call readers’ attention to an apparent puzzle in the trust and health services literature: low trust or mistrust, which we refer to as “missing” trust, has been associated with both patient overuse and underuse of medical resources; (2) to propose hypotheses to reconcile the puzzle; and (3) to suggest future research directions that can clarify the relationship between missing trust and utilization.

## Studying Missing Trust

A large number of health services research studies on trust proceed with the goal of identifying the effects of missing patient trust on health care utilization.<sup>4</sup> We reconsidered that literature as 2 subliteratures, according to our interests: (1) those in which missing trust was associated with underuse, defined as the avoidance of clinically appropriate care, and (2) those in which missing trust was associated with overuse, defined as utilization of medical

## ABSTRACT

Research about mistrust in health care often relies on the narrative that lacking trust causes underuse of health care services. This narrative seemed to hold up in the COVID-19 pandemic era, when mistrust in systems and providers led to widely recognized vaccine hesitancy and reluctance to seek care. In this review, we suggest that the “mistrust leads to underuse” narrative is important but incomplete, as mistrust in health care may also cause patients to overuse health care services. We searched the literature for studies, meta-analyses, and interviews that assessed the effect of patient trust on health care utilization. Although overuse literature is sparse, surveys and physician interviews indicate that patients who do not trust their clinicians may seek multiple opinions on the same diagnosis and utilize more costly interventions that are not recommended. Physicians also report being more likely to utilize extraneous tests and medications when patients do not trust them. Hence, problems of trust may lead to both underuse and overuse of health care services. We postulate several factors that may influence whether a mistrustful patient underuses or overuses health care resources, including personal characteristics, environmental characteristics, and levels of analysis, and we encourage more investigation about mistrust and health care overutilization.

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resources that were not medically necessary or were low value. The underuse literature includes considerably more, and more rigorous, studies than the overuse literature, which may owe to the difficulties of measuring overuse. That said, there is ample enough theory and evidence linking missing trust to overuse to prompt a reconsideration of the relationship between patient trust and utilization. The [Table<sup>2,3,5-19</sup>](#) provides an illustrative (rather than comprehensive) snapshot of the 2 subliterations, featuring original research published from any country between 2000 and 2022.

### Missing Trust and Health Care Underuse

The underuse literature is a fairly well-characterized field with validated tools showing that missing trust can lead to underutilization of medical resources across various outcomes and patient populations. This literature relies heavily on the Medical Mistrust Index, a 14-item validated scale to measure patient perception of deceit, level of caution, beliefs about privacy, and confidence in the health care system.<sup>2</sup>

Most studies supporting the underuse narrative are survey based and investigate patient trust or mistrust in either the health care system, individual providers, or both; they seek to correlate mistrust with varied measures of underutilization. Such studies have found that patients who mistrust the health care system, their provider, or both tend to take less advantage of health care resources through underuse of the following measures: receiving standard-of-care interventions,<sup>3,11</sup> filling prescriptions,<sup>2</sup> adhering to medications,<sup>9,10</sup> screening for cancer or other chronic conditions,<sup>6</sup> participating in medical research,<sup>7</sup> visiting a primary care physician,<sup>5</sup> receiving vaccines,<sup>13</sup> taking physician advice,<sup>2</sup> attending follow-up appointments,<sup>2</sup> and seeking care when needed.<sup>2</sup> Underuse research also tends to focus on minority patient populations. Seven of the 11 underuse studies we identified surveyed racial and ethnic minority populations.<sup>6-8,10-13</sup>

### Missing Trust and Health Care Overuse

Less remarked upon are a number of studies that have directly investigated how patient trust may lead to health care overuse. This smaller body of research consists primarily of qualitative interview-based studies with physicians and patients and a smattering of survey-based studies that explore how patients' trust in the physician or health care system affects their medical decision-making.

For example, in 2 studies involving patients with medical conditions for which conservative management is indicated, patients who trusted their physician were shown to be more likely to choose conservative management over costlier surgical interventions.<sup>14,17</sup>

In Poland, a survey carried out in 2015-2016 found that patients with increased trust in the health care system, as assessed by a

## TAKEAWAY POINTS

Most trust literature centers on how mistrust leads patients to underuse health care but rarely considers other outcomes, such as overuse—that is, seeking out care that is unnecessary, costly, and potentially harmful.

- ▶ Increasing trust could be a mechanism to promote high-value care and minimize harms associated with overusing care.
- ▶ Considering only underuse as an outcome of missing trust leads to an incomplete narrative in trust research.
- ▶ The COVID-19 pandemic illuminated missing trust in the health care system and in providers, so it is important to understand the breadth of potential consequences.

5-item questionnaire, were less likely to report wanting to seek multiple physicians' opinions on the same diagnosis.<sup>20</sup>

In interview studies, many physicians drew from personal experience to suggest that a lack of patient trust contributes to overuse.<sup>16,18,19</sup>

A 2019 review by Fritz and Holton entitled "Too Much Medicine: Not Enough Trust?" explored the potential relationship between trust and overuse of health care, claiming that lack of patient trust in their physician contributes to overuse.<sup>21</sup> Prior evidence has shown that continuity of care increases patients' trust in their physician.<sup>22</sup> On this basis, Fritz and Holton use continuity of care as a proxy for trust and cite studies that demonstrate a correlation between increased continuity of care and decreased overuse.

These overuse studies advance several claims regarding the relationship between trust and medical overuse. First, patients are more likely to accept conservative medical recommendations from a physician whom they trust, thus decreasing overuse.<sup>14,17</sup> Second, patients who trust their physician are less likely to seek multiple opinions about the same diagnosis, also decreasing overuse. Finally, increased patient trust makes *physicians* more likely to follow their clinical judgment rather than order extraneous interventions when they perceive their patients desire them.<sup>16,18,19</sup>

Although most of the underuse literature has centered on marginalized patient populations, and particularly racial minorities, the minority status of patients was generally ignored in the trust-overuse literatures. When studying how missing trust may lead to overuse, studies commonly use representative participant samples or predominantly nonmarginalized patients. We caution readers against assuming that the relationship between missing trust and underuse is a function of racial minority status. Doing so would make a fundamental attribution error, in which outcomes driven by situational factors are falsely attributed to an individual's inherent traits. Even if the propensity to underuse does correlate with a patient's minority status, this more likely reflects the individual's relationship with the health care system, which is a byproduct of their lived experience, history, and systemic discrimination, rather than an insight about the minority status itself.

### Reconciling the Puzzle

So, could it be that missing trust leads patients to both overuse and underuse? We propose 3 hypotheses, which are not mutually

**TABLE.** Overview of Trust Literature With Patients as Trustors by Trust Type, Trustee, and Underuse vs Overuse Outcome<sup>2,3,5-19</sup>

Outcome	Author (year)	Sample	Trust type	Trustee	Type of measurement used	Outcome studied	Summarized finding(s)
Underuse	Goepp et al (2004) <sup>5</sup>	Families of all races/ethnicities	Mistrusts	Health care system	Interviews and focus groups	Low-acuity visits to the ED (instead of primary care)	Patients and families were more likely to visit the ED instead of primary care because of mistrust and because of ED simplicity.
	Thompson et al (2004) <sup>6</sup>	African American and Latina women	Mistrusts	Physician and health care system	Mistrust scoring system	Cancer screening/mammogram	Patients who missed mammograms had higher mistrust scores ( $P < .04$ ) compared with patients who did not miss mammograms.
	LaVeist et al (2009) <sup>2</sup>	Random households (all races/ethnicities), with emphasis on Black-White comparisons	Mistrusts	Health care system	Medical Mistrust Index	<ul style="list-style-type: none"> <li>• Taking physician advice</li> <li>• Failing to follow up</li> <li>• Failing to seek care when needed</li> <li>• Failing to fill prescription</li> <li>• Postponing/delaying care</li> </ul>	More mistrust in the health care system correlated with less advice taken ( $P < .01$ ), failure to follow up ( $P = .01$ ), postponement of care ( $P = .01$ ), and failure to fill a prescription ( $P = .002$ ), but not failure to get needed care ( $P = .06$ ).
	Bickell et al (2009) <sup>3</sup>	Women of all races/ethnicities	Mistrust	Health care system	Survey questions	Receiving adjuvant/follow-up treatment after breast cancer surgery	Patients who were not treated with adjuvant therapy had greater mistrust ( $P = .001$ ) than patients who were treated.
	Bussey-Jones et al (2010) <sup>7</sup>	African American adults compared with White adults	Lacks trust	Researcher and research system	Open-ended questions	Donate blood sample for research	African Americans were less likely to participate in research compared with White patients, and this difference was completely explained by differences in trust.
	Hammond et al (2010) <sup>8</sup>	Black men	Mistrusts	Health care system	Medical Mistrust Index from LaVeist et al <sup>2</sup>	Primary care visit in the last year	Patients with higher medical mistrust were less likely to undergo routine health examination (OR, 0.26; 95% CI, 0.09-0.76).
	Polinski et al (2014) <sup>9</sup>	Adults of all races/ethnicities	Lacks trust	Physician	Focus group discussion	Primary medication adherence (filling first prescription)	A focus group discussion revealed that distrust was a primary reason why patients did not fill their first antihypertensive prescription.
	Galvan et al (2017) <sup>10</sup>	Latino men	Mistrusts	Health care system	Medical Mistrust Index from LaVeist et al <sup>2</sup>	HIV ART adherence	Lower medical mistrust scores were significantly associated with adherence to ART (OR, 0.60; 95% CI, 0.39-0.94; $P < .05$ ).
	Powell et al (2019) <sup>11</sup>	African American men	Mistrusts	Health care system	Medical Mistrust Index from LaVeist et al <sup>2</sup>	Preventive health services (blood pressure and cholesterol screening)	Patients with higher mistrust scores were more likely to delay blood pressure and cholesterol screenings.
	Senft et al (2020) <sup>12</sup>	Black men compared with White men	Mistrusts	Health care system	GBMMS	Willingness to discuss clinical trials	White patients were more willing to discuss trials than Black patients, but mistrust significantly mediated this association between race and willingness to discuss (indirect effect, $-0.22$ ; $P = .02$ ).
Thompson et al (2021) <sup>13</sup>	Black adults	Mistrusts	Physicians and health care system	GBMMS	COVID-19 vaccine uptake and trial participation	Black patients were less likely to accept vaccination and participate in trials, and mistrust scores mediated the difference in outcome by race (trial $P = .003$ ; uptake $P < .001$ ).	

(continued)

**TABLE.** (Continued) Overview of Trust Literature With Patients as Trustors by Trust Type, Trustee, and Underuse vs Overuse Outcome<sup>2,3,5-19</sup>

Outcome	Author (year)	Sample	Trust type	Trustee	Type of measurement used	Outcome studied	Summarized finding(s)
Overuse	Oram et al (2014) <sup>14</sup>	89.9% White, 98.3% insured, 54.6% college graduates	Trusts	Physician	Patient trust in physician scale from Kao et al <sup>15</sup>	Active prostate cancer surveillance over surgical intervention	
	Alber et al (2017) <sup>16</sup>	—	Trusts	Physician	Qualitative, semistructured interviews with GPs	Less overuse	
	Herwig et al (2019) <sup>17</sup>	25 patients in 2 German teaching practices, demographics not described	Trusts	Physician	Qualitative patient interview	Less overuse of surgical intervention for stable coronary artery disease patients	
	Opdal et al (2019) <sup>18</sup>	—	Mistrusts	Physician	Qualitative focus group with GPs	Overtesting	
	Ellen et al (2021) <sup>19</sup>	—	Trusts	Physician	Qualitative interviews with oncologists	Less overuse of oncology health services	

ART, antiretroviral therapy; ED, emergency department; GBMMS, Group-Based Medical Mistrust Scale; GP, general practitioner; OR, odds ratio.

exclusive. Testing these hypotheses should be a priority for future research on patient trust.

**Unobserved patient characteristics.** Studies of the relationship between missing trust and utilization rarely make use of randomization or other research designs fit for causal inference. As a result, a leading hypothesis is that other variables influence whether patients who lack trust will underuse or overuse health care. Health literacy, for instance, may be a modifier, determining whether overuse or underuse is the behavioral response to missing trust. Among people with low levels of trust in the health care system or provider, those with low literacy may not understand the purpose of an intervention and therefore underuse, whereas those with high health literacy may know (or believe they know) what to request and therefore overuse. To test this hypothesis, studies to quantify and compare levels of health literacy in addition to trust, and perhaps other variables, among patients who overuse and underuse health care are needed.

**Unobserved environmental characteristics.** A second hypothesis postulates that the same patient may overuse or underuse medical resources depending on their situation. This is partly supported by our review, in which underuse studies measured mostly nonurgent outcomes such as medication refills and attending appointments (the overuse literature is too sparse to make general claims about the nature of outcomes studied). Future research, such as a survey asking patients their level of willingness to utilize a variety of interventions, could help to strengthen this hypothesis.

**Levels of analysis.** A third hypothesis is that the trustee under study affects whether patients overuse or underuse. For example,

missing trust in an individual provider may lead a patient to demand testing or imaging to confirm a doctor's diagnosis, whereas missing trust in a health care system may lead to patients to "steer clear" entirely, and therefore underuse. We noted that the majority of the trust/underuse literature assesses trust in health care systems, whereas the overuse literature focuses more squarely on trust in individual providers. However, more studies, especially on overuse, are needed to determine whether trends in utilization change based on whether the trustee in question is the health care system or the provider.

Generally, future research on the relationship between patient trust and utilization should be strengthened in several ways. Research designs that allow for causal inference should be prioritized, including longitudinal designs. Close attention should be paid to sample demographics, and reporting thereof, to avoid the propagation of logical fallacies related to marginalized statuses. Additional attention should be paid to the measurement of overuse of medical resources as an outcome of interest. Finally, research on what "too much trust" might yield by way of underuse or overuse is also warranted, as it seems reasonable that it too could yield nonoptimal utilization. ■

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