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# A framework for conceptualizing how narratives from health-care consumers might improve or impede the use of information about provider quality

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## **Cover Page Footnote**

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### Abstract

Consumers choosing a health-care provider have access to diverse information including narratives by patients about their prior experiences. However, little research has examined how narratives might improve or impede the use of information about the quality of providers' performance. This paper describes a conceptual framework for examining mechanisms by which narrative information might influence consumer judgments and decisions about providers. We conducted a conceptual review of risk communication and behavioral decision research. We synthesized the literature to form the foundation of a conceptual framework for assessing how narrative information about provider quality impacts consumer decisions about providers. We identified four key characteristics of narratives (convey emotion; explain logic; provide relational information; and capture naturalistic experience) that may address four consumer needs (avoid surprise and regret; recognize dominant options; motivate to act or not act; and make multi-attribute tradeoff decisions). We also identified three main functions of narratives (provide a simple, powerful cue; imbue quality information with meaning; and stimulate cognition and behavior) in four decision contexts (short-term treatments; external disruptions; chronic illness; problematic experiences). A rigorous research program can be derived from the conceptual framework to generate evidence-based recommendations about whether and how patient narratives might encourage: (1) more reasoned decisions; (2) consistency with a patient's own values/preferences; and (3) engagement with provider quality information. Research results can be used then to develop robust guidance for health communicators reporting diverse and often incommensurate performance metrics.

### Keywords

Narrative, quality reporting, patient decisions, choice of provider

### Introduction

Efforts are growing to expand consumer access to diverse types of health information and decision support. When searching for a primary-care physician or a specialist, or deliberating over preventive care or treatment options, consumers have long been able to access a range of evidence-based, quantitative data on quality of care (e.g., numeric ratings from survey data such as "percentage of patients who found it easy to get an appointment with this doctor").<sup>1,2</sup> For instance, the results of surveys from the Consumer Assessment of Healthcare Providers and Systems (CAHPS), funded by the US Agency for Healthcare Research and Quality (AHRQ), provide information about ways in which patient experiences with

providers have been valuable or problematic and how health-care organizations can improve patient care.<sup>3-6</sup>

Increasingly, consumers may also access qualitative information reflecting the experiences of family and friends or the opinions of strangers who have posted comments on the internet.<sup>7</sup> Just as consumers look for reviews of restaurants, travel destinations, and a host of other products and services, they are increasingly consulting commercial websites (e.g., Yelp) for online ratings and reviews provided by patients about their prior experiences with health-care providers and their organizations.<sup>8</sup> Some government websites (e.g., the United Kingdom National Health Service's "Choices" internet resource) also have begun to report narrative

information in addition to the quantitative information already provided.<sup>9</sup>

Although more than twenty years of research has examined rigorous ways to collect and convey quantitative information in public reports of health-care quality,<sup>10,11</sup> researchers have given less attention to whether or how qualitative information should be gathered and used to convey patient experiences,<sup>12</sup> particularly in reports presenting CAHPS survey results. Extensive literature from multiple health-related fields has examined the value and limitations of qualitative information in understanding and improving patient decision processes (e.g., choosing among treatment options),<sup>13-15</sup> but few studies have focused specifically on how systematic reporting of qualitative information might affect patients choosing a new provider.<sup>16-18</sup> Consequently, organizations responsible for communicating the results of surveys about patients' experiences with their providers have limited guidance for deciding whether and how to convey narratives. Such organizations may include federal and state government agencies (e.g., Centers for Medicare and Medicaid Services, CMS), large health systems, or small provider practices and the organizations they use to collect and report survey results to consumers in online or printed formats. Regardless of whether survey results are being reported online or in printed formats, these health communicators need better information about the value and limitations of reporting patient narratives about providers.

The purpose of this paper is to describe a conceptual framework for examining mechanisms by which narrative information might influence consumer judgments and decisions about providers. The relatively new, emerging role for narratives in patient decision making means that we first need to identify key characteristics that make this type of information valuable or problematic in decisions about providers. Later in the paper we address the potential mechanisms by which such narrative information might impact patients' decision processes.

### Key characteristics of narratives

"Narrative" information refers to the retelling of something that happened, presented via written or spoken words.<sup>19</sup> Early work by cognitive scientists such as Lakoff and Johnson<sup>20</sup> has shown that everyday narratives are important because they convey the conceptual metaphors that shape the way we communicate, think, and act. Evidence also supports the idea that people impose story structures to make sense of their everyday experiences,<sup>21,22</sup> including their health-related concerns.<sup>23</sup> In the context of patient decision making, narratives are qualitative expressions (Table 1) such as: individual patient comments (e.g., brief descriptions of specific aspects of experiences); descriptive reviews (e.g., in-depth evaluations); or testimonials (e.g., stories of what one person experienced

or did).<sup>16,17,24,25</sup> Narrative forms may be characterized in other ways as well.

In this paper we focus primarily on patient narratives about the performance of health-care providers. This kind of information is increasingly prevalent and sought after by consumers.<sup>8,26-29</sup> Yet we know little about how patient narratives might improve or impede consumer choice of a doctor or other provider because research so far has focused more heavily on the impact of narratives provided for other types of choice (e.g., among treatment options).<sup>17</sup>

Coherent patient narratives are multifaceted, with several characteristics making them engaging and meaningful. As storied expressions that reflect rich experiences, patient narratives convey emotions, provide the logic or an explanation underlying a perspective, express relational information, and capture naturalistic experiences, as depicted in Table 1.<sup>30,31</sup> Patient narratives also often have strong face validity because they portray experiences in a more holistic, engaging, and memorable manner than do quantitative survey measures. Expressions of emotion or affect highlight relevance and provide easily intuited conclusions about whether a decision maker would want to pursue or avoid a similar experience.<sup>9</sup>

Currently, there is insufficient empirical research to determine what features of narratives are associated with the process of forming a "good" judgment or decision—i.e., one that is well reasoned, consistent with a patient's values and preferences, and based on robust information about patient experiences with providers.<sup>16</sup> For instance, does explaining patient experience within a personal, social, and cultural context help to align choice of provider with a decision maker's values? When do people read meaning into data or make linkages where this is unwarranted?<sup>20,32</sup> To what extent does vivid or emotional case information distract people from base rates or other relevant statistics?<sup>17,33,34</sup> When do narratives have clear informational value? What do we still need to know about how narrative information might enhance or diminish decision processes?

### Research on narratives can help generate evidence-based recommendations for health communicators in real-world settings

Robust methods have been used for decades in the fields of behavioral decision making and risk communication to understand knowledge transfer and choice processes.<sup>35-39</sup> For instance, past efforts to assess decision-making competence have paid close attention to identifying specific decision skills (e.g., literal and inferential comprehension, understanding patients' reasoning, consistency of decision processes). In addition, researchers have examined how specific decision skills may be affected

Table 1. Example Patient Narratives and Key Characteristics

	Key Characteristics of Patient Narratives			
	<i>Convey emotion</i>	<i>Explain logic</i>	<i>Provide information about patient- doctor relationship</i>	<i>Capture naturalistic experience</i>
<b>Example 1</b> This doctor is not very communicative—I'd feel less nervous if she could chat more.	Describes nervous feelings	Explains what would reduce nervousness	Describes poor patient-doctor interaction	Uses informal language
<b>Example 2</b> Just from reading about him on Google, I can tell that this doctor's got every certificate there is and he's on all kinds of boards. I think he even teaches at a medical school a little bit. But, I've met him, so I can tell he really, really knows what he's doing.	Describes feelings of confidence	Explains reasons for confidence	Describes positive patient encounter with doctor	Reflects holistic context of evidence for confidence (Google-located certificates and boards, personal experience)
<b>Example 3</b> I was really bothered by a lot of stuff, so I went and talked to my doctor about a lot of stuff and then got a completely surprising phone call on Monday saying that she had been thinking about it all weekend and she was going to set up some different tests and appointments to see if we could answer my questions and get to the bottom of the stuff that's bothering me. Called me at home, said she was worried. That was fantastic.	Describes feeling bothered, then happy	Explains how problem was identified and addressed	Describes how doctor showed concern for patient and the impact this had on the patient	Describes dynamic experience with actions by both the patient and the doctor

by the format of information.<sup>40,41</sup> However, evidence about how patient narratives may influence decision making about providers in real-world settings is lacking. If researchers empirically identify how elements of a narrative support or diminish the specific skills that comprise competent decision making, then recommendations could be made to encourage the use of narratives with elements that support those skills and avoid or counteract narratives that undermine those skills.

To illustrate, we might expect that very simple or very complex narratives make it hard for consumers to follow the decision rules being applied by a patient when evaluating a provider. Systematically examining when simple versus complex narratives are useful to consumers would provide guidance to health communicators about the features of narratives (e.g., number of words, sentence structure, proportion of contextual information) that optimally articulate patient decision processes. Guidelines generated from a systematic program of empirical research on narratives could be translated into

clearer choices about best practices for health communicators on how to use narrative information in different ways depending on the demands of the context. For instance, if empirical evidence shows that a narrative is most likely to enhance decision making when it provides a personally meaningful system of navigation through a complex array of quality information, we might recommend that health communicators direct consumers to read narratives by others “like them.” In this case, guidelines might suggest tagging comments to help consumers narrow their focus or search for information that most reflects their own situation (e.g., likely to need multiple tests). Guidelines might also need to articulate how to teach consumers to conduct a search based on relevant tags before reading through multiple (potentially irrelevant) comments. Additional research could explore whether organizing narratives according to various criteria (e.g., frequency of similar comments) enhances consumer satisfaction with their information search and decision process and/or limits attention to extreme (non-representative) opinions.

### **A conceptual framework is needed to guide research on the role of narrative information in consumer health decisions**

Given that narrative information is multi-dimensional and that its effects on decision processes may vary in complex ways, we need a systematic and rigorous program of research to help health communicators discern whether and how narratives may help or hinder decision making or in what context they might do both.<sup>42</sup> Understanding the potential impacts can lead to more sophisticated public reporting that incorporates narratives about patient experiences in a useful way, especially if the narratives are elicited (rather than spontaneously generated) to serve particular consumer needs, such as finding a doctor who communicates well.<sup>9</sup>

To build a conceptual framework, we adapted Jabareen’s<sup>43</sup> methods for systematically linking multiple bodies of knowledge. Our goal was to lay out key concepts—and presumed relationships among them—to provide an interpretive (rather than causal or analytical) approach to understanding how patient comments about providers impact consumer judgments and decisions. Similar to qualitative metasynthesis techniques,<sup>44</sup> we synthesize findings from two fields of research for which there already exists consensus about how message format may affect decisions under conditions of risk and uncertainty: risk communication and behavioral decision research. Texts selected for consideration included peer-reviewed journal articles, book chapters, reports, and commentaries, to reflect a variety of descriptions that effectively represent the complex phenomenon of real-world decision processes. Through an iterative process, we categorized and integrated concepts that have been well-established in

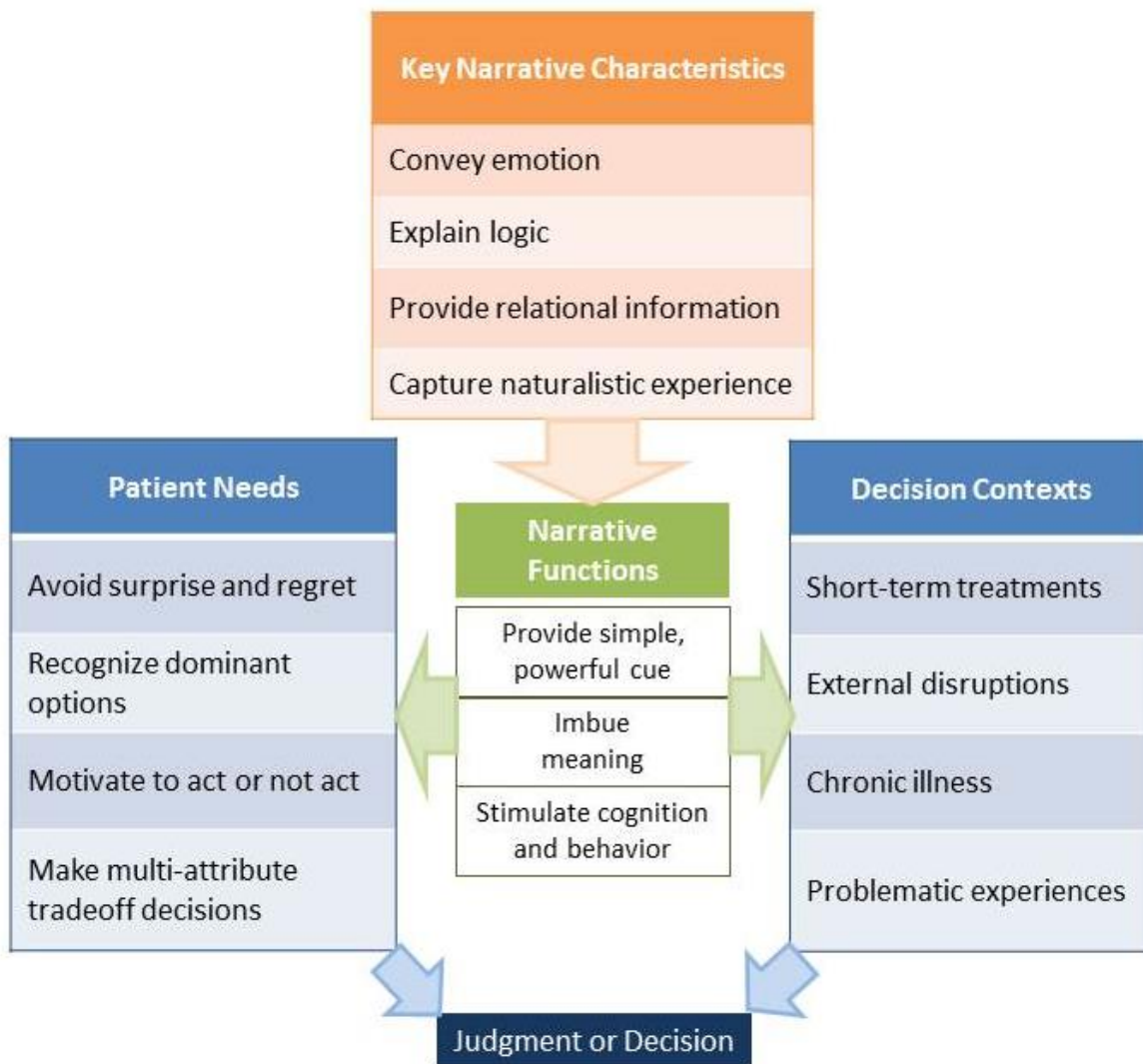
multidisciplinary literature to develop a framework for understanding how key narrative characteristics function to help or hinder consumers with different needs in a range of decision contexts.

A key conclusion of several decades of risk communication and behavioral decision research is that decisions tend to be influenced by variables related to three main categories: (1) the decision information (e.g., characteristics of qualitative narratives or quantitative data); (2) the decision context (e.g., time pressure, chronicity of illness); and (3) the decision maker (e.g., patient needs, consumer engagement).<sup>39</sup> A good decision is more likely to result when characteristics of the decision information meet the needs of the decision maker or demands of the decision context.<sup>45</sup> By focusing on these variables and how they interact, researchers and practitioners can begin to determine systematically how narrative information impacts health-care quality measurement and reporting and consumer decision-making processes and outcomes. Our conceptual framework is not exhaustive; rather, it is intended to illustrate how the key characteristics of narratives may function during a judgment or decision process to address specific, sometimes overlapping, patient needs and decision contexts (Figure 1).

We developed a framework broadly useful for researchers and practitioners by balancing the need to be generalizable across a range of consumer decision contexts with the need to be specifically relevant to health-care services. Generalizability is ensured by attending to foundational theory and empirical findings about key factors influencing consumer decision making and communication. Relevance is ensured by identifying and addressing distinguishing aspects of patient decisions about providers (e.g., patient needs and types of decisions faced by patients).

At this early stage of development, we acknowledge that there may be some instances where the relevance of our framework is limited. First, while tens of millions of patients each year make their own choices and provide their own narratives,<sup>46</sup> sometimes patient representatives (e.g., caregivers, family members) are the ones making choices or submitting narrative information. Evidence suggests, however, that family members have a similar capacity as the patient to observe and judge the quality of care.<sup>47</sup> Second, our framework’s relevance may be limited in instances when patients (or their representatives) do not engage with the provider they presume to be interacting with, but instead are seen by a nurse or physician assistant in the same practice. Importantly, respondents can explain in narratives who they are talking about (which they cannot do with closed-ended questions), which provides a more reliable way to capture the problem of misidentification and, if necessary, modify the framework. Finally, relevance may be limited due to differences across health-care settings (e.g., inpatient vs. outpatient providers

**Figure 1. Conceptual framework identifying how key characteristics of narratives function to address patient needs and decision contexts during a judgment or decision process**



and patients; planned vs. unplanned care; acute vs. chronic conditions; single vs. multiple clinicians). Empirical testing will help to clarify whether there exist unique characteristics of settings that need to be incorporated into the framework. In addition, carefully designed narrative elicitation protocols will help to identify additional factors that are needed to account for differences across settings.<sup>48</sup>

### Patient needs

Following Zikmund-Fisher's<sup>38</sup> taxonomy of precision in patient risk communication, we first identified four basic needs that qualitative information might be suited to address. First, consumers have a basic need to know when something might happen. For instance, in some situations consumers might want to avoid being surprised by

unanticipated outcomes so that they may minimize avoidable decision regret (e.g., "this doctor didn't listen when I told him my history, so we had to repeat some painful tests"). A second basic need of consumers is to know when an option is dominant. In addition to quantitative metrics describing provider performance, a consumer may benefit from considering information about relative possibility that can be described in a narrative (e.g., "this doctor always explains things in a way I understand, which is not true of any of the other doctors I've seen"). A third basic need of consumers is to be motivated to act or be reassured that no action is necessary. For instance, a patient needs to know when a threshold (e.g., for cholesterol) has been exceeded and what to do in response (e.g., "this doctor told me how to find a dietician that could help me").

A fourth basic need is to make multi-dimensional trade-off decisions in which options are comparatively better on some dimensions and comparatively worse on others. For instance, a consumer might need to decide if he or she is willing to spend more time in a waiting room to see a doctor who is reported to have a better relationship with her patients. In this situation, consumers need to understand that they need to trade off multiple attributes (i.e., waiting time vs. rapport). In addition, consumers must clarify which attributes are more important to them (waiting time or rapport). A qualitative possibility statement by a patient can clearly convey such tradeoffs and priorities to other consumers: “You often sit in the waiting room or exam room a bit longer than planned when you go to see Dr. X. But that’s because she’s taking time to talk with her other patients and really understand their situations, so it seems OK to wait.”

### Decision contexts

Importantly, patient needs may vary with the context and timing of decisions. Shaller et al.<sup>46</sup> highlight how the type of information that consumers perceive as most salient differs with the circumstances in specific decision situations. For instance, consumers may be choosing a health-care provider because they are shopping for a specialized, short-term treatment (e.g., elective procedures, prenatal care) or experiencing an external disruption (e.g., moving to a new area, changing health coverage). Or consumers may choose a new provider because they are suffering from a serious chronic condition that requires specialist care or are dissatisfied with the quality of care from their current health-care provider.

Each decision context will be accompanied by different emotional states,<sup>49</sup> capacities to interpret complex information,<sup>50</sup> and needs for trusted support.<sup>51</sup>

Consequently, the way in which information is attended to and used will vary with these individual differences across the contexts.<sup>52</sup> To successfully meet patient needs at different decision points, information about clinicians’ performance will need to carry out a range of functions across contexts. Understanding how narrative information functions to address patient needs in diverse settings is a first step toward reporting quality information in a way that the intended audience views as relevant, credible, and usable for a given circumstance.

### Key characteristics of narratives address patient needs by making information more actionable

When making a decision to address a particular need, consumers often construct their values and preferences using cues from the decision information and from their own internal feelings.<sup>53,54</sup> Narratives can address patient needs when they make information actionable in the consumer’s context. In this section we examine how

narratives may address patient needs and context demands by providing a simple yet powerful basis for pursuing or avoiding an option, in particular through “affect.” Affect refers here to the quality of “goodness” or “badness” that may (a) be felt by the decision maker (with or without consciousness) and (b) demarcate a clinical encounter as either appealing or concerning.<sup>55</sup> We also highlight some ways in which narratives may lead decision makers astray and how a systematic program of research could help to identify and address these problems.

#### *Providing a simple, powerful cue*

Recognizing the importance of experiential information during the process of making a judgment or decision, recent decision theories have incorporated reliance on affect as a key component in constructing values and preferences.<sup>20,39,49,55-63</sup> Our everyday experiences lead decision options and attributes to become “marked” with positive and negative feelings.<sup>64</sup> These affective markers act as guides for decision makers by sounding an alarm that warns us away from an option or by acting as an incentive that encourages us to pursue an option.

In comparison to more statistical information, narrative information is particularly good at conveying affect because the values held by consumers are embedded in the contextually, morally, and emotively rich stories and conversations through which we define ourselves and our actions.<sup>65,66</sup> Using an overall, readily available, affective impression gleaned from a narrative can be easier and more efficient than weighing the pros and cons of various reasons or retrieving relevant examples from memory, especially when the required judgment or decision is complex or mental resources are limited.<sup>46</sup>

Affect in narratives may also function as a cue for good or bad decision options that guide perceptions of risks and benefits. Decision stimuli such as patient comments (e.g., “This doctor was great”) evoke affective experiences that influence people’s perceptions (e.g., doctor is low risk, high benefit) and consequently their choices (e.g., patient chooses this doctor). In this way, affect provides quick orientation for patients and facilitates their judgment and decision making.<sup>55</sup> However, we also need to understand in which situations narratives might lead consumers to oversimplify classification of information as “good” or “bad,” leading them to miss important differentiations in the quality of providers or to override other valuable cues. In this case, researchers could measure the extent to which consumers objectively remain uninformed during their decision-making process, even though they may have examined comments from multiple other patients and subjectively feel like they have become more informed.

#### *Imbuing quality information with meaning*

By helping people to grasp better what the actual experience of a choice might feel like or by facilitating



comparisons across different dimensions, narratives may provide a useful mechanism for making information more meaningful.<sup>67</sup> For instance, patients may have abundant information about how long they can expect to wait for a typical office visit with their primary-care physician, but little knowledge about negative outcomes that could occur when information about their care is not shared at the right time to the right people. Thus, for patients, the meaning of “wait time at primary care office visit” may be easy to grasp but the meaning of “care coordination” may be hard to grasp.

Narratives are particularly useful when meaningfulness is low for two reasons. First, narrative information can help people better comprehend the implications of a choice. Imagine a patient who has never required multiple tests, specialists, or medications. This patient might not fully appreciate how disjointed communications among primary-care clinicians and specialists may result in unsafe or ineffective care. As a result, he may ignore information about care coordination when initially choosing a provider, but then find this attribute is highly important when serious illness strikes. This patient may have been better attuned to the value of coordinated care if he had already encountered comments by patients explaining how good outcomes resulted from coordinated care or poor outcomes resulted from uncoordinated care.

A second way that narratives may improve the meaningfulness of information is by facilitating comparison among incommensurate metrics. For instance, patient comments may indicate that one doctor is known for always having same-day appointments available, but that another doctor is known for helping his patients stay up-to-date with preventive screening tests. How can a patient compare these doctors when they are described on qualitatively different dimensions? Affective cues help to translate complex cognitions about cost-benefit and other trade-offs into simpler positive and negative evaluations, thus helping decision makers to compare and integrate different metrics on a common scale. The common scale makes information more meaningful and easier to use than comparing multiple logical reasons that are represented by disparate scales.<sup>49,68</sup>

Importantly, we need to recognize that not all efforts to enhance meaning may produce the expected results. In particular, empirical research needs to clarify the situations in which narratives fail to recognize important differences in the worth of different pieces of information being combined. For instance, a patient may comment that office staff offer timely appointments “one hundred percent of the time” (a relatively precise measure) but that the doctor coordinates care “pretty well for the most part” (a relatively imprecise measure). An unintended consequence could be the obfuscation of important distinctions across the providers being compared. Just as

authors have recently asked whether the star-rating system proposed for CMS<sup>69</sup> is a useful way to summarize a comprehensive set of quality metrics, or in fact distracts consumers from important information, narratives may confuse consumers by combining information that varies in precision, reliability, and validity.

### *Stimulating cognition and behavior*

A third function of narratives is to stimulate cognition and behavior.<sup>17</sup> Classical theories of information processing, such as the elaboration likelihood model,<sup>70,71</sup> suggest that when people are presented with information, the amount of effort they will dedicate to evaluating the quality and strength of the information depends on how relevant they perceive the information to be. People who are highly engaged by a message tend to use more criteria for evaluation and to process the information contained in the message in greater detail.<sup>72,73</sup>

Narratives may encourage in-depth processing because people spend more time attending to—and are more engaged by—narrative messages than numeric messages.<sup>74</sup> For example, Cox and Cox<sup>78</sup> compared two forms of messages designed to promote mammography, one anecdotal and the other statistical, and found that the anecdotal version was significantly more engaging than the statistical version. A recent survey experiment examining consumer choice among clinicians found that websites containing narrative information significantly increased consumers’ time with and attention to quality reports.<sup>42</sup> Alternatively, some research suggests that narrative information may encourage the use of heuristic rather than systematic processing.<sup>72</sup> Heuristics rely on the use of “rules of thumb” by decision makers, based on their past experiences and observations. In such situations, narratives might make some outcomes seem more likely because they make available mental representations that are more vivid<sup>79</sup> or emotionally salient<sup>80,81</sup> in an individual’s memory. Regardless of the mode of information processing used, narratives may provide powerful motivations for changing patient behaviors (e.g., seeking a new specialist’s opinion for a chronic condition because other patients have reported success with that specialist).<sup>82</sup> These observations are consistent with classical theories of emotion and motivation<sup>83</sup> and suggest that the tendency to classify information as good or bad is linked to behavioral tendencies.<sup>84-86</sup>

There are, of course, limits to relying on affect in narratives as a motivator. For instance, some studies suggest that very high levels of negative feelings may promote defensive avoidance behaviors (e.g., not changing to a better doctor if driving further is very unappealing), particularly when a clear plan of action is lacking.<sup>87-89</sup> Similarly, narratives written in a more compelling or persuasive manner may garner more attention, even though they provide no additional decision-relevant

information. The extent to which outliers (extreme opinions) can be contextualized and misinformation can be corrected needs to be determined to clarify whether and how attentional biases can be minimized.

### **The nuances of the impact of narrative information on decision making need to be further explored**

The complex and multidimensional nature of narratives, decision problems, and decision makers means that we need to consider potential interactions among multiple factors to fully understand when narrative information may improve or impede effective patient decision making. The elaboration likelihood model suggests that depth of information processing depends not only on how engaged people are by information but also on how capable they are of understanding it. Thus, the advantages of narrative over statistical communications in terms of perceived relevance and comprehension may matter most when the audience for the communication lacks the education or experience required to make sense of complex statistical information.<sup>90</sup> For audiences with lower health literacy and limited mathematical ability, communicating relevant information about health-care providers with patient stories and other narrative structures may be particularly beneficial.<sup>13,49,70,90-93</sup>

Although the increased engagement afforded by narrative information may lead to increased attention to and scrutiny of the content contained in the narrative, it is not clear if this increased attention and scrutiny would extend to statistical information in cases in which the two types of information are paired. Evidence suggests that less attention may be given to the statistical information when it is combined with narrative information than when the statistical information is presented on its own.<sup>42,94</sup> Similarly, patient narratives can displace more evidence-based advice from clinicians.<sup>17</sup>

If consumers simply find narratives more meaningful than other types of quality metrics or information, then displacement of numeric metrics or information may not be problematic. But if consumers neglect statistical quality metrics in the presence of narratives despite still viewing the former as important markers of quality,<sup>42</sup> then the neglect undermines good decision making (defined as good reasoning, consistency with decision makers' preferences and values, and engagement with health-care information). Many consumers may find it difficult to sensibly integrate numeric and qualitative input because the two forms of information are cognitively processed in such different ways.<sup>81</sup> To harness the increased engagement afforded by narrative information in a manner that does not erode the influence of relevant quantitative information, it may be necessary to create a clearer bridge

between the two types of information in public reports on health-care quality.

Another important consideration is that the weight given to narrative information during a decision process may depend on its consistency with other information and how different decision makers are affected by inconsistencies. For instance, Huppertz and Carlson<sup>95</sup> investigated the impact of the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) report of patient experiences and word-of-mouth narratives on consumers' hospital choice. When information was inconsistent between the HCAHPS data and the narrative, HCAHPS data tended to dominate but this displacement was most pronounced for less knowledgeable respondents, who seemed less comfortable with inconsistent representations of quality.

The weight given to narrative versus other forms of information during decisions about provider choice may depend also on the extent to which consumers want to learn from the past experiences of consumers who are in some sense "like them." Understanding how similar one is to the person reporting on their experience is very important for some (but not all) consumers. Aggregated measures provided by CAHPS and the Healthcare Effectiveness Data and Information Set (HEDIS) measures offer no capacity for this personalization, though it is sometimes suggested that these metrics be reported for subsets of consumers (e.g., by race or health status). Narratives create the potential for this more personalized matching when they report general characteristics (e.g., gender, age) of the patient leaving the comment. However, this may result in the context of the narrative (e.g., who is delivering the information) being more influential than the content of the narrative (e.g., information about the communication skills of alternative providers).<sup>17,72</sup>

Finally, important ethical considerations also need to be addressed as health communicators consider using narratives to communicate provider quality. Unfortunately, research has focused more on the effects of narrative than on the ethical considerations of using narrative to improve the effectiveness of science communication to nonscientist audiences. Dahlstrom and Ho<sup>96</sup> raise three ethical questions about the use of narrative in science policy contexts which also apply to the use of narrative in communicating about provider quality: (a) Is the underlying purpose of using narrative comprehension or persuasion? (b) To what extent should elements of a narrative remain rigidly accurate or portray a generalizable example? (c) Should narrative even be used? By their very nature, narratives may imply a strong normative assessment of a line of reasoning and related behaviors, yet the assumptions on which they rely are unlikely to be stated or defended explicitly.<sup>97</sup> Thus, a clearer articulation of the ethical considerations faced by health

communicators should help to define appropriate roles for narrative. A robust theoretical model helps health communicators become aware of these pitfalls of narratives by organizing relevant variables in a way that the potential for detrimental impacts becomes more obvious. A robust empirical research program derived from or organized around that model then helps health communicators by demonstrating the bounds within which narratives can be expected to lead decision makers to perform well or poorly.

### Next steps: Questions to address in future research and guide applications

To enhance the usability and meaningfulness of information in reports of the quality of health-care providers, health communicators need to know how consumers respond to information and how to present information in ways that support good decision making. Report developers need to test their information formats to clarify the intended and unintended consequences that may be introduced by narrative information in consumer decision processes or decision outcomes. Ultimately, robust guidelines are needed for the reporting of patient narratives to ensure their interpretability and usefulness.<sup>9,98</sup>

By specifying relevant variables and potential mechanisms by which they impact decisions, the conceptual framework outlined above helps to organize a research agenda aimed at enhancing the appropriate use of narratives in the reporting of health-care quality information to consumers. Several important questions should be addressed in future research, including:

- Does empirical evidence support particular methods or “best practices” for representing and communicating narrative information?
- How should narrative information be integrated with other performance metrics when reporting patient experiences to consumers who are making health-care choices in specific contexts?
- When and why might the use of patient comments lead consumers astray (e.g., to choose a dominated option) or to ignore valid and reliable quantitative data?
- How does the impact of narrative information on clinician choices differ across demographic (or other) subgroups and across health-care settings (e.g., inpatient vs. outpatient providers and patients; planned vs. unplanned care; acute vs. chronic conditions; single vs. multiple clinicians)?
- Are the mechanisms by which narratives influence decisions about providers similar when choices are made by patients versus patient representatives (e.g., caregivers, family members)?

### Conclusion

In this paper, we argue that although quantitative information about patient experience has dominated health-care quality measurement and reporting, qualitative information is increasingly prevalent. Narrative information such as patient comments can be elicited and organized in reliable and valid ways to present meaningful information about a patient’s experience with a provider, the patient’s decision process, and the consequences of a health-care choice.<sup>9</sup> Systematic research is needed to gauge whether and how narratives influence affective and deliberative information processing mechanisms in specific contexts for specific patient needs.

We have presented a conceptual framework for organizing research that can inform evidence-based recommendations about whether and how patient narratives encourage or discourage: (1) more reasoned decisions; (2) consistency with a patient’s own values/preferences; and (3) engagement with health-care information. These same explorations would also comprehensively inform policymakers’ efforts to enhance the role of patient experience as feedback for improving provider performance.

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