

The Impact of Narratives on Healthcare Decision-Making in Online Discourse

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ABSTRACT

This study examines first what type of evidence is most influential in online discussions for patients when making decisions about their health and second how people deploy, interpret, and react to stories in these online discussions to better understand the role and importance of narrative in the medical field. Data was gathered on the platform Reddit using the subreddit r/melanoma for a duration of two weeks. 242 posts were collected and analyzed. Using a combination of grounded theory and coding criteria from sociologist and narrative scholar Francesca Polletta, a code book was developed and applied to all 242 posts to assess narrative impact and engagement. Results demonstrate that evidence based on past experiences and factual information were the most persuasive. Additionally, stories yielded greater discussion, greater empathetic connections, and greater positive responses from online discussants than other forms of evidence. Further, those positive responses indicate that patients seeking medical advice were more likely to express agreement with the advice when it was offered with a story. Given these results, greater attention should be paid to narratives shared in online communities, particularly considering the levels of misinformation and disinformation found online and the evolving relationships between doctors and patients where authority is no longer so easily assumed.

KEYWORDS

Narrative; Personal Experience; Fact; Evidence; Persuasion; Medical Decision-Making; Social Media

INTRODUCTION

The doctor-patient relationship is an essential part of medical care. It is the method by which symptoms are observed and discussed, diagnoses are made, and patient care is offered. Historically, the doctor-patient relationship has followed a paternalistic model in which the physician dominates all aspects of the medical decision-making process. Until recently, it was widely accepted in the medical community that only the physician could truly understand the scope of symptoms and disease and accurately make a diagnosis.¹ This was largely due to the assumption that the general public lacked sufficient medical knowledge. However, within the past few decades, various doctor-patient relationships that emphasize patient participation have become increasingly common. This transition can be traced back to the work conducted by psychologists Josef Breuer and Sigmund Freud that highlighted the significance of the patient as a unique person rather than a group of symptoms. They discussed the importance of communication with the patient as a critical step in diagnosis. This then placed the patient at the center of the doctor-patient relationship and hence led to patient-centered medicine.¹

In 1956, Szasz and Hollender outlined three distinct models of doctor-patient relationships, legitimizing the view that it was not necessary for physicians to act authoritatively²:

- The first model is the activity-passivity model, which refers to traditional paternalism in the medical field. This model involves a power imbalance where the physician acts in the “patients’ best interest.” The patient has little to no autonomy or say in medical decision-making. This model has roots dating back to Ancient Egypt and for centuries dominated the medical field.¹
- The second model is the guidance-cooperation model. The physician offers guidance and instruction to the patient due to their extensive medical knowledge. The patient is then expected to comply with the advice offered to them. Similar to the previous model, the patient holds little power in this relationship, yet the physician is not authoritative.
- The third model is the mutual participation model. Both the physician and the patient share responsibility for making medical decisions and planning the treatment. This relationship is characterized by equal power and consideration for the other’s values and expectations. This model is seen most commonly in cases of chronic disease or pain in which the patient can maintain greater independence.

The introduction of these psychosocial theories that emphasized a communicative relationship between physicians and patients and subsequently the creation of various doctor-patient models has led to increased patient autonomy and involvement in medical decision-making.

Due to this shift toward increased patient engagement, scholars have begun to consider additional factors in the medical decision-making process when evaluating patient involvement. On the provider side, factors include the issue of empathy and the degree to which physicians respond positively or negatively in response to patients’ needs, concerns, and feedback.³

There are also patient-related factors that impact medical decision-making including education level and health literacy. Patients having a lower literacy level are more likely to ask the physician to repeat something but “less likely to ask a substantive question, use medical terminology, refer to medications by name, request additional services, or seek new information.”⁴ There are also demographic factors that impact the extent of patient participation including age and sex as research shows that younger patients and females are more active in the decision-making process.³

Important social, cultural, and personal experiences also impact this process, including but not limited to, the patient’s socioeconomic status, race, medical preferences, behavior, and concerns.⁵ This is particularly the case in terms of patient’s perception of their vulnerability to an “unintended or unexpected incident which could have or did lead to harm for the patient.”³ Historically, such incidents have disproportionately impacted racial and ethnic minorities in the U.S.^{6,7} In order to reduce the frequency of these incidents, a growing number of patients have demanded a larger role in the decision-making process.³

The type of medical decision also impacts the degree to which patients are involved in the decision-making process. Dr. Raisa Deber explains that “problem-solving” and “decision-making” are two distinct areas for patient participation. Deber claims that problem-solving is not suitable for the patient, as there is only one correct answer requiring extensive medical knowledge. In the example of a radiograph that displays a broken leg, she argues, there is only one correct diagnosis: a broken leg.⁸ These situations, therefore, are not entirely conducive to patient participation in solving the problem at hand and conducting the diagnosis. However, physicians still utilize the patients’ experiences in making the diagnosis and these diagnoses are not always so straightforward or accurate, as one of the most common types of patient narratives in describing their medical history is misdiagnosis stories.⁹

Decision-making situations require the patient to evaluate the value of potential outcomes and their preference for each,⁸ presenting a greater opportunity for patient participation than diagnosis situations. One study concerning patient preferences in involvement in medical decision-making reveals that patients had a stronger desire to be involved in decisions that require no medical knowledge.¹⁰

Outside of the doctor-patient relationship, there are various factors that influence patient participation in the decision-making process, including social media and online communities. There are many identifiable benefits of social media use to patient participation in medical decision-making, the most common of them being enhanced patient empowerment,¹¹ defined as “the discovery and development of one’s inherent capacity to be responsible for one’s own life.”¹² Patient empowerment can be characterized by patients developing the necessary skills, resources, and information in order to reach their goals in the medical setting. Social media can complement the information shared by physicians, offer patients a unique platform to express their genuine emotions, and provide them with the opportunity for social comparison, or comparing their condition with other patients.¹¹ Further, online communities provide patients a space to talk about health issues in lay terms, distinct from the often alienating language of institutional medicine.¹³ These effects have led to more equal communication between patients and physicians due to patients’ increased confidence, health literacy, and increased willingness to participate in the decision-making process.¹⁴

However, not all of the effects of social media usage are positive, particularly with respect to the reliability of medical information. Patients are increasingly challenging physicians’ expertise. Physicians have often responded by reacting negatively to patients’ online activity, which in turn has had a disempowering effect on patients.¹⁴ This spiral of distrust has led some patients to change physicians.¹¹

Just as attention to the specific media formats used in medical decision-making is important, so too is the mode. Over the past few decades, there has been an explosion of social science research focused on the role of narrative in shaping human behavior, perception, and knowledge.^{15–18} In the medical field, physicians utilize stories in a variety of ways: they hear stories from patients, share their patients’ stories with other patients as well as with their colleagues, trade stories of their own experiences with their colleagues, and reflect on all of these stories as they consider their own medical practice.¹³ In the doctor-patient interaction specifically, storytelling “is the method by which the meaning of the illness and disease are integrated and interpreted by both the physician and the patient.” Further, the patients’ stories plays an integral role in establishing their viewpoint in the decision-making process.¹⁹

However, anthropologists, folklorists, and historians have long discussed the need for further emphasis on storytelling in the medical setting.^{19–32} For instance, Dr. Arthur Kleinman, a physician-anthropologist, suggests that doctors must pay close attention to their patients’ narratives and move past “clinical interrogation.”³³ Additionally, Dr. Rita Charon argues that “narrative competence” is essential to the practice of medicine. She defines narrative competence as “the set of skills required to recognize, absorb, interpret, and be moved by the stories one hears or reads.”³⁴ Both scholars argue that physicians could enhance their clinical and emotional skills through these two practices, leading to better patient care.

Despite this call there has been little research into how stories shared outside of the specific doctor-patient dyad impact medical decision-making. A few studies suggest that narratives increase patient adherence and knowledge. Psychological benefits including increased empathy and improved affective forecasting, have also been identified.³⁵ Other studies demonstrated that narratives had a significant impact in certain conditions. For instance, narratives shared via an audio or video format were more likely to be persuasive compared to a written narrative.³⁶ Further, narrative research beyond the medical field specifically suggests powerful impacts, not least of which in terms of persuasion. For example, Jones and Crow found that personal beliefs and emotions play an essential role in decision-making and that decisions are not solely based on scientific evidence. In terms of persuasiveness, therefore, they argue that communicators would benefit by presenting information in a narrative format.³⁷

The increasing prevalence of online communities and chat forums dedicated to particular medical issues and illnesses have created a space for people to discuss their health issues, including seeking advice for treatment. Narratives shared in these spaces have been shown to lead to improvements in health care initiatives for patients,³⁸ provide emotional support,^{39,40} increase personal empowerment,⁴¹ provide a positive model for socializing new online group members,⁴⁰ and alternatively promote health literacy^{39,40} as well as risk perpetuating false information.⁴²

Based on the current scholarly literature, it is clear that analysis of the role of narrative in medical decision-making is needed, particularly in new media. Accordingly, this study examines the relationship between narratives shared on social media and patient decision-making, asking the following two questions:

- 1 - What types of evidence shared on social media are persuasive when making decisions about one's healthcare?
- 2 - What role do stories play in discussions of healthcare on social media?

For the purposes of this study, we define narrative as a text that indexes or describes a past event; provides a sequence of action; includes elements of orientation, complication, and resolution; and is structured with a beginning, middle, and end. Narratives include plots, characters, settings, and actions. Structured as bounded events, narratives can be re-told in new settings, making them particularly easy to share.⁴³⁻⁴⁷ This definition adheres to the relatively strict definitions used in folklore studies, linguistic anthropology, and sociolinguistics that attend closely to form. Looser definitions used increasingly often throughout the social sciences may not include these qualities, and as such, may not share the same outcomes of more strictly defined narratives.⁴⁸

METHODS AND PROCEDURES

The study utilized a mixed-methods approach in order to describe the relationship between various types of evidence used in online discussions and how the patient reacted to the advice that was offered.

There were many social media platforms and diseases that could have been selected and investigated for this research. Ultimately, however, examining the subreddit *r/melanoma* on the Reddit platform was selected for three reasons. First, its discussion-based algorithm provides an opportunity for multiple types of discourse and facilitates conversations among users about virtually any topic including medical care.⁴⁹ Second, the nature of the discussion and questions posed were frequently geared towards identification and diagnosis, both of which were directly or indirectly related to medical decision-making. (Many of the other social media sites dedicated to medical issues focused on lifestyle and relationships post-diagnosis, which does not involve medical decision-making.) Third, the subreddit *r/melanoma* was both a large and active group, with approximately 5,500 members and multiple new posts daily. Accordingly, this social media site offered an accessible, relevant, and sizable data set.

Coding began on September 25, 2022, working with posts beginning two full weeks earlier to help avoid missing newly posted comments. Coding included all posts between September 9, and September 15, 2022, reaching saturation point when no new patterns or types of posts emerged, and after which a significant body of data had been collected.

There were 41 original posts, with 201 responses, resulting in 242 total posts in the dataset. Of the 242 posts, 67 contained a story: 19 shared in the original post, 48 in the comments. However, not all 48 stories in the comments were shared by audience members: 17 stories were shared by the original poster (OP), 31 by commenters.

After the dataset was compiled, open coding techniques were used to identify emergent themes and patterns. Additionally, coding categories from Francesca Polletta's work assessing narrative persuasiveness in political discourse were included in order to compare this data in the context of her findings. Eventually, a formal codebook was constructed that included the number of upvotes (likes), number of comments, inclusion of an image, type of post (question or comment), type of question, whether the post included a story, function of the story, tone, nature of response, whether

advice was offered, types of evidence, types of authority, and, most importantly, the original poster’s response. To ensure intercoder reliability, both co-authors independently coded the first 38 posts (17% of the dataset) and compared results. Of the 13 coding categories across 38 posts, there was disagreement on only 17 out of the 507 total number of codes. At 97% alignment, this is well above the 90% typically needed for reliability. The codebook was then clarified to address the disagreement and then applied consistently to the entire dataset. Statistical analyses were then applied in order to look for additional patterns, correlations, and frequencies.

RESULTS

The purpose of this study was to evaluate the significance of various types of evidence utilized in online communities when patients are making decisions about their health as well as to specifically assess the nature and impact of narratives. While the data made it impossible to determine the medical decision the patient ultimately made, it was possible to determine how they reacted (positively, negatively, or no response at all), and in some cases what they *said* they were going to do.

Types of Evidence

The most prevalent evidence types utilized in the online posts were observational evidence (e.g. “It definitely changed shape, and it doesn’t look like any other mole I have”) (30.2%), past experience-based evidence (e.g. “I’m a diagnosed hypochondriac and I’m telling you this, melanoma just doesn’t often look anything like what you’ve got pictured here”) (16.9%), and opinion-based evidence (e.g. “Ah, well I would just get it checked anyway, just to be safe”) (15.3%) (see Table 1). The least common evidence types were longitudinal (“It appeared around 2 months ago it has grown I think a little in size”) (8.7%), factual (e.g. “CDKN2A mutation increase lifetime risk for getting melanoma”) (8.3%), and weblinks (e.g. “https://notamole.com/uglyduckling”) (3.7%).

Evidence Types	All Posts	Commenters Only	Advice Shared
Past Experience	16.9% (41)	23.7% (31)	31.0% (18)
Fact	8.3% (20)	11.5% (15)	15.5% (9)
Observational	30.2% (73)	22.9% (30)	32.8% (19)
Longitudinal	8.7% (21)	3.8% (5)	-
Weblink	3.7% (9)	6.1% (8)	13.8% (8)
Opinion	15.3% (37)	28.2% (37)	58.6% (34)

Table 1. Frequency of Evidence Type Table displays percentages and (counts), Sample sizes are as follows: Dataset = 242, Commenters = 131, Advice Shared = 58

Table 1 displays how often each evidence type was utilized across all of the sampled posts, including original posters (column 1). The frequency of evidence types utilized solely by commenters was examined as well in order to more accurately determine what evidence types are being utilized in response to original posters. Opinion-based (28.2%), past experience-based (23.7%), and observational evidence (22.9%) were the three most common evidence types that commenters used. This was followed by factual (11.5%), weblink-based (6.1%), and longitudinal evidence (3.8%) (column 2). Finally, the frequency of evidence types utilized by commenters specifically when sharing advice to the original posters was determined as well (column 3). This displays that opinion-based evidence was by far the most prevalent (58.6%), followed by observational evidence (32.8%), past experience-based evidence (31.0%), factual (15.5%), and weblink-based evidence (13.8%).

More significantly, the OP positive response rate for each evidence type when advice was shared was also calculated in an effort to determine the most persuasive evidence (Table 2). In this study, OP positive response rate was utilized in order to gauge the original poster’s reception to various advice shared in response to their question. Some examples of responses that indicated a positive response by the original poster include:

Evidence Type	Positive OP Response Rate
Observational	32.8%
Past Exeperience	50.0%
Fact	44.4%
Weblink	12.5%
Opinion	32.4%

Table 2. Positive OP Response Rate per Evidence Type

“SUCH a helpful article! You my friend are the reason I’m putting away my phone right now and going to sleep.”

“Alright, I’ll see if I can get an appointment! Thank you for the replies.”

The data show that past experience-based evidence had the most favorable response rate (50.0%), with factual evidence (44.4%) as a close second. This was followed by observational evidence (32.8%) and opinion-based evidence (32.4%). Lastly, weblink-based evidence had the lowest response rate (12.5%). There was only one instance of longitudinal evidence being utilized when advice was being offered to the OP, therefore, this metric was not included when evaluating positive OP response rate.

Types of Evidence & Narrative

The study’s research questions focused on types of evidence and narrative. Therefore, narrative status and prevalence of evidence usage are important factors in determining persuasiveness (Table 3).

Advice Type and Frequency	Positive OP Response Rate
Non-narrative	24.4%
Narrative	53.8%*
Single Evidence	25.0%
Multiple Evidence	38.5%

Table 3. Positive OP Response Rate when Advice is Shared *Significance was reported for the following level: *p<0.05 [t(56) = 2.1, p = 0.04]

Virtually all of the stories shared were personal experience narratives: first-person stories shared by the person involved (95.5%; the other 4.5% were secondhand stories from family and close friends). When stories were shared there was a positive OP response rate of 53.8%, compared to a rate of 24.4% when stories were not shared. Narrative advice, in comparison to non-narrative advice, received statistically significantly higher positive responses from the original poster. On average, multiple forms of evidence when offering advice received a positive OP response rate of 38.5%. However, when only a single type of evidence was used, this rate dropped to 25% (Table 3), suggesting, not surprisingly, that more evidence is better than less.

Further, analysis of these two factors combined makes it clear how narrative and multiple types of evidence work together to impact positive OP response rate (Table 4).

Narrative and Evidence Status	Positive OP Response Rate
Non-narrative & Single evidence	23.1%
Non-narrative & Multiple evidence	26.3%
Narrative & Single evidence	33.3%
Narrative & Multiple evidence	71.4%

Table 4. Positive OP Response Rate based on Storytelling and Number of Evidence Types when Advice is Shared

When advice was offered, yet no story was shared and only one type of evidence was utilized, there was a positive

OP response rate of 23.1%. When no story was shared and multiple types of evidence were used, the rate increased to 26.3%. The same trajectory was apparent when stories were shared, but the increase with multiple evidence was much more dramatic. When there was a story shared with one type of evidence, this rate was 33.3%. However, when multiple types of evidence were used, and a story was shared, this more than doubled the positive OP response rate to 71.4%.

Narrative Usage

The following data focus solely on the second research question related to narrative use: when and why are stories shared, and how are stories received. Stories were most often shared in response to explicit diagnosis questions, followed by implicit diagnosis questions, and then treatment questions (Table 5). However, relative to the number of questions that were shared for each question type, questions related to treatments yielded the most stories: on average, 4 stories were shared per treatment question.

Question Type	Number of Stories	Stories to Question Ratio
Implicit Diagnosis	15	1.07
Explicit Diagnosis	21	0.88
Treatment	12	4

Table 5. Frequency of Stories

In terms of function, narratives were used to inform audiences, answer questions, offer advice, offer empathy, express anxiety, validate concerns, build credibility, persuade readers, and offer examples (Table 6). The vast majority of the stories (97.0%) were used to inform. However, these functions are not mutually exclusive, and often, stories would contain multiple functions.

Function of Narratives	Frequency
Inform	97.0%
Answer Question	32.8%
Offer Advice	17.9%
Empathetic	9.0 %
Express Anxiety	16.4%
Share Similar Concern	14.9%
Build Credibility	7.5%
Persuade	4.5%
Offer Example	9.0%

Table 6. Function of Narratives

In terms of reception by the original poster, the 31 stories shared by commenters received a positive OP response rate of 61.3% compared to the positive response rate of the entire dataset of 44%. Further, although 61.3% of responses were positive, this does not mean the remaining responses were negative. In fact, there were no negative responses to stories that were shared by commenters. Rather, the remaining responses were either neutral (32.3%) or there was no response (9.7%).

The dataset was also analyzed according to functions identified by Francesca Polletta in her study of narratives used in online discourse. Analysis included the responses among all participants (not just the original poster) as well as non-narrative claims in order to accurately assess the impact that narratives have on their audiences. The 67 stories in the dataset yielded 71 responses from audience members.

This data show that the majority of the functions were more prevalent in response to narrative compared to non-narrative

Function	Percentage of Narrative Claims	Percentage of Non-Narrative Claims
Acknowledge Emotional Impact	12.7%**	3.5%
Make a Corroborating Claim	11.2%	5.8%
Share a Similar Concern	1.4%	4.7%
Answers Question	35.2%	36.6%
Ask a Follow-up Question	32.4%***	9.9%
Express Appreciation	9.9%	5.2%
Disagree	1.4%	2.3%

Table 7. Audience Members’ Reception of Narratives *The percentages for each response type were calculated by dividing the number of each response by the number of claims in its category. There were 71 narrative claims and 172 non-narrative claims. **Significant on the 0.01 level, $t(241) = 2.8$, $p = .006$ ***Significant on the 0.0001 level, $t(241) = 4.5$, $p = .00001$

claims. In response to narrative claims, the most common response was answering OP’s question (35.2%), followed by asking a follow-up question (32.4%), acknowledging emotional impact (12.7%), making a corroborating claim (11.2%), and expressing appreciation (9.9%). Lastly, disagreeing, asking to clarify, and sharing the same concern had the same frequency (1.1%). Particularly relevant to this study, posts in response to narrative claims were significantly more likely to acknowledge the emotional impact and to ask a follow-up question in comparison to posts in response to non-narrative claims.

The 172 responses to non-narrative posts were also analyzed. This revealed that the most common response was answering OP’s question (36.6%), then asking a follow-up question (9.9%). This was followed by making a corroborating claim (5.8%), sharing the same concern (4.7%), expressing appreciation (5.2%), acknowledging emotional impact (3.5%), disagreement (2.3%), and asking to clarify (0.5%).

DISCUSSION

There were two main objectives of this study: to understand 1) which evidence types utilized in online communities are most frequent and most persuasive in medical decision making, and 2) the role narratives in particular play in these contexts. From the beginning, assessing persuasiveness was difficult. It was not possible to determine whether people actually followed the advice given, even when offering positive feedback such as appreciation for their advice or recognition of their peace of mind. However, this study does offer insight into the types of evidence used most often, the degree to which that evidence prompted a positive response, and the impact narrative had in these online communities compared to other types of evidence.

In terms of the prevalence of evidence types in the dataset, observational (30.2%) and past experience-based evidence (16.9%) were the most common, both of which are commonly used with narratives. Even in posts that did not include a narrative, these types of evidence far surpassed factual evidence (8.3%) and statistical evidence, of which there was not a single instance. Further, none of those posting commented on the low degree or complete lack of facts or statistics, suggesting that evidence that is primarily anecdotal and personal - both of which lend themselves to narrative - is the expectation for these online communities. The reliance on individual-based evidence (personal past-experience and opinion) is even more clear when distinguishing between the commenters and the overall dataset, revealing that opinion-based evidence (28.2%) is the most prevalent, followed by past experience (23.7%) and observational evidence (22.9%). When focusing solely on posts that offered advice to the original poster, the pattern is even stronger, with opinion-based evidence as the most prevalent evidence type (58.6%), followed by observational (33.0%), and past experience (31.0%). Although narratives were rarely used among posts that were offering advice (22.0%), evidence types common with narratives were more common than factual evidence.

In terms of the types of evidence that resulted in a positive response rate from the original poster, however, past experience-based evidence remained high (0.5), with factual evidence a close second (0.444). This reveals that these two evidence

types were the two most impactful and significant for patients. Although factual evidence was not common when advice was shared (0.155), it was responded to positively by posters (44.4%). Furthermore, it is understandable that observational evidence resulted in a low positive response (0.328) rate as it was used broadly and frequently in the dataset. The same can be said about opinion-based evidence (0.324), as there was no experience or factual basis to a commenter's advice. Yet, it is interesting to note that weblinks (any link to a website with medical information) contained the lowest positive response rate (0.125). It would be expected that they would be similarly received as factual evidence, if not in a more positive manner due to the potential of their increased credibility, yet this was not the case. This may suggest an unwillingness to follow external links in these contexts. Additionally, there is no relationship between prevalence and persuasiveness, as the most common evidence type utilized when advice was shared (opinion-based) was not the most persuasive.

Due to the frequency and high positive response rate of evidence types common with stories, further relationships among posts that were offering advice to the original poster were explored, first looking at the correlation between positive response rates and storytelling. This revealed that narrative advice in the aggregate contained a significantly higher positive response rate compared to non-narrative advice (Table 3), although stories are not shared as frequently, they are far more effective in persuading people in online discourse. Non-narrative advice was more than three times more prevalent than narrative advice (3.5:1), yet the positive response rate for non-narrative advice (0.244) was less than half that of narrative advice (0.538), signifying the importance of stories in this setting.

One possible explanation for this dramatic finding is the function of stories as “empathy machines.” Stories invite audiences to view a situation from another person's vantage point, encouraging an empathetic response. Previous research has shown that empathy plays a vital role in persuading audience members of one's argument generally, and in the medical decision-making process specifically.⁴⁹ This interpretation is supported by the significantly higher positive response rate for narrative advice in comparison to non-narrative advice.

Shifting to consider the amount rather than the type of evidence types reveals not surprisingly that more evidence is better than less in terms of positive response rate. While this was true for non-narrative posts as well, the increase from 33.3% to 71.3% was dramatic and significant in establishing not only the impact of narrative, but narrative's reliance on additional forms of evidence for effective persuasion (Table 4). This information, alongside the significantly large positive OP response rate, leads us to assert the persuasiveness and effectiveness of storytelling when making decisions about one's health.

In terms of when stories were shared, treatment-related questions yielded the highest number of stories (4), although they were by far the least prevalent question type. (Table 5). This could be explained by the fact that diagnosis questions tend to be original poster-focused, whereas treatment questions are “you” focused and invite audience members to speak about their own experiences, including by sharing a narrative. Stories allow us to be egocentric and talk about ourselves. For example, a typical treatment-related question was, “Any members in here ever had atypical moles removed?” This question invited audience members to share their own experience with atypical mole removal to answer the original poster's question, hence the much higher story-to-question ratio. Conversely, an example of a diagnosis question was, “Should I be worried? This mole is quite new and has gotten bigger over the past couple of weeks.” This question is specific to the original poster and therefore yields less personal sharing by audience members and subsequently fewer stories.

In order to understand why stories were shared, each post was coded for its function. The variety of functions displayed in Table 6 demonstrates the breadth of narrative functions in online communities. The function ‘to inform’ was the most common as original posters informed their audience members of their condition as they asked their question, and audience members informed the original poster and other readers of their past history in their response.

Another common function was to ‘express anxiety,’ also commonly used by original posters concerned for their health.

Further, this function was most common in diagnosis questions. In fact, all but 2 narratives that expressed anxiety were from diagnosis questions. Furthermore, it is significant that the ‘offer exemplar’ and ‘empathetic’ functions contained high positive OP response rates (83.3%). Both of these functions are frequently found in narrative.

In terms of how people seeking medical advice responded to what people had to say, stories resulted in a notably larger positive response rate (61.3%) compared to the overall dataset (44.3%). This suggests that the use of narratives may increase the chance that advice is responded to positively.

In terms of understanding how audience members as opposed solely to the original poster reacted and responded to stories, Polletta’s model of assessing narrative function and responses was utilized and applied to this study. Nearly every function was more prevalent in response to narrative claims compared to non-narratives (Table 8). Additionally, posts in response to narrative claims were significantly more likely to acknowledge the emotional impact of the narratives and include follow-up questions compared to non-narrative posts, highlighting the importance of narratives in increasing collaboration and discourse in online medical communities.

Function	Narrative Claims	Narrative Claims*	Non-Narrative Claims	Non-Narrative Claims*
Acknowledge Emotional Impact	12.7%	6.0%	3.5%	0.5%
Make a Corroborating Claim	11.2%	18.1%	5.8%	1.4%
Express Appreciation	9.9%	26.4%	5.2%	16.9%
Disagree	1.4%	14.3%	2.3%	5.1%

Table 8. Comparison of the Rates of Reception of Narrative and Non-Narrative Claims *Data From Polletta (2011)

In order to compare these findings to other research concerning narrative impact, this analysis was compared to Polletta’s research and a similar pattern from this study can be observed. Acknowledging emotional impact, making a corroborating claim, and expressing appreciation were all more prevalent in response to stories in both studies. The sample size utilized in this study was smaller and the general response rate that had been calculated as a part of this study is generally lower compared to Polletta’s work, yet increased conversations and collaborations among members in response to stories can be observed.

Comparison also suggested some differences that may be related to the differences between political and medical discourse. In this study, the frequency of posts that acknowledged the emotional impact was greater in comparison to Polletta’s work, which could be the case due to the stress and anxiety-inducing nature of medical discourse. Yet, in the political discussions in Polletta’s work, making a corroborating claim and disagreement were both more common, perhaps due to the natural argumentative nature of political conversations. Additionally, there was a significant difference in the frequency of posts that expressed appreciation, with rates much higher in Polletta’s work. This difference may be attributed to the fact that the Reddit platform in this study allows people to upvote (like) posts. More than 95% of posts received at least one upvote, for both narrative and non-narrative claims. Such a finding is not particularly useful, but it does offer a possible explanation for why the numbers in this study were so much lower than in Polletta’s since an upvote could serve as a form of expressing appreciation, replacing the need to explicitly state it in one’s comment.

CONCLUSIONS

With the growing prevalence and popularity of online communities and chat forums dedicated to various medical conditions and the significant impact that narratives have been shown to have on persuasive discourse, storytelling on social media outside of the doctor-patient dyad needs to be considered and evaluated when discussing patient involvement and participation in the medical decision-making process. This study suggests that although narrative advice is not as prevalent as non-narrative advice, its persuasive impact is significantly greater. Further, narratives encourage greater interaction by acknowledging emotional impact, making corroborating claims, and expressing appreciation. These findings suggest that if people want others to heed their advice, they should share stories, ideally with multiple forms of ev-

idence. If doctors want to establish collaborative and trusting relationships with their patients, they will likely need to engage in storytelling as well in order to compete with the stories their patients are hearing online. In either case, understanding the medical decision-making process in the U.S. today will require greater attention to how stories shared online shape our perceptions and therefore our behaviors.

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PRESS SUMMARY

Within the last few decades, the doctor-patient relationship has evolved tremendously and has begun to include a greater role for the patient. Additionally, online spaces discussing various diseases have increased in popularity for many patients. Therefore, based on research in medical anthropology, this study examined what type of evidence - medical-based or narrative-based - is most influential for patients making decisions about their health in online discussions. Further, the study applies narrative theories developed by rhetoricians, political scientists, and folklorists to consider how people deploy, interpret, and react to stories in these online discussions to better understand the role and importance of narratives in the medical field. Results demonstrate that past experience and factual-based evidence were the most persuasive, yet stories yielded greater discussion among members, greater empathetic connections among members, and most significantly, increased the chance that medical advice was taken. Therefore, greater attention should be paid to narratives shared in online communities.