

Abstract Title: Reddit Users' Questions and Concerns about Anesthesia

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Background/Introduction: Patients utilize social media in search of support networks. Reddit is one of the most popular social media sites and allows users to anonymously connect. Anesthesia patients are actively using Reddit to discuss their treatment options and experiences within the medical system.

Methods: Posts published on an active Reddit forum on Anesthesia (i.e., */r/Anesthesia*) were used. Big Query was used to collect posts from */r/Anesthesia*. We collected 3,288 posts published between December 2015 and August 2019. We collected a control group of 3,288 posts from a Reddit forum not related to Anesthesia (*/r/AskReddit*). Using latent Dirichlet allocation (LDA) we extracted 20 topics from our data set. The LDA topic themes most associated with posts in */r/Anesthesia* compared to the control group were determined.

Results: LDA analysis of posts in */r/Anesthesia* relative to a control group produced 6 distinct categories of posts: “Patient-Physician Experience, Medication, Health Care Infrastructure, Procedures, Personal Inquiries, and Uncertainties.” The posts most associated with */r/Anesthesia* when compared to a control group were posts belonging to the “Physician-Patient Experience” category (Cohen’s $d=0.389$) while the posts least associated with */r/Anesthesia* were from the “Uncertainties” category of posts (Cohen’s $d=0.147$). Example experiences from members of the */r/Anesthesia* forum highlight subjective experiences of patients undergoing anesthesia.

Conclusion: The language used on social media can provide insights into an individual's experience with anesthesia and inform physicians about patient concerns. Anesthesiologists are poised to address these concerns and prevent anonymous misinformation by providing verified physician insights on the forum */r/Anesthesia*.

Images: Table 1: Latent Dirichlet Allocation Topics associated with */r/Anesthesia* Posts with Correlated Words Used to Highlight the Topic and Redacted Illustrative Examples

Category/Theme	Operational Definition	Cohen's D	Correlated Words	Redacted Illustrative Posts
Patient-Physician Experience	Posts surrounding relationships between members of the care team and patients	0.389	Anesthesia, surgery, procedure, sedation, anesthesiologist, patient, anesthetic, surgeon, pain, experience	Hello everybody, I underwent a procedure this morning while sedated. I came and read the pinned post in this subreddit since I had been worrying about it for weeks, and it truly helped me relax. I generally struggle with quite severe anxiety relating to my health. While getting ready this morning, I was still a little on edge, but my amazing and caring anesthesiologist basically informed me that given my health, she wouldn't even bother describing extreme risks; she only said that I might feel nauseous and have a sore throat after. I was asleep with one of the nurses holding my hand, and when I awoke, I was overjoyed. After roughly 4 hours of being awake, I feel great! The fear of the unknown made me worried, but I now get that it is truly okay. Thank you for your help across this forum.
Uncertainties	User posts regarding patient worries and fears	0.147	I'm, don't, shit, stop, smoking, give, smoke, week, anxiety, die	Help me. I spent three weeks without doing any drugs. A friend of mine invited me out to drinks last Thursday (also something I must stop, but anyway). I let him know that I stopped doing drugs and that I needed to keep clean (especially for two weeks) since I am scheduled to undergo major surgery on April 15... Does anyone here have any information on whether I should be able to have the surgery? Has anyone ever smoked meth and felt sick afterwards?

