



# Do Financial Conflicts of Interest Affect What Endovascular Specialists Post on Social Media?



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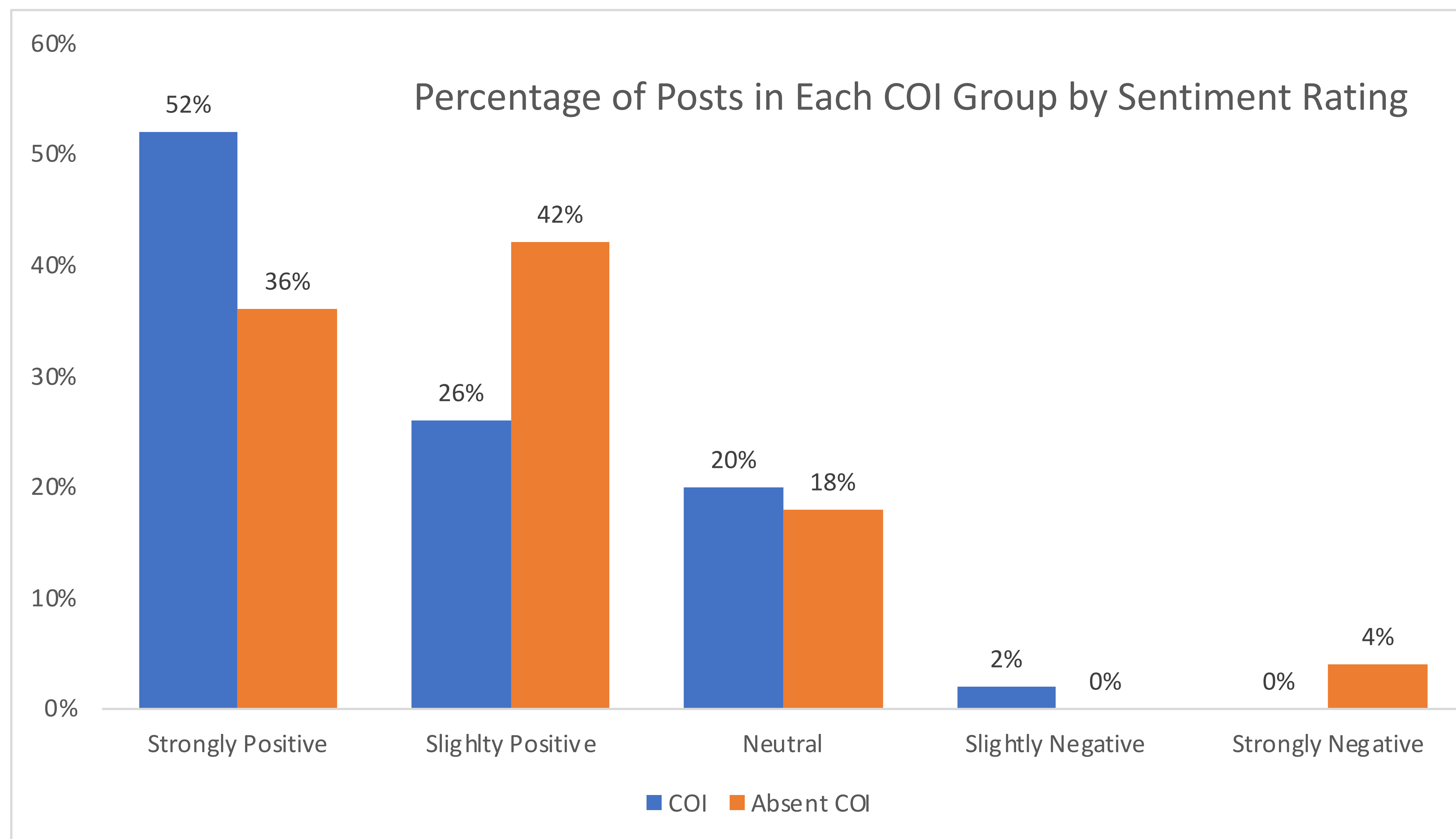
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## Introduction

- Eighty-five percent of the public report that they have used social media to inform their decisions regarding healthcare. (1)
- Physicians are increasingly using social media to discuss clinical cases and procedural techniques.
- Some posts mention specific medical devices and companies, and many do not properly disclose conflicts of interest.
- The current study evaluates if interventional radiologists and other endovascular specialists with financial conflicts of interest (COIs) with medical devices and companies reference the device or brand with a more positive bias on social media, compared to endovascular specialist posters without COI.

## Methods and Materials

- X (formerly Twitter) hashtags commonly used by endovascular specialists were used to identify posts by US physicians mentioning a specific device or company.
- 13,809 posts between 10/7/2021 and 12/31/2021 were evaluated.
- Centers for Medicare & Medicaid Services Open Payment database were used to identify COIs.
- A positive COI is defined as receiving payment from device manufacturer/company within 12 month prior to social media post.
- Post author's sentiment towards brand/device was assessed on 5-point scale (1-5 outlined in **Table 1**). Inter-rater agreement was measured with Krippendorff's alpha.
- Mean score was used to determine sentiment. Positive sentiment is greater than 3, neutral is equal to 3, and negative is less than 3.
- Posts were then grouped into physicians with positive COIs and those without COIs and compared using a t-test.



**Figure 1:** Percentage of posts from COI grouping bucketed by sentiment rating

Sentiment (Score)	COI	Absent COI
Strongly Positive (5)	26	18
Slightly Positive (4)	13	21
Neutral (3)	10	9
Slightly Negative (2)	1	0
Strongly Negative (1)	0	2

**Table 1:** Number of posts for the COI group and absent COI group by sentiment

## Results

- A random sample of 100 posts were analyzed. 50% had positive COIs (50/100) and the other 50% did not have any COIs.
- The mean sentiment rating for posts with a positive COI, 4.16, was higher than the mean sentiment rating of 3.54 for posts without a COI (p<0.001).
- Furthermore, conflicted posts were more likely to be strongly positive [52% vs 36%] (**Table 1**).
- Krippendorff's alpha demonstrated strong inter-rater agreement (alpha = 0.947).

## Discussion

- Physicians with financial COIs were more likely to reference a device or brand positively on medical social media than physicians who had not received any payments.
- If authors are not disclosing these COIs, readers may not be able to weigh any potential bias in the posts to help inform their medical decision making.
- Further education and awareness of COI on medical social media is needed to best use social media as a collaborative tool to impact patient care.

## References

1. K. G. Bennett, N. L. Berlin, M. P. MacEachern, S. R. Buchman, B. A. Preminger, and C. J. Vercler, "The Ethical and Professional Use of Social Media in Surgery: A Systematic Review of the Literature," *Plast. Reconstr. Surg.*, vol. 142, no. 3, p. 388e–398e, Sep. 2018.

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