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The Potential effects of financial conflicts of interest of speakers at the Pulmonary/Allergy Drug Advisory meetings

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INTRODUCTION

The Pulmonary-Allergy Drugs Advisory Committee (PADAC) evaluates the safety and efficacy of new drugs used in the treatment of pulmonary, allergic, and immunologic diseases. Previous studies have shown positive recommendations from advisory committees are associated with drug approval by the FDA. We investigated the relationship between FCOI among public speakers and their recommendations for the drug under review as well as PADAC voting patterns.

OBJECTIVES

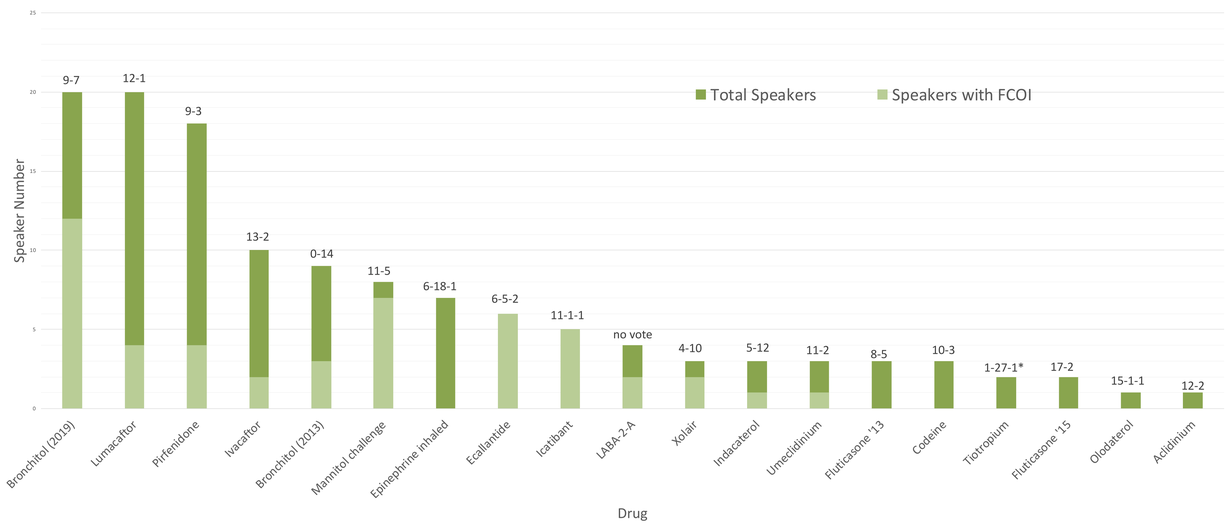
The primary objective of this study was to investigate the relationship between FCOI among public speakers and their recommendations for the drug under review at PADAC meetings. Our secondary objective was to determine whether the number of speakers and the number of speakers with FCOI were related to PADAC voting patterns.

METHODS

We included the testimonies of all public We included the testimonies of all public speakers at the PADAC meetings from November 2009 to May 2019 using verbatim transcripts deposited on the FDA website. We used a pilot tested Google form to perform blinded, independent data extraction for each speaker. An ordered logistic regression was performed with each speaker's overall statement about the drug — negative, positive or neutral — serving as the dependent variable. Independent variables included whether the speaker was taking the drug in question, whether the speaker had the disorder treated by the drug, and whether the speaker disclosed a FCOI. Stata 15.1 was used for all analyses.

RESULTS

Figure 1: Vote outcomes in relation to speaker number



Our ordered logistic regression model found that speakers who disclosed a FCOI were significantly more likely to give a positive testimony than those who did not (OR = 5.13, 95% CI = 1.83—14.37, P < 0.001) and that speakers who had the disorder for which the drug was taken were significantly more likely to provide positive testimony than speakers who did not have the disorder (OR=5.49, 95% CI = 1.84 — 14.37, P < .01). Speakers who took the medication in question were not more likely to provide a positive testimony than those who did not (OR = 3.38, 95% CI = 0.32—35.42, P = 0.31). The width of these confidence intervals, however, limits the certainty of these findings.

Figure 1 shows the voting results and the number of public speakers for each drug meeting. Nine (of 10) votes with five or less speakers had a vote swing of six or more. There were 3 vote swings of 3 or less; 2 of which had more than five speakers. One of them, which included more than five speakers with a vote swing of three or less, had 100% public speakers with FCOI; the other had 60%. A sub-analysis of the 2 Bronchitol meetings found a 122% increase in the number of public speakers and a 300% increase in the number of speakers with a FCOI between the 2013 Bronchitol meeting and the 2019 meeting. Bronchitol had 9 speakers in 2013 — 3 (33%) with FCOI — and the vote was 0-14. In the 2019 Bronchitol session there were 20 speakers — 12 (60%) with FCOI — and the vote was 9-7.

Table 1: Number of speakers with FCOI

Drug Name Presented at Hearing	Drug Company	# Speakers ▲	# Speakers with Disclosed Financial Conflicts of Interest♦
Bronchitol (2019)	Chiesi	20 (15.63%)	12 (24.49%)
Long-acting beta-2 agonist	Merck	4 (3.13%)	2 (4.08%)
Xolair	Genentech and Novartis	3 (2.34%)	2 (4.08%)
Umeclidinium/Vilanterol	GlaxoSmithKline (GSK)	3 (2.34%)	1 (2.04%)
Tiotropium Bromide	Boehringer Ingelheim Pharmaceuticals	2 (1.56%)	0 (0%)
Pirfenidone	InterMune	18 (14.06%)	4 (8.16%)
Olodaterol	Boehringer Ingelheim Pharmaceuticals	1 (0.78%)	0 (0%)
Bronchitol (2013)	Pharmaxis	9 (7.03%)	3 (6.12%)
Mannitol Challenge	Pharmaxis	8 (6.25%)	7 (14.29%)
Lumacaftor/Ivacaftor	Vertex	20 (15.63%)	4 (8.16%)
Ivacaftor	Vertex	10 (7.81%)	2 (4.08%)
Indacaterol	Novartis	3 (2.34%)	1 (2.04%)
Icatibant	Jerini US, Inc.	5 (3.91%)	5 (10.20%)
Fluticasone Furoate/Vilanterol (2013)	GlaxoSmithKline (GSK)	3(2.34%)	0 (0%)
Fluticasone Furoate/Vilanterol (2015)	GlaxoSmithKline (GSK)	2 (1.56%)	0 (0%)
Epinephrine inhalation OTC	Armstrong Pharmaceuticals, Inc.	7 (5.47%)	0
Ecallantide	Dyax	6 (4.69%)	6 (12.24%)
Codeine	N/A	3 (2.34%)	0 (0%)
Aclidinium bromide	Forest Laboratories, Inc.	1 (0.78%)	0 (0%)

▲ Percentage from total number of speakers (n=128)
♦ Percentage from total number of speakers with financial conflicts of interest (n=49)

CONCLUSION

Our findings suggest that public speakers who have FCOI are more likely to recommend drugs for approval, at least within the context of PADAC. However, these findings combined with others show a consistent effect. Greater efforts are needed to understand the effects of public speakers on voting behaviors. Changes to the current guidance on FDA FCOI disclosure are needed, and the future role of public speakers should be questioned.

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