

The Use of Superlatives in News Articles on Cardiac Drugs

Dev Jaiswal DO, Ryan Ottwell BS, Daniel E. Wildes Jr. DO, Amber Douglas BS, Matt Vassar PhD

INTRODUCTION

Superlatives are tactics used by journalists to inflate the benefit of drugs and medical devices.

News articles using these exaggerations could distort the perceptions of a drug's effectiveness on health care providers and consumers.

Superlative use is of particular importance when readers look beyond medical literature and use news articles to seek medical information.

The current extent of superlative use in news articles with cardiovascular drugs is not currently known.

OBJECTIVES

Investigate the use of superlatives and specific enticing language in current news articles on cardiovascular drugs.

SUPERLATIVES USED

Breakthrough

Game Changer

Miracle

Cure

Home Run

Revolutionary

Transformative

Life-Saving

Groundbreaking

Marvel

METHODS

We searched Google News for 10 superlative terms, along with the search term "heart drug".

We searched for articles published over a five-day period (September 1, 2019 to September 5th, 2019).

Articles were screened for relevance to cardiac drugs and whether the superlative was used in reference to the drug.

Two of us (DJ and AD) reviewed and extracted data for all news articles in a duplicate, blinded fashion.

The extracted data elements included:

Drug described by the superlative

Drug class

FDA Drug Approval

If the article described clinical or preclinical data

The news outlet

If news article authors were journalists, healthcare providers, or other.

Following data extraction, the two investigators met and resolved discrepancies.

If a discrepancy could not be resolved, a third investigator (MV) was available for adjudication.

RESULTS

Our initial search resulted in 59 news articles from 53 different news outlets.

Twenty-three articles met inclusion criteria and were included in our final data set.

We found 29 instances of superlative use in 23 of the included articles.

Eleven drugs from 7 drug classes were associated with superlative use with 1 article not mentioning the drug name.

The most common drug associated with superlative use was Inclisiran, a PCSK9 inhibitor.

Over a quarter of the drugs did not have FDA approval

The most frequent superlative used was 'Game-Changer'

The superlatives "Marvel" and "Miracle" yielded no results. The majority of the authors were journalists while only one article was written by a physician.

CONCLUSION

We demonstrated that superlatives are commonly used in news articles in regards to cardiovascular drugs.

Other studies have demonstrated the use of superlatives in oncology news articles, though this is the first of its kind exploring superlatives use in cardiology news articles.

News journalists may not correctly understand the magnitude of clinical benefit of particular drugs and may, thus, use superlatives unjustifiably.

Limitations of our study include a short time period for which data were collected and a small sample size of the included news articles. Further research exploring superlative use in cardiology and in other fields of medicine is warranted.

Superlatives may influence consumers and health care providers' perceptions of a specific drug and its relation to current medical care.

We found that the majority of our news articles contain superlatives, thus we recommend readers exercise caution that their opinion not be clouded by these exaggerations.

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Table 1. Characteristics of Drugs and Superlative use

Drug	Article Frequency No. (%), n=23	Superlative Frequency No. (%), n=29	Superlative	Drug Class	FDA Approved	Clinical Data
Repatha & Praluent	1 (4.3)	1 (3.4)	Breakthrough (1)	PCSK9 Inhibitor	Yes	Yes
Dapagliflozin	5 (21.7)	5 (17.2)	Breakthrough (3) Transformative (1) Game-Changer (1)	SGLT-2 Inhibitor	Yes	Yes
Empagliflozin	1 (4.3)	2 (6.9)	Game-Changer (2)	SGLT-2 Inhibitor	Yes	Yes
Unknown	1 (4.3)	1 (3.4)	Breakthrough (1)	Kinase Inhibitor	No	In Trial
PolyPill*	2 (8.7)	2 (6.9)	Life-Saving (1) Breakthrough (1)	ACE Inhibitor HMG-CoA Reductase Inhibitor Beta Blocker NSAID	No	Yes
Inclisiran	10 (43.5)	15 (51.7)	Game-Changer (10) Transformative (1) Ground-Breaking (2) Home Run (2)	PCSK9 Inhibitor	Yes	Yes
Selatogrel	1 (4.3)	1 (3.4)	Game-Changer (1)	P2Y12 Inhibitor	No	In Trial
Rivaroxaban	1 (4.3)	1 (3.4)	Game-Changer (1)	Direct Oral Anticoagulant	Yes	Yes
4F-PCC	1 (4.3)	1 (3.4)	Life-Saving (1)	Hemostatic Agent	Yes	Yes

*Polypill consists of Aspirin, Lisinopril, Simvastatin, and Atenolol