

Abstract

Introduction: Press releases (PRs) from universities or academic medical centers sent to print or online media are a common strategy to transmit research to the public, other scholars and potential donors.

Methods: We identified all PRs from Eureka Alert, the major online database for scientific PRs (www.eurekaalert.org) from 1/1/14 to 12/31/20, using the search strategy: <"Crohn disease" > or <"ulcerative colitis" or <"inflammatory bowel disease">.

Results: Of 104 press releases many contained hyped titles, spin, and overclaiming.

Discussion: Media can inadvertently or purposefully distort or misrepresent science. For lay readers, scholarly studies require specialized knowledge.

Introduction

- As many as 90% of US adults access health issues from mass media. Press releases sent to online media and newspapers by academic medical centers communicate scholarly work to the public.
- As many as one-third of health-related newspaper stories rely exclusively or largely on press releases from potentially biased sources.
- Social media has an impact on public knowledge of IBD. Pew study- social media such as Facebook, Twitter, YouTube are primary media sources for many Americans, including access to medical information.
- **Hypothesis:** press releases about IBD frequently exaggerate importance of specific research / overstate practical impact while underemphasizing or ignoring limitations. Patients, scholars and other readers may be misled. Result- inaccurate health beliefs, decisions, potential for worse clinical outcomes.

Methods and Materials

- We identified releases from academic centers indexed in Eureka Alert (www.eurekaalert.org) [2008-2013], the most used online database for scientific press releases from 1/1/14 to 12/31/20
- Search strategy: topic: <"Crohn disease"> or <"ulcerative colitis"> or <"inflammatory bowel disease">. Analysis of manifest and latent content from pre-determined criteria was performed and adjudicated if inter-observer differences occurred.
- PRs reported research in peer-reviewed scientific journals in English- minimum word count=200. Pre-study assessment criteria: linguistic spin; misinformation; misleading reporting, titles or quotes; safety claims without evidence, extrapolation to unstudied groups, interventions, outcomes; inclusion of study weaknesses or limitations.
- **Misleading reporting / claims include** linguistic spin, selective reporting of favorable results only, statistical non-significance, claim of safety with inadequate evidence; claim of causality in observational study or without RCT; claiming effect based on uncontrolled study (no comparison group); exaggerated importance of results

Results

We included 104 PRs:

- Inaccurate or hyped titles: 43 %
- *In vitro* or animal studies (N=42) noting such research is uncommonly translated to humans = none
- Overclaiming in author quotes= 40 %
- Study strengths notes= 87 %; study weaknesses / limitations noted= 20 %
- Improper extrapolation to unstudied groups, interventions or outcomes= 50 %

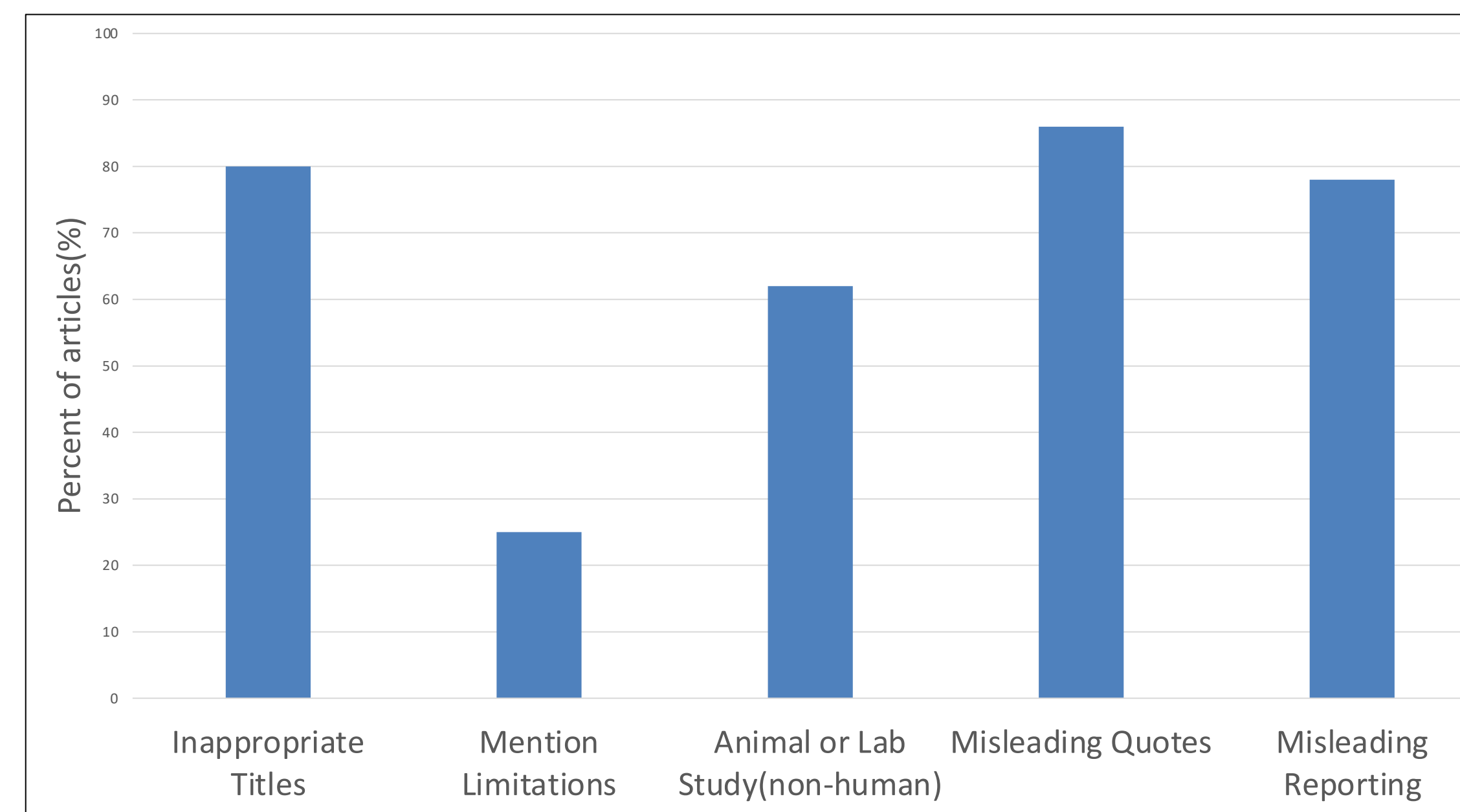


Chart 1. Press Release Analysis

Misleading Quotes

"Our findings indicate that RNF5 is the lock that keeps a key inflammatory protein under control. Once this lock is broken, 'Pandora's box' is opened, and S100A8 is released to cause inflammation,"

"Our ground-breaking discovery that bacteria and fungi both play a critical role in health and disease has tremendous implications not only for understanding the disease process, but also for development of potentially life changing treatments for those who suffer from chronic digestive diseases,"

"The finding is remarkable because it means that a Crohn's patient could also have a beneficial effect on their gut bacteria and inflammation by only switching the type of fat in their diet,"

Discussion

- PRs are written by publicity or development officers. Study of 165 "health reporters" at 122 daily newspapers→80 % had no prior training; 40 % agreed that "most health reporters lack training in health issues". Only one-third felt very confident in reporting medical news.
- Media can inadvertently or purposefully distort or misrepresent science. For lay readers, scholarly studies require special knowledge.
- Our data indicate that IBD-related PRs are commonly inaccurate or over-optimistic. Real-life medical decisions may be adversely affected.
 Feller- we'll may need to make the comment about social media / Twitter in the final manuscript / presentation not the abstract.

Conclusions

CONCLUSIONS

- Press releases analyzed commonly described unpublished, preliminary or non-human research.
 - Many press releases overstate impact of research.
 - Newspapers are easy targets for criticism. But, medical centers, universities, investigators may be culpable
 - Our data supports view that bias, marketing strategy, media hyperbole interfere with medical data the public receives. Press releases are advertising. Some research in popular media may not be balanced or accurate.
- OUR CONCERN:** Portrayals of cancer research in news media may give an over-optimistic view of diagnosis, treatment, prognosis, availability of "breakthroughs". Some real-life medical decisions may be affected.

Contact

Christian Schroeder
 The Warren Alpert Medical School of Brown University
Christian_Schroeder@brown.edu
 Phone: 845-264-1130