

Spotting Paper Mills

Tips for Medical Writers

Definition

The term “Paper Mills” refers to manuscripts submitted to journals for a fee intended to simplify the publication process for researchers or sell authorship. Key concerns surrounding these papers include data fabrication, image manipulation, stock photo use, fake authorships, and plagiarism.



How common are they?

The global paper mill industry is alarmingly pervasive, with recent analyses revealing that **between 2% and 46%** of manuscripts submitted to scientific journals from 2019 to 2021 were produced by paper mills.¹ Additionally, a 2022 report by the [Committee on Publication Ethics](#) indicated that for most journals, approximately **2%** of submitted papers likely originated from paper mills, with some journals facing figures exceeding **40%**.²

Why are they dangerous?

Paper mills pose a significant threat to medicine and science because the scientific community depends on peer-reviewed publications to advance knowledge and guide clinical practices. In medicine, decisions about treatments, guidelines, and public health policies are rooted in published studies. When these studies are fraudulent, they can spread false claims about drug efficacy, safety, or disease mechanisms, leading to harmful or ineffective interventions that compromise patient safety and public health. Additionally, paper mills flood journals with fake studies, diverting attention from legitimate, high-quality research. This not only dilutes scientific discourse but also wastes valuable resources that could be used to further genuine innovation.



Red flags

Identifying and excluding fake data is crucial for maintaining scientific integrity. This is why you, as a medical writer, play a significant role in this process.

Here are key criteria to help spot fake, low-quality papers:

- Rapid Peer-Review and Acceptance
- High Publishing Fees
- Journals Unindexed in Reputable Databases
- Poor Journal Metrics
- Suspicious Authorship Patterns
- Inconsistent or Unexplained Data
- Fabricated Figures or Images
- Generic or Vague Conclusions
- Irrelevant or Fake Citations
- Self-Citation or Circular Citations
- Poor Writing Quality
- Unrealistic Study Claims (Too Good to Be True!)
- No Conflicts of Interest Disclosure
- No Ethical Approval for Studies Involving Human or Animal Subjects



Ways to support your clients

Low-quality publications can compromise the credibility of your client's work. Here are ways to support your clients in this domain:

- Verify all sources. They should come from legitimate, peer-reviewed journals indexed in reputable databases.
- Be familiar with CONSORT³ (for clinical trials) and PRISMA⁴ (for systematic reviews) to assess compliance with research standards.
- Use tools like [Retraction Watch](#) to identify any papers retracted due to fraud or ethical concerns.
- Educate your clients on red flags, as many clients may not be aware of the prevalence of paper mills or how to identify fake publications.
- Highlight the importance of adhering to guidelines like GPP⁵ or ICMJE⁶.

For advice like this and to learn more about medical writing foundations, visit [Guanine Medical Academy](#) and enroll today for free!



Abbreviations

CONSORT, Consolidated Standards of Reporting Trials

GPP, Good Publication Practice

ICMJE, International Committee of Medical Journal Editors

PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses

References

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