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Standardization in science: effects and issues of guidelines for biomedical reporting

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Citation

Schniedermann, A. (2026, June 11). *Standardization in science: effects and issues of guidelines for biomedical reporting*. Retrieved from <https://hdl.handle.net/1887/4304878>

Version: Publisher's Version

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Downloaded from: <https://hdl.handle.net/1887/4304878>

Note: To cite this publication please use the final published version (if applicable).

English summary

This book is concerned with formal scholarly communication in contemporary biomedical research. Biomedical research is an essential pillar in understanding human health and tackling medical problems. As in other scientific domains, biomedical researchers formally communicate their knowledge by writing and publishing texts in academic journals. But the record of formalized medical knowledge has been called into question since the 1990s. Research experts soon answered by promoting new methodological standards and formalized guidelines, which should be used by all biomedical researchers around the globe. But how can a formal guideline be implemented into a research system that spans countries, cultures, and many medical subfields?

This investigation addresses this question and presents an elaborate research project in the social studies of science. Based on document analyses, interviews with guideline developers and users, as well as bibliometric analyses of the uses and users of the *Preferred reporting items for systematic reviews and meta-analysis* (PRISMA), this project offers an intensive examination of contemporary writing practices in the medical sciences.

Starting from the post-war history of biomedicine, this project reveals how writing and publishing in this field has been caught between the competing demands of researchers, pharmaceutical companies, and healthcare decision-makers. Throughout the individual chapters, it will become clear that reporting guidelines are not just an intellectual coincidence or pet project of some research methodologists. Rather, the standardization of biomedical reporting will become visible as a strategic endeavor, spearheaded by prominent research and publishing experts. These experts forged their own community dedicated solely to the systematic analysis and reform of the practices and social contexts that shape day-to-day biomedical research. As a result, the guidelines have become extraordinarily successful and are used by thousands of systematic review authors worldwide. The success of reporting standards has led to an overall redefinition of literature reviews and related genres in medical research and beyond. Moreover, the transformation of scientific qualities into standardized categories hints at much more fundamental transformations to come in the future of scholarly communication.