

Rejection Rates for Manuscripts Uploaded to an AI-Driven Precheck Tool Compared With Manuscripts That Did Not Undergo a Precheck at a Multidisciplinary Medical Journal

Duncan MacRae, Abhishek Sudra, Kara Hamilton

✓ Objective:

Online precheck tools identify common errors in grammar and formatting and are intended to help authors identify missing declarations and common language issues prior to first submission.

Our purpose was to evaluate the use of an AI-driven precheck tool and to examine the resulting impact on initial rejection rates.

✓ Design:

This cohort study involved original research manuscripts submitted to *Medicine* during a 7-month period from June 2021 to January 2022. Prior to submission, authors were encouraged to upload their manuscript to an AI-driven precheck tool, which understands the precise meaning of phrases within a document and automatically captures both semantic and syntactic variations. The tool is configured to check for language and grammar quality, as well as the presence of ethics statements, conflicts of interest declarations, and adherence to word count limits.

The precheck tool offers two levels of feedback: a free basic report that summarizes issues that the system suggests should be addressed prior to submission and a premium check, costing 29 USD, which provides the author with a downloadable Word document containing all suggested changes in detail. Authors were not mandated to use the precheck tool, and the choice to purchase the premium report was entirely at the author's discretion. The resulting report was provided to the authors in order that changes could be made prior to submission. The journal editors did not receive a copy of the report.

All manuscripts were also subjected to a technical check carried out by the editorial office prior to the assignment of editors or reviewers.

Articles that were uploaded to the precheck tool platform were then crosschecked against all articles submitted to the journal's submission platform, allowing the journal to compare the proportions initially rejected (ie, decisions made prior to undergoing peer review) amongst the 3 distinct groups.

✓ Results:

Amongst 7904 submitted manuscripts, author selections for the 3 groups of manuscripts (no precheck, basic precheck, premium precheck) and numbers initially rejected are detailed below. Amongst articles that did not undergo any precheck, 34.2% (2073/6062) were rejected following technical check, compared to 20.1% (333/1661) for articles that received the basic precheck report and 7.3% (13/181) for articles that received the detailed premium report. Overall, 15.5% fewer precheck manuscripts were rejected vs no check manuscripts (18.8% [346/1842] vs 34.2% [2073/6062]).

Precheck Status	Submissions	Initial Rejections (n)	Initial Rejection (%)
None	6062	2073	34.2%
Basic	1661	333	20.1%
Premium	181	13	7.3%

✓ Conclusions:

The use of a precheck tool to assist authors in identifying language errors and missing manuscript elements prior to submission was associated with a **decrease** in initial manuscript rejections.