

AMERICAN MEDICAL ASSOCIATION ACADEMIC PHYSICIANS SECTION

Resolution: (Assigned by HOD)  
(A-25)

Introduced by: James Docherty, DO, MS, and Jennifer Nordhauser, MD, MPH

Subject: Preregistration in Medical Research

Referred to: Reference Committee (Assigned by HOD)

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Whereas, the scientific method relies on the clear distinction between hypothesis generation (postdiction) and hypothesis testing (prediction) to maintain the credibility of research findings<sup>1-3</sup>; and

Whereas, current practices in medical research often fail to adequately differentiate these processes, leading to overconfidence in findings and the increased likelihood of irreproducible results due to hindsight bias and selective reporting<sup>2-5</sup>; and

Whereas, preregistration is a proven methodology that requires researchers to define and publicly document their research questions, study designs, and analysis plans before data collection or analysis begins, which helps clarify the distinction between exploratory and confirmatory research<sup>1, 2-9</sup>; and

Whereas, evidence suggests that preregistration improves the reproducibility, transparency, and credibility of research findings by reducing biases, clarifying the distinction between exploratory and confirmatory analyses, and mitigating the misuse of statistical inference methods such as null hypothesis significance testing<sup>1, 2, 6-7, 9</sup>; and

Whereas, numerous platforms and frameworks now exist to facilitate preregistration across disciplines, including clinical trials, and its adoption has been associated with improved research practices, including increased detection of reporting biases and enhanced public trust in scientific findings<sup>2, 6, 8</sup>; and

Whereas, AMA policy H-460.941 supports preregistration; therefore be it

RESOLVED, that our AMA amend policy H-460.941 by addition and deletion to read as follows:

Our AMA will:

(1) take every appropriate opportunity during the health system reform debate and implementation stages to educate the public, the Administration, and Congress about the importance of support for science and biomedical research and about the potential problems if these areas are not given sufficient consideration in health system reform;

(2) take steps to become the coordinating point for efforts, both within and outside of the Federation, to promote, enhance, and defend biomedical science;

(3) continue and expand its efforts to advocate for the primacy of science and biomedical research as the basis of quality medical care by working with and influencing both the private sector and the federal government, including the legislative, executive, and judicial branches;

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2 (4) take necessary steps to monitor the scientific enterprise, establish programs and policies as  
3 appropriate, and initiate advocacy efforts as needed;  
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5 (5) consider and take the necessary steps to anticipate and establish guidelines to assist  
6 physicians and others in responding to the ethical issues emerging from the scientific revolution;  
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8 (6) increase its educational efforts to the public and to the profession to explain how science is  
9 critical to the future of the profession and to the future development of high quality medical care;  
10 and  
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12 ~~(7) support preregistration in order to mitigate publication bias and improve the reproducibility of~~  
13 ~~biomedical research.~~  
14

15 (7) recognize the importance of preregistration as a cornerstone of rigorous and reproducible  
16 biomedical research;  
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18 (8) collaborate with relevant stakeholders to advocate for the integration of preregistration into  
19 medical research protocols, emphasizing its use for clinical trials, observational studies, and  
20 other research contexts;  
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22 (9) collaborate with relevant stakeholders to support efforts to provide training and resources for  
23 medical researchers to implement preregistration effectively, including access to standardized  
24 registries and education on preregistration practice; and  
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26 (10) collaborate with relevant stakeholders in the medical and scientific community to promote  
27 policies and incentives that align preregistration with the goals of career advancement, funding  
28 acquisition, and publication, fostering a culture of transparency and accountability in medical  
29 research.  
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Fiscal Note: (Assigned by HOD)

Received:

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## RELEVANT AMA POLICY

### 1) H-460.941: Science and Biomedical Research

Opportunities, Challenges and Health System Reform

Our AMA will:

- (1) take every appropriate opportunity during the health system reform debate and implementation stages to educate the public, the Administration, and Congress about the importance of support for science and biomedical research and about the potential problems if these areas are not given sufficient consideration in health system reform;
- (2) take steps to become the coordinating point for efforts, both within and outside of the Federation, to promote, enhance, and defend biomedical science;
- (3) continue and expand its efforts to advocate for the primacy of science and biomedical research as the basis of quality medical care by working with and influencing both the private sector and the federal government, including the legislative, executive, and judicial branches;
- (4) take necessary steps to monitor the scientific enterprise, establish programs and policies as appropriate, and initiate advocacy efforts as needed;
- (5) consider and take the necessary steps to anticipate and establish guidelines to assist physicians and others in responding to the ethical issues emerging from the scientific revolution;
- (6) increase its educational efforts to the public and to the profession to explain how science is critical to the future of the profession and to the future development of high quality medical care; and
- (7) support preregistration in order to mitigate publication bias and improve the reproducibility of biomedical research. [CSA Rep. 8, A-94; Reaffirmed: CSA Rep. 8, A-05; Reaffirmed: CSAPH Rep. 1, A-15; Appended: Res. 901, I-18]