

efficient or the probability.<sup>2</sup> Menard states that “the OR cannot take the place of a standardized logistic regression coefficient for valuating the strength of the influences of the independent variables on the dependent variable, relative to one another.” The strength of each independent variable cannot be judged based on the magnitude of the OR, so that a larger OR for one independent variable might not have a stronger association than a smaller OR for another independent variable.

The magnitude of the OR should not be used to evaluate the strength of association for individual independent variables or predictors. In the article by Mora et al, a different analysis is needed to assess the strength of association between the biomarkers and BMI, physical inactivity, or other independent variables.

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**In Reply:** Dr Cheng raises a statistical concern regarding the comparison of the magnitude of the ORs for BMI and physical inactivity in relation to cardiovascular biomarkers. We agree that when comparing the association of 2 different measures, such as BMI and physical inactivity, with a dependent variable, the 2 measures should be standardized for comparison. Some investigators argue for using standardized regression coefficients when comparing the relative contributions of each measure. However, standardized coefficients have limited applicability to nonnormally distributed predictors.<sup>1</sup> In our study, BMI and physical activity were not normally distributed. For such analyses, it is preferable to calculate the coefficients for quantiles of BMI and physical inactivity<sup>1</sup> as we did in Table 4, providing an accurate and readily interpretable comparison of the 2 measures with respect to their associations with the cardiovascular biomarkers. From a clinical and public health perspective, we also chose to display the results using clinical cutpoints for BMI and physical inactivity, as demonstrated in the Figure.

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## RESEARCH LETTER

### Declaration of Medical Writing Assistance in International Peer-Reviewed Publications

**To the Editor:** Medical researchers have an ethical and scientific obligation to publish, but between one third and two thirds of research may remain unpublished.<sup>1,2</sup> A major reason for nonpublication is lack of time,<sup>1</sup> which may lead researchers to seek medical writing assistance. Guidelines from journal editors<sup>3</sup> and medical writers<sup>4-6</sup> encourage authors to acknowledge medical writers. We quantified the proportion of articles from international, peer-reviewed, high-ranking journals that reported medical writing assistance.

**Methods.** For this descriptive study, which was conducted between November 2004 and January 2005, we reviewed 1000 original research articles from 10 international journals, representing different content areas (TABLE). Selected journals had to be among the highest ranking journals in their area (based on the 2003 Institute for Scientific Information impact factor), be peer-reviewed, publish acknowledgments, and be available online and in English. Articles were selected in consecutive reverse order, starting with the most recent online edition, until we had 100 articles per journal. Standardized definitions were used to classify articles in terms of declared writing assistance (reference to an individual or organization that assisted with the preparation, writing, technical editing, spelling and grammar checking, or formatting of the manuscript) and pharmaceutical sponsorship (statement that research was sponsored by a pharmaceutical company, or if 1 or more of the authors was a pharmaceutical company employee). Prevalence rates and 95% confidence intervals (CIs) were determined from logistic regression analysis using SAS version 9.1 (SAS Institute, Cary, NC).

**Results.** Medical writing assistance was reported in only 60 (6.0%) of 1000 articles (95% CI, 4.6%-7.7%). In the subset of pharmaceutical-sponsored studies (n=102), assistance was declared in 10 articles (9.8%; 95% CI, 4.8%-17.3%). Prevalence varied among journals, from a minimum of 0% to a maximum of 11%.

**Comment.** To our knowledge, this is the first quantification of the prevalence of declared medical writing assistance in a large cohort of original research articles from international, high-ranking, peer-reviewed journals. We found a low level of declared medical writing assistance, whether or not articles were based on research with pharmaceutical sponsorship.

**Table.** Prevalence of Declared Medical Writing Assistance and Industry-Sponsored Research in 1000 Articles From International, High-Ranking, Peer-Reviewed Journals\*

Journal	2003 Impact Factor†	Requirement to Acknowledge Medical Writer‡	Publication Period of 100 Articles Examined	No. of Articles With Declared Medical Writer	No. of Articles From Industry-Sponsored Research
<i>American Journal of Kidney Diseases</i>	3.9	No	February 2004 to November 2004	0	8
<i>American Journal of Medicine</i>	4.4	No	May 2004 to December 2004	10	8
<i>Archives of General Psychiatry</i>	10.5	No	December 2003 to November 2004	8	7
<i>Arthritis Research and Therapy</i>	5.0	Yes	June 2003 to December 2004	6	13
<i>Circulation</i>	11.2	No	November 2004 to December 2004	4	11
<i>Clinical and Infectious Diseases</i>	5.4	No	July 2004 to November 2004	11	22
<i>Diabetes Care</i>	7.5	No	August 2004 to November 2004	5	26
<i>Hepatology</i>	9.5	No	August 2004 to December 2004	4	3
<i>International Journal of Cancer</i>	4.4	No	January 2005 to February 2005§	10	2
<i>Thorax</i>	4.2	Yes	April 2004 to December 2004	2	2
<b>Total (N = 1000)</b>	NA	NA	NA	60	102

Abbreviation: NA, not applicable.

\*Articles selected in consecutive reverse order, starting with the most recent online edition, until there were 100 articles per journal.

†From the Thomson Institute for Scientific Information's Journal Citation Reports.

‡Explicit statement within the journal's "Instructions to Authors" that medical writing assistance should be acknowledged.

§Online edition for February 2005; available in January 2005.

The true prevalence of medical writing assistance comprises the prevalence of declared medical writing assistance (6% in our study) and the prevalence of undeclared medical writing assistance. Estimates for the prevalence of undeclared medical writing assistance are based on different information sources. In one survey,<sup>7</sup> authors admitted that undeclared medical writing assistance was involved in only 11 (1.4%) of 809 published articles. In another survey,<sup>8</sup> when authors were specifically asked whether they used but did not declare medical writing assistance, only 14 (2%) of 810 authors admitted to this practice. An assertion that 50% or more of drug-related articles in high-ranking journals are prepared with undeclared medical writing assistance<sup>9</sup> was not supported by direct evidence.

Our results may underestimate the true prevalence of medical writing assistance in the published medical literature. First, authors may be unaware of the need to declare writing assistance. Only 2 of the 10 journals we examined specifically advised authors to acknowledge writing assistance (Table). Second, authors may be unwilling to declare writing assistance because of the controversy surrounding authorship practices,<sup>8</sup> particularly the unethical practice of not declaring assistance (ghostwriting). Third, approximately 40% of authors may be interested in writing assistance to help them improve manuscript quality and reduce preparation time.<sup>8</sup> Fourth, demand for medical writing services is growing, with increases in the number of medical writers and the medical writing services market.<sup>10</sup> Fifth, preliminary evidence suggests that not all medical writers follow ethical publication guidelines. A pilot survey of medical writers, who made substantial contributions to manuscripts, found that only approximately 55% encouraged authors to follow ethical publication guidelines.<sup>11</sup>

Our study is limited by our use of high-ranking journals and original research articles; the prevalence of declared medi-

cal writing assistance may differ for mid- to low-ranking journals and for other article types. Although we used information published in the acknowledgment sections, our results reflect the information that authors and journals chose to provide, which may be incomplete. Finally, because we did not attempt to examine the prevalence of undeclared assistance, additional evidence-based studies are required to quantify its extent.

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## CORRECTIONS

**Incorrect Data:** In the Original Contribution entitled "Fluoxetine After Weight Restoration in Anorexia Nervosa" published in the June 14, 2006, issue of *JAMA* (2006;295:2605-2612), the boxes in Figure 1 that stated the reasons for premature termination for participants taking fluoxetine and placebo were switched. In the box describing reasons for termination for participants taking the placebo, "Suicide Attempt" was incorrectly substituted for "Clinical Deterioration." In Tables 1, 3, and the Measures section, The Yale-Brown-Cornell Obsessive Compulsive Scale for Eating Disorders should have been termed the Yale-Brown-Cornell Eating Disorder Scale and the Eating Disorders Inventory should have been termed the Eating Disorder Inventory. In the Table 2 footnotes, the  $\chi^2$  value after "Proportion of patients with outcome status of full recovery, good, or fair vs poor with fluoxetine vs placebo" should have been  $\chi^2=1.005$ . In Table 3, the random-effects regression for the fluoxetine group for the Eating Disorder Inventory bulimia subscale should have been 0.11 rather than -0.11. In the last paragraph of the article, the references 24,25 after "psychological treatments" should have been numbered 24 and references 26,27 after "olanzapine" should have been numbered 26. None of these corrections affect the conclusions in the article.

**Error in Wording:** In the Editorial entitled "Radiosurgery and Whole-Brain Radiation Therapy for Brain Metastases: Either or Both as the Optimal Treatment" published in the June 7, 2006, issue of *JAMA* (2006;295:2535-2536), an error occurred in wording. In the final paragraph on page 2536, the term "stereotactic radiosurgery" should have been "whole-brain radiation therapy" in both instances. The sentence should have read "Aoyama et al<sup>10</sup> have prospectively shown that withholding whole-brain radiation therapy does not affect survival for patients who have 4 or fewer brain metastases; these patients have a higher rate of local brain failure, but apparently withholding whole-brain radiation therapy does not influence how patients die of their disease."