

Pharmaceutical Advertising in Medical Journals

Revisiting a Long-Standing Relationship



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Marketing efforts across many industries, including the health-care industry, have shifted toward digital advertising through web-based, social media, and mobile application platforms. Still, as recently as 2015, the health-care industry expended nearly twice as much on advertisements in traditional print media (\$2.39 billion) as on digital advertising (\$1.22 billion).¹ For professional medical journals alone, \$637 million was spent in 2016 on nearly 100,000 pages of print advertisements.²

Traditional print-based advertising in medical journals remains particularly attractive to pharmaceutical manufacturers because print versions of such journals reach 90% of physicians, a figure that rises to 96% when print and digital versions are considered together.³ For journals, selling advertisements⁴ generates revenue that helps offset the rising costs of maintaining a print presence in an increasingly digital era. These costs include salaries of senior editors and staff who

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administer the peer review process, business coordination with publishers, online peer review platforms, online hosting, copy editing, digital production of articles, maintenance of subscriber databases, marketing, filing copyrights, and production of print versions. Advertisements enable pharmaceutical manufacturers to target physicians precisely and try to sway prescribing practices in favor of the product being advertised, regardless of whether it is the most efficacious or cost-effective option for a patient. Although some physicians may not believe that they are influenced by advertising, studies indicate a return on investment between \$3 and \$5 for every dollar a pharmaceutical company spends on journal advertising.⁵ Return on investment was also found to be greater for older drugs (> 4 years on the market) than for newer drugs (< 4 years on the market).⁶

In March 2016, a *CHEST* editorial board member, Mark Metersky, wrote a Letter to the Editor⁷ questioning the evidence base supporting the use of Mallinckrodt's repository corticotropin injection (H.P. Acthar Gel), for which *CHEST* had carried a print advertisement a few months earlier. Metersky observed that this formulation of corticotropin cost nearly \$34,000 per 5-mL vial and that reliable evidence of its superiority over oral corticosteroids—which cost pennies per pill—still appeared to remain lacking for sarcoidosis more than a half-century after the drug was first approved by the US Food and Drug Administration (FDA). He also cited evidence of substantial financial ties between top prescribers of the drug and its manufacturer.

Three physicians penned a *CHEST* editorial⁸ applauding Metersky's efforts, and the manufacturer withdrew the advertisement from subsequent issues. Editor-in-Chief Richard Irwin convened a panel at the American College of Chest Physicians' (*CHEST*) 2016 meeting. This issue of *CHEST* contains a summary of those proceedings,⁹ which includes a review of issues such as the drug's price and efficacy for various conditions. These topics are critically important to patient care and resource stewardship, but an even more fundamental question is: Should medical journals carry pharmaceutical advertisements at all?

Physician promotion has come under scrutiny in recent years. The gifting of seemingly innocuous items like

pens and mugs, which once flooded physician offices, is now viewed with skepticism.¹⁰ The industry has voluntarily agreed to limit free physician meals, although these remain common if incident to presentations that “provide scientific or educational value.”¹¹ Yet many physicians continue to hold a relatively forgiving view of medical journal advertisements, despite their limited educational value¹⁰ and provenance from a source with obvious commercial interests.

In the case of corticotropin, Mallinckrodt had real financial incentives to advertise in *CHEST* and seek to influence physician prescribing: At an average cost of \$6,400 per one-page medical journal advertisement, even a single additional prescription would return Mallinckrodt’s investment several times over. A recent study found that from 2011 to 2015, Medicare spent \$1.3 billion on repository corticotropin injection, including > \$162,000 in 2015 for each beneficiary who received the drug, and that a majority of frequent prescribers (> 10 claims; 84%) specialized in rheumatology, neurology, or nephrology.¹² The advertisement in *CHEST* may thus have been an attempt to broaden its prescribing base to pulmonary and critical care physicians.

Medical journals of all specialties have been found at various times to carry advertisements that may be based, like those of repository corticotropin injection, on scant evidence or fail to provide sufficient weight to countervailing information about the use of the drug. To address concerns over such advertisements, the International Committee of Medical Journal Editors already recommends that editors “have full and final authority for approving print and online advertisements.”¹³ This solution, however, places considerable power and authority into the hands of a single editor or group of editors, which may at times complicate the checks and balances necessary for running a business enterprise and may prove difficult to implement.

Some journals such as *PLoS Medicine*, concerned over editorial independence and potential blurring of lines between science and marketing,⁵ eschew advertisements from manufacturers. Of course, their open access business model can rely on considerable financial start-up support from foundations and the charging of author fees, which have increased recently to stay abreast of rising publication expenses.¹⁴ A journal with no advertising could help to ensure that journals do not unwittingly serve as platforms for conveying misleading

information about drugs. At the same time, elimination of advertisements could disrupt established financial models on which journals rely. An alternative approach, recommended by some, would be to limit advertising to products or services appealing to physicians that hold little risk of misleading or otherwise inappropriately influencing physician prescribing practices.⁵ Unfortunately, most medical journals have more limited circulation than popular press magazines, and so may have less appeal for these types of advertisers.

Journals must hold themselves to high standards when deciding whether to sell advertisements to pharmaceutical manufacturers and, if any are to be sold, what written policies, criteria, or requirements should be applied. To avoid future incidents such as the one that launched the current discussions hosted by *CHEST*, editors could conduct periodic reviews to ensure advertising content does not mislead, or submit advertising for prereview by non-profit organizations or academic centers. Relying on the FDA to review advertising content is insufficient because the FDA lacks the resources to cover the advertising landscape and is not required to preapprove advertisements prior to dissemination.¹⁴ One study of 83 advertisements in medical journals found that nearly half did not comply with one or more requirements within the FDA Prescription Drug Advertising Guidelines.^{15,16}

Journal editors face ongoing challenges in balancing a number of different roles and may be separated from the business side of the journal. Nevertheless, they must recognize the importance of also systematically monitoring the content of journal advertisements. Ultimately, each medical journal must set and regularly review its policies, revising them when necessary. In the instance of the corticotropin advertisement in *CHEST*, the vigilance of the editor along with *CHEST*’s written advertising policies led to identification of the advertisement as misleading and its removal from the journal. Journals that do not have the capacity for such corrective conduct will be increasingly called upon by the public and responsible readers to address these shortcomings and re-examine their business models of carrying pharmaceutical advertisements, whether online or in print.

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