

# Do advertisements in clinical software influence prescribing?

Peter R Mansfield

*Pharmaceutical companies must believe there are benefits from advertising, but just what these benefits are, and how they are measured, is not clear*

Pharmaceutical company executives must believe that advertising is effective. Otherwise, pharmaceutical advertising would be illegal under the Australian *Corporations Act 2001* (Cwlth), which requires that company staff rationally believe their business judgements to be in the best interests of their corporation.<sup>1</sup> However, Henderson and colleagues' study in this issue of the *Journal* (page 15) may have found an advertising delivery channel that does not work.<sup>2</sup> They compared prescribing by general practitioners exposed to advertisements in clinical software with prescribing by unexposed GPs during 2003–2005. Despite a large sample size and carefully controlling for many possible confounders, they did not detect any significant difference in prescribing for six of the seven drugs studied. Interestingly, there was significantly less prescribing of one drug by exposed GPs — possibly a false-positive finding arising by chance, but this is the first ever published evidence that pharmaceutical advertising may sometimes unintentionally reduce sales.

Opinions about the effectiveness of advertisements (one-way persuasive messages from an identified sponsor) have varied over the past 100 years. Founder of one of the first department stores in the United States, John Wanamaker, may have lamented that “half the money I spend on advertising is wasted; the trouble is I don't know which half”.<sup>3</sup> A pharmaceutical marketing textbook asserts that advertising alone does not increase sales, but is cost-effective for increasing awareness of new drugs.<sup>4</sup> According to this text, advertising has a small but useful role, because it synergistically boosts the effectiveness of other promotional methods, including drug representatives. By contrast, advertising executive Pierre Garai asserted that “advertising which does not work does not continue to run. If experience did not show beyond doubt that the great majority of doctors are splendidly responsive to current [prescription drug] advertising, new techniques would be devised in short order.”<sup>5</sup> This suggests that advertising becomes more effective over the years by a trial-and-error process akin to evolution by natural selection. Recently, marketing academic Dick Wittink concluded that medical journal advertising produced competitive returns on investment in many situations.<sup>6</sup> In 2007, it is not clear how effective advertising is, or how accurate companies have become at measuring its effectiveness.

The findings of Henderson and colleagues<sup>2</sup> are consistent with many hypotheses. It is possible that advertising has an effect that their study failed to detect. There may have been an unknown confounder, or an effect that was too small to be detected but still large enough to provide adequate return on investment. The study focused on drugs that had been available for more than a year but advertising is more effective for introducing new drugs.<sup>4</sup> The study measured market share, but advertising may increase market size. Competitors who did not advertise in clinical software may have promoted their drugs with other equally effective methods. Advertising to GPs in the

exposed group may have saved promotional resources that were used to target GPs in the control group in other ways.

Perhaps advertising in clinical software really is ineffective. This is plausible because these advertisements impinge on the doctor–patient relationship in a way many find annoying, and some find repugnant.<sup>7</sup> Doctors are habituated to medical journal advertisements, but may give advertisements delivered through a new channel more attention and thus more scrutiny, rendering them less effective.<sup>8,9</sup> Perhaps any additional advertising that targets doctors will have little impact because expenditure on pharmaceutical promotion may now be high enough to run into the law of diminishing returns.<sup>10</sup>

Maybe advertising is sometimes counterproductive. For example, some doctors may react against advertisements they dislike. During a consultation, when patients also see an advertisement on the computer screen, the doctor may choose an unadvertised drug to avoid having it appear that the decision was biased. However, there would still be a bias (but in the opposite direction) that would be problematic if the advertised drug was the best treatment.

If any type of drug promotion is ineffective, then it wastes money earned from the high prices paid by patients and taxpayers that are supposed to provide incentives for research. If pharmaceutical executives come to believe that advertising in clinical software is ineffective, they will be required to cease investing in it. This would have major repercussions for the clinical software industry where, currently, the software maker who accepts advertising revenue dominates the market. However, the pharmaceutical industry may want to persist with this very new advertising channel. Companies might decide to allow time for more effective techniques to evolve. They may pay for ineffective advertising just to keep the channel open in case it works during new drug launches. Advertisements in clinical software could become more effective in a few years when doctors have become habituated to them, and so give them less attention.<sup>8,9</sup> Perhaps the companies' real aim is not short-term sales, but to gain influence over future decision-support functions within clinical software that could have considerable impact on prescribing in the long term.

Like Wanamaker, we may never really know if advertisements in clinical software in 2003–2005 were just a waste of money or not. If pharmaceutical executives are motivated and able to determine the true effectiveness of advertisements in clinical software, then these advertisements will either become extinct or evolve to become more influential, for good or ill for all concerned.

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