Letter to the Editor: New Study Raises Questions about Effectiveness of Nicotine Replacement Therapy

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In our 2015 analysis on smoking cessation guidelines published by the Royal Australian College of General Practitioners (RACGP) (MacKenzie and Rogers, 2015), we raised a number of concerns that related to the RACGP's recommendations. Among our findings was that advice provided to Australian general practitioners focused overwhelmingly on recommending pharmacotherapy to patients who expressed an interest in quitting, despite existing evidence that most ex-smokers succeeded without assistance. We also noted that the Guidelines relied on smoking cessation rates reported by randomized clinical trials, but failed to acknowledge the growing literature indicating that such trial results are not replicated in 'real-world' settings.

Our analysis of the Guidelines showed that much of the research evidence cited in the RACGP's recommendations for the use of nicotine replacement therapy (NRT) and other pharmacotherapy was funded by pharmaceutical corporations that produce cessation products, a point that went unacknowledged by the Guidelines' authors. Given the credibility and impact of recommendations issued by peak professional bodies such as the RACGP, we argued that there was an urgent need for transparency regarding funding for research cited in such guidelines, and for a reassessment of the RACGP's advice on cessation.

Our article prompted a strong response from the RACGP, both in this journal (Ackermann, 2015) and in Australian online media (Groombridge, 2015). The main thrust of their reply was to question our findings and recommendations, and to reaffirm the reliability of the studies cited in the Guidelines. The issue of pharmaceutical industry funding for much of the research cited in the Guidelines was largely disregarded.

In his reply, the RACGP's Evan Ackermann (2015) particularly emphasized their reliance on 'high-level systematic reviews of all relevant studies (e.g., Cochrane reviews)'. As we described in our article (MacKenzie and Rogers, 2015) and in our response to his critique of it (MacKenzie and Rogers, 2016), we analysed funding sources for the studies included in three Cochrane systematic reviews that were cited in the Guidelines. We found that of studies included in the systematic reviews with results supporting pharmaceutical assistance, 61% had been funded by the pharmaceutical industry. We did not, however, question the validity of the findings presented in the Cochrane reviews, as such a task was beyond the scope of our study.

Stanley and Massey (2016) have recently undertaken such an analysis. The results have potentially important implications not only for RACGP guidance, but for recommendations on smoking cessation more broadly. They examined a key Cochrane systematic review of 122 NRT clinical trials (Stead et al, 2012) using meta-regression analysis which can 'test, accommodate and correct multiple sources biases, often mentioned but dismissed by conventional systematic reviews' (Stanley and Massey, 2016: 1). Specifically, meta-regression analysis exceeds the consideration of bias found in systematic reviews, and incorporates risks of bias as well as small-sample, reporting or publication bias.

Their key finding is that when 'potential biases from multiple sources are simultaneously accounted for, statistical traces of NRT's effectiveness dissolves', diverging dramatically from the 50% to 70% increase in smoking cessation for NRT over placebo reported in the Cochrane review (Stanley and Massey, 2016: 3). This, they conclude, means that the perceived effectiveness of NRT therapy needs to be re-evaluated.

The RACGP's position that smoking cessation recommendations 'should be based on the highest possible evidence' (Ackermann, 2015) means, we hope, that it will reconsider its guidance on smoking cessation for GPs given the accumulating evidence regarding the lack of effectiveness of pharmacotherapy.

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