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Relationships between medical students and drug companies in New Zealand

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Abstract

The relationships between doctors and drug companies have generated considerable global debate. Medical students are unique stakeholders in this discussion, although they are underrepresented in descriptive data. This article reviews international literature on the effects of drug company promotion, the effect on students, the New Zealand context and explores implications for New Zealand medical students. Creating an influence free environment to inform and involve students in the debate is a strong precursor to delivering gold standard patient care in the future.

The pharmaceutical industry and the medical profession are inexorably interrelated and interdependent. The ethics and economics of this relationship has been a subject of professional and public debate within New Zealand and internationally.[1–3] Finding the right balance between educating health professionals on medical advances, compensating them for their time, presenting accurate information and limiting commercial bias is complex.

Of special relevance is the relationship between the pharmaceutical industry and medical students.[4] Although students do not have prescribing rights they are at a formative stage of professional development. Attitudes and habits to prescribing, and to the drug industry itself, are developed through formal teaching, socialisation and role modelling at medical school.[5,6] Thus, there is significant potential for influence over future prescribing behaviours.

This article examines international evidence for the influence of drug promotion on doctors and medical students. International evidence guides a discussion of drug promotion in the New Zealand context and possible policy implications.

Evidence about effects of drug promotion

Attempts to quantify the effects and outcomes of the relationship between doctors and drug companies have been published in a number of major medical journals. Some of these studies have suffered from criticisms of methodology and assumptions.[7,8] Nevertheless, it is appropriate to consider this body of evidence as a foundation for forming evidence-based guidelines and opinions for medical students.

The landmark review article of this field considered literature on the behavioural impact of medical professional-industry interactions.[9] The evidence indicated that interactions (such as meeting with pharmaceutical representatives, receiving gifts, receiving drug samples, industry paid meals, travel to conferences, listening to pharmaceutical speakers and CME sponsorship) all altered behaviour or attitudes of prescribers in favour of pharmaceutical companies.[9] Studies since have shared similar findings, suggesting that interaction with drug companies alters prescribing habits.[10,11]

The effects of promotion can also occur without conscious recognition; house officers attending a pharmaceutical presentation prescribed more of the manufacturers drugs, regardless of whether they could consciously remember the name of the sponsor.[12] The medical profession's consistent lack of insight into the effects of drug company promotion has been widely criticised.[13,14]

There is strong evidence (predominantly of North American origin) that interaction with the pharmaceutical industry begins in medical school.[5,6] One study documents that gift giving from drug companies begins as early as the first year in a preclinical medical course.[15] There is some evidence that students, like doctors, can be influenced even when they no longer consciously recall the name of a given sponsor.[16]

The potential harm from drug promotion activities fall into three key domains: non rational prescribing; inflation of drug costs; and erosion of public trust. Promotion-associated changes in prescribing habits tend towards non-rational prescribing by promoting new drugs over cheaper and equally effective alternatives.[9,17,18] Equally, the vast expense of promoting drugs to prescribers is funded by increased medication costs borne by either governments or individuals. Thus, patients and society are paying for targeted promotional incentives to doctors.[2,19] Public trust in doctors can be undermined when clinical independence is perceived to be threatened by drug industry and profession interactions.[20]

There are also potential benefits from the relationship between doctors and pharmaceutical companies.[21] In particular, the communication of information on new pharmaceuticals efficacy, side effects and contra-indications to doctors, by companies who have undertaken the research and development on these given products.[7]

Marketing bias is a documented concern;[22] however drug companies have at least the potential to provide an unrivalled source of information about their products.[23,24] As the economist Lichtenberg has established on multiple levels pharmaceutical use in the aggregate is beneficial and its ongoing innovation has led to significant increases in life expectancy and other real outcomes, including reduced hospitalisations and total medical costs.[25] Patients, medical practitioners and pharmaceutical companies all have a vested interest in doctors' understanding of novel therapeutic agents.

Drug company sponsorship provides significant funding for Continuing Medical Education (CME) activities. In the absence of this funding it is theoretically possible that the number of CME activities could decline or be less accessible for participants.[23,26] However, this possibility is tempered by international concern about inherent bias in drug company sponsored CME activities.[9]

Medical students and drug companies

Medical students represent a unique niche market for drug company promotion activities and influence. Students cannot prescribe pharmaceutical products, which provides some limit to the effect of pharmaceutical promotion. Equally, their low status in medical hierarchy restricts their ability to endorse products or influence the prescribing of senior colleagues. Students are also exposed to a range of sources for drug information; formal teaching from pharmacology departments, senior clinicians and textbooks.

These legitimate sources have the potential to dilute bias in drug company promotion. Conversely, students may be more vulnerable to influences than graduates; they are inexperienced, eager to learn and at the bottom of a power imbalance.[27] In addition, students bridge the gap between encultured professionals and the lay public. This provides learners with a unique perspective on issues of concern to both groups. As one author puts it, "A further significant harm is that accepting gifts potentially silences medical students as critics of the industry-profession relationships. This means that society loses the important contribution to reform provided by young people who have not yet accepted 'normal' professional behavior".[28]

Finally, students generally fall outside the remit of compulsory oversight from professional colleges and societies which increasingly have policies on pharmaceutical interactions.[29] Many universities lack clear guidelines or structured curriculum on drug promotion issues.

There is good international evidence that medical students feel underprepared for interactions with industry and want additional formal education on the issue.[5,15,30] Medical schools have a responsibility to teach professional ethics, and to ensure that this teaching is meaningful and applicable for students. The pharmaceutical industry exemplifies the kind of ethical dilemmas likely to confront and engage medical students.

There is strong academic consensus that formal ethics teaching in the pharmaceutical industry is vital in minimising harm.[6,7,31,32] There is also evidence to suggest that education interventions change medical student attitudes to drug promotion.[33,34]

Internationally, medical students' associations have been some of the strongest advocates for improved education and discussion about their relationship with the pharmaceutical industry. In particular, the 'pharma free' campaign by the American Medical Student's Association has been extensive and sustained over a number of years.[36]

Pharmaceutical promotion in the New Zealand context

The vast majority of research into the effects of pharmaceutical promotion has occurred in the United States. Generalisability to the New Zealand setting may be limited by the prescribing constraints of the Pharmaceutical Management Agency (PHARMAC). The influence of PHARMAC constraints on drug promotion activities is unstudied but likely reduces promotional activities in comparison to the less regulated American market. An additional confounder is direct to consumer advertising (DTCA); New Zealand and the United States are the only developed countries where it is legal to use conventional media to market prescription drugs to the public.

An array of pharmaceutical company promotion activities do occur in New Zealand, albeit not to the extent detailed in North American literature. A 2005 report found that two thirds of New Zealand GPs saw drug sales representatives. Of these, half found that drug reps were of limited use as a prescribing resource but that drug companies were a key source of information about new drugs.[36]

There is no formal data available on the interaction between New Zealand medical students and drug companies. In New Zealand some students attend regular sponsored

lunches in teaching hospitals and are exposed to ubiquitous print advertising. Until recently, the University of Otago had a graduation prize sponsored by a pharmaceutical company.[37] Sponsorship of events is a particularly tempting for student associations with limited income.

The Auckland University Medical Student Association (AUMSA) 'Capping Show' has received a small amount of sponsorship from drug companies for many years.[38] The inaugural 'MECA' Conference 2007, run in association with the Otago University Students Association was principally sponsored by Clinicians, a subsidiary of Douglas Pharmaceuticals.[40]

New Zealand regulation of drug promotion influence

Voluntary self regulation by the pharmaceutical industry provides very limited protection for clinicians or patients. A Code of Conduct for the Registered Medicines Industry (RMI) in New Zealand exists.[40] However, the corporate obligation of pharmaceutical companies may preclude vigorous self regulation.

A number of local institutional policies have been developed in an attempt to maximise the benefits of drug promotion whilst limiting harms. The Medical Council of New Zealand (MCNZ) 'Good Medical Practice' guide advises "Do not ask for or accept any inducement, gift, or hospitality that may affect, or be thought to affect, the way you prescribe for, treat or refer patients."[41] These sentiments are closely echoed in the New Zealand Medical Association's Code of Ethics.[42]

A small number of New Zealand organisations have developed stricter policies on interacting with the pharmaceutical industry. The 2005 RCGPNZ annual conference limited the extent of funding from traditional pharmaceutical sources in attempt to decrease drug company influence.[43] Likewise, a Christchurch Independent Practitioners Association provides CME to local GPs entirely from internal revenue, explicitly excluding drug companies.[43]

The Christchurch School of Medicine and Health Sciences General Practice and Public Health Department has a longstanding policy of not accepting pharmaceutical funding for research projects, teaching or hospitality.[43,44] A New Zealand psychiatry journal club also documented their rationale for forgoing pharmaceutical funding.[2] These examples illustrate that although pharmaceutical industry sponsorship is present in New Zealand, a number of organisations and institutions have successfully challenged the practice.

Student organisations have also become increasingly engaged in policy development. The New Zealand Medical Students' Association (NZMSA) debated seeking pharmaceutical funding for their conference in 2007. Eventually they established a policy outlining the strict requirements which would be necessary before pharmaceutical sponsorship could be sought.[45] The issue was revisited in 2009 and the NZMSA executive voted to not to accept funding from pharmaceutical companies at any time in the future and to develop further policy.[46] Similar debates by medical student organisations have occurred in Australia and internationally.[4]

In 2008, the Australian Medical Student's Association released detailed guidelines limiting the extent of pharmaceutical company interaction with medical students in a broad range of settings.[47]

Conclusion

The use of pharmaceutical products produces overall benefit and has led to significant medical advancement. However, the relationship between producers, prescribers and consumers of these products is complex. This is particularly relevant for medical students as the newest members of the medical profession. In New Zealand, as elsewhere, there are significant potential ethical and financial harms from drug promotion, as well as potential benefits. Although promotional effects may be limited by PHARMAC, the pharmaceutical industry's promotional tools are evident in local medical practice.

A small number of New Zealand organisations have reflected on their relationship with pharmaceutical companies. New Zealand medical students' associations have been particularly proactive in articulating and attempting to address issues surrounding drug company promotion.

An ongoing, evidence-based, approach to drug company relationships should be widely pursued in New Zealand. In particular, medical schools should give this issue additional thought and embed debate in their curricula to inform practise and opinions of future doctors. This debate should occur in a protected environment with limited or no exposure to promotion.

Medical students should be encouraged in their attempts to find workable models which balance ethical, education and commercial demands. Identifying best practice between medical students, doctors and drug companies is critical for providing gold standard patient care.

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