

Physicians, the industry and population health

Juan Gervas,^{1,2,3,4,5} Peter R Mansfield^{5,6,7}

In the 1840s, many doctors carried out autopsies of women who had died of childbirth fever. The doctors sometimes became infected with bacteria without knowing it. When they delivered more babies, they transmitted the infection to more women, causing more to die. When it was suggested to the doctors that they might be unintentionally carrying harmful bacteria they felt insulted and reacted with angry denials. Fortunately, since then our profession has gone through a paradigm shift based on understanding the germ theory of disease. Initially, it was thought that doctors who deliver babies should never carry out autopsies, but methods of preventing and/or curing bacterial infection such as surgical gloves and hand washing have been shown to be effective.

We now face a similar situation. In 2008, many doctors allowed themselves to be exposed to drug promotion. These doctors may have become infected with bias without knowing it. When they treat patients their decisions are not as good as they could be. When it is suggested to the doctors that they might be unintentionally carrying harmful bias they feel insulted and react with angry denials. Our profession needs to go through a paradigm shift based on understanding theories of how decision-making can be biased, such as the Elaboration Likelihood Model and Cognitive-Experiential Self Theory.¹ Unfortunately, at this time, we do not have any proven methods for detecting, let alone preventing or curing, bias.

Currently, many doctors deny that they are influenced by drug promotion, but are not so confident about their colleagues. This "illusion of unique invulnerability" is common and makes people overconfident and thus at higher risk of

being misled.² We live in a market society in which no product is sold without a comprehensive marketing plan, including advertising and incentives. In fact, when doctors prescribe new drugs, the first stage in the decision-making process is awareness of a new drug. The most important source of information is the pharmaceutical industry, in particular the company representatives. We are aware of seven studies of the impact of drug promotion on the quality of prescribing. One study found some good, but more harm. Two studies did not detect any effects. Four studies found only harm. Being marketing legitimate, we cannot accept crossing borders that carry needless injury (even death as the cerivastatin story shows) and cost. Inappropriate use of technology (medications, devices, information technology and others) carries the dangers of unnecessary labelling, poor treatment decisions, iatrogenic illness and economic waste.³

Use of unnecessary technology and the inappropriate use of necessary technology are threatening in many ways patients' and populations' health. These are the reasons why we are saying "no more free lunch". Doctors do not need to be banqueted or put up in the best hotels.⁴ The cost of gifts seems a small price to pay for dignity, integrity and independence. But there are not only gifts. There is also continuous medical education; companies are in business to make money not to educate physicians, so we need global thinking across all sales activities and their costs and side-effects.²⁻⁵

Dialogue between the interested parties is needed. But, who are the interested parties? There are more than two (doctors and industries).⁵⁻⁷ Interested parties also include politics, drug agencies, researchers, epidemiologists, scientific journals, medical experts, journalist, patients and society as a whole. For example, the acceptability of receiving gifts is dependent on the social norms that influence doctors' beliefs and behaviours. So the picture is not only black and white.

For those who trust government-approved drugs, 2004 was not a good year. The licensing of Vioxx and its

continued use in the face of unambiguous evidence of harm have been public health catastrophes. Without actions to change drugs regulators' (mainly the US Food and Drug Administration and the European Medicines Agency) behaviour, the most important legacy will be the continued erosion of trust that public health institutions will suffer. Critical questions are around the approval process and about post-marketing surveillance systems.

The relationship between researchers and industry has been described as being as risky as dancing with a porcupine. The fundamental need to satisfy shareholders could, and at times did, conflict with a researcher's agenda to seek and unveil the truth. But things could be even worse with new, more aggressive pharmaceutical conduct, as shown in Canada and everywhere drug companies threaten legal action over guidelines, which can be seen as intimidation of researchers. For example, AstraZeneca, the manufacturer of omeprazole, did not accept the notion that its drug was interchangeable with other drugs. The company is threatening legal action in order "to protect its interests".

Many medical journals are supported by pharmaceutical company advertising. The poor prescribing of some physicians is surely influenced by drug spending on advertising. The pharmaceutical industry incorporates bibliographical references to clinical trials, because of the effect of the growing evidence-based movement on prescribing behaviour of doctors. But in many cases, the promotional statements are not supported by the references.⁸ In general, journals are caught between publishing the most relevant and valid research and being used as vehicles for drug company propaganda. Studies sponsored by pharmaceutical companies are four times as likely to have outcomes favouring the sponsor than studies funded by other sources.⁴

Technology industries have many other avenues of influence, including funding of patients' organisations and public relations companies. Direct-to-consumer advertising and selling sickness are big businesses. Pharmaceutical companies are actively involved in sponsoring the definition of diseases and promoting them to both physicians and consumers. Slowly but surely, the social construction of illness is being replaced by the corporate construction of disease.³

Medical experts are the key elements in between industry and physicians and consumers. Manufacturers of drugs and

¹ Canencia de la Sierra, Garganta de los Montes y El Cuadrón (Madrid) Spain; ² Equipo CESCA, Madrid, Spain; ³ Department of International Health, Escuela Nacional de Sanidad, Madrid, Spain; ⁴ Nogradas, Spain; ⁵ Healthy Skepticism Inc, Australia; ⁶ Private practice, Willunga, South Australia; ⁷ Discipline of General Practice, University of Adelaide, South Australia
Correspondence to: Dr Juan Gervas, Travesía de la Playa 3, 28730 Buitrago del Lozoya, Madrid, Spain; jgervas@meditex.es

What this study adds

This study highlights the global responsibilities for the final use of drugs and industrial products. It is not only about clinicians and industries, but also about many interested parties including politics, drug agencies, researchers, epidemiologists, scientific journals, medical experts, journalist, patients and society as a whole. If the final objective is to avoid unnecessary suffering, morbidity and mortality, physicians should say “no free lunch”, and be supported by all interested parties.

Policy implications

Physicians cannot be alone in their daily struggle to use diagnostic and therapeutic technologies appropriately. They must say no to gifts and more, but in a context of ethical public policy decisions.

devices are pursuing profits, and doctors and patients are trying to do their best in the “market”. Experts not only gain profit but satisfy a need for public recognition and obtain academic influence when lobbying for the use of unnecessary technology and the inappropriate use of

necessary technology. Frequently, opinion leaders adopt double standards when they write in peer-reviewed journals and talk to physicians.

No one is innocent as, for example, the stories of rofecoxib, fenoterol and gabapentin teach us.^{6 7 9} We scientists, physicians and epidemiologists are not innocent. The final consequences could be unnecessary suffering, morbidity and mortality in patients and populations. There is a need for new rules and guidelines on doctors’ relations with technology (medications, devices, information technology and others) companies. Rules and guidelines based not on gifts but on transparency, independence and commensurate support. The final objective should be to improve patients’ and populations’ health.

On many occasions, doctors expect everything (information, research, education and even money) from companies. This culture of entitlement may be one of the most difficult obstacles to overcome. It is a risky culture that is both symmetrical and reciprocal, with three components: to give, to receive and to repair (prescribing, of course). It is time to say no.

Competing interests: Both authors belong to organisations that promote fair pharmaceutical–physician relationships. Since 2005, JG has been the coordinator of the Seminars of Innovation in Primary Care, organised by

Fundación Ciencias de la Salud (Madrid), Fundación para la Formación de la Organización Médica Colegial (Madrid) with support of the Instituto para la Investigación de la Fundación Jordi Gol (Barcelona), and sponsorship of the Spanish Ministry of Health and GlaxoSmithKline.

Note: Studies of the impact of drug promotion on the quality of prescribing: references are available on request to peter@healthskepticism.org.

Provenance and peer review: Not commissioned; not externally peer reviewed.

J Epidemiol Community Health 2009;**63**:773–774.
doi:10.1136/jech.2008.077651

REFERENCES

1. **Chaiken S**, Trope Y, eds. *Dual process theories in social psychology*. New York: Guilford Press, 1999.
2. **Mansfield P**. Accepting what we can learn from advertising’s mirror of desire. *BMJ* 2004;**329**:1487–8.
3. **Moynihan R**, Heath I, Henry D. Selling sickness: the pharmaceutical industry and disease mongering. *BMJ* 2002;**324**:886–91.
4. **Abbasi K**, Smith R. No more free lunch. *BMJ* 2003;**326**:1155–6.
5. **Hébert PC**. The need for an Institute of Continuing Health Education. *CMAJ* 2008;**178**:805–6.
6. **DeAngelis CD**, Fontanarosa PB. Impugning the integrity of medical science. The adverse effect of industry influence. *JAMA* 2008;**299**:1833–5.
7. **Pearce N**. Corporate influences on epidemiology. *Int J Epidemiol* 2008;**37**:46–53.
8. **Villanueva P**, Peiró S, Librero J, et al. Accuracy of pharmaceutical advertisements in medical journals. *Lancet* 2003;**361**:27–32.
9. **Steinman MA**, Bero LA, Chren MM, et al. Narrative review: the promotion of gabapentin: an analysis of internal industry documents. *Ann Intern Med* 2006;**145**:284–93.