



Medical Students and the Pharmaceutical Industry

A BMA Discussion Paper

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Introduction

There is continuing debate amongst industry representatives, doctors and medical students about the state of interactions between the medical profession and the pharmaceutical industry. In recent times, controversy over the way the pharmaceutical industry is regulated has also increased. Many believe doctors are putting their professionalism on the line by becoming too cosy with the industry, and that this is resulting in the loss of patient trust, and suboptimal patient care. The role of medical students in this relationship is a difficult one. Respect for their teachers often compels students to remain silent, even when they disagree with their actions. There is little guidance for medical students on how to deal with pharmaceutical representatives, and most medical schools have no policies on interacting with drug companies. This short article attempts to (briefly) analyse the benefits and drawbacks of the relationship as it is. It will go on to consider some of the important arguments against the close entanglement of the two establishments, and finally considers the role of medical students as advocates for change, if change is necessary at all.

The Medical Profession and the Pharmaceutical Industry

The pharmaceutical industry has a historically intimate relationship with the medical profession. It has played a vital role in the advancement of medical care, and continues to drive medical innovation and improvements in patient satisfaction. According to the Association of the British Pharmaceutical Industry, today, pharmaceutical companies fund more medical research than all other funders put together.¹

Research is not the only area where the pharmaceutical industry plays an important part. The industry plays a major role in Continuing Medical Education (CME), providing funding for organising courses around the world, and often paying for doctors to attend - or teach at - these courses.² The industry is also heavily involved in organising teaching sessions on new drugs, and training for new medical equipment.³

In the past, the pharmaceutical industry has been seen as the hero in the eyes of the masses. It has often been portrayed as an industry involved in a noble race of discovery, pioneering for humankind in the fight against disease and poor health.⁴

In recent times, however, there has been a change in attitudes towards the industry. There is increasing evidence that the pharmaceutical industry – while generally beneficial - exerts a range of negative influences on public health. Evidence shows that when a drug company funds a research study, the study is more likely to come out in favour of the company's own products than comparable studies.⁵ Corporations have also been accused of selecting studies that are more favourable to their products, while suppressing studies that are not.⁶ With so much clinical research funded by the industry, these practices have far-reaching consequences. There are numerous examples of published studies advocating the use of expensive new drugs, and portraying them as major advances, when in fact there is very little improvement in outcomes.⁷⁻⁹ In some cases – most famously that of Vioxx – studies that highlighted the dangers of the new drug were suppressed. In the case of Vioxx, it was only after billions of dollars had been spent on prescribing the drug to thousands of patients that these studies were exposed.¹⁰ These patients were unnecessarily exposed to the dangers of the drug, and it is now feared that thousands of patients died due to the effects the drug had on the cardiovascular system.¹¹

There is also a major debate over how pharmaceutical marketing to doctors affects patient care. There are a variety of techniques used, many of which – such as free lunches, industry-funded conferences and the use of pharmaceutical representatives – have become inseparably entwined with the life of the healthcare professional.

Most doctors believe they are unaffected by pharmaceutical advertising, but most also believe that

their peers are susceptible to it.¹² There is strong evidence that shows the effectiveness of pharmaceutical advertising techniques in changing the prescribing practices of doctors.¹³⁻¹⁵ This results in doctors prescribing according to the best marketing, not what is best for the patient.¹⁶ There is a growing cynicism within medical circles regarding the education offered by pharmaceutical representatives. This has forced the industry to develop new ways of promoting its products. These include ghost-writing of research articles, and recruiting expert speakers to extol the virtues of new drugs at conferences. These techniques have the same targeted effect as meetings with pharmaceutical representatives, but are harder to recognise and regulate.¹⁷

Criticisms of the Pharmaceutical Industry

There is a growing group of stakeholders who support the disentanglement of the medical profession from the pharmaceutical industry – often alongside wholesale reform of the structure and regulation of the industry. Many argue that doctors' professionalism in the eyes of their patients is at stake.¹⁸

The following is a selection of criticisms made against the pharmaceutical industry.

It is not just the relationship between the industry and the medical profession, but the underlying ethics of the industry itself, that has come under increasing scrutiny in recent times. An example of this is the focus on profitable treatments for western diseases, and a failure to research less profitable treatments in the developing world.¹⁹ Malaria, pneumonia and diarrhoea – diseases associated primarily with the developing world - account for 21% of the world's disease burden, but receive 0.31% of industry funding.²⁰ One study shows that of the 1393 chemical entities marketed from 1975 to 1999, only 16 were for tropical diseases and tuberculosis.²¹ The pharmaceutical industry's defence is that drug development is a long and costly process. Companies have little incentive to develop drugs that are not likely to turn a profit.²² The industry has also been criticised for a gradual slowdown in innovation. The number of drug approvals from the Food and Drugs Administration (FDA) in the USA and the European Medicines Evaluation Agency (EMA) in Europe between 1998 and 2003 fell by 35% compared with the previous 5 years.²³ Of these approvals, most were tweaks made to older drugs that were coming to the end of their patent period; so-called “Me too” drugs.^{24,18} Pharmaceutical companies argue that changes in regulation are hampering their ability to bring drugs to market, slowing down development and increasing costs.¹⁷

This reduction in output has not been associated with financial constraints within the pharmaceutical industry. In 2002, the profits of the 10 pharmaceutical companies on the Fortune 500 totalled more than all other 490 companies put together.²⁶ About 14% of Big Pharma sales revenues are spent on research and development, while 36% is spent on marketing.¹⁸ Additionally, the profit margins of the pharmaceutical industry are greater than any other – around 30%. This compares favourably with the oil industry and investment banking, with margins of 8 % and 12%, respectively.²⁷

One of the most controversial topics with regard to the regulation of the pharmaceutical industry is the patent system. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) was first negotiated in 1994, and has since undergone gradual adjustments, most notably the Doha Declaration of November 2001.²¹

This agreement states that patents must be made available for any new invention, product or process, in all fields of technology. It also states that the term of patent protection must not end before twenty years after the first filing date.²⁹ TRIPS was developed with the aim of rewarding corporations sufficiently for their research and innovation, giving incentives for future inventions, and meeting the short term objective of allowing people to use current inventions. The extent to which the latter two of these goals have been met is the subject of much controversy.³⁰

Defenders of the system argue that there has to be some reward for the massive initial outlay involved in the development of a complex product such as a medical compound. Without this long patent period, there would be no incentive to develop new, innovative drugs.²³

They also argue that there are exceptions built in to the system that allow the patent to be broken. This refers to compulsory licenses, which – if obtained – allow a country to produce a patented drug in response to a public health emergency.²⁴

Those opposed to TRIPS believe the system allows drug companies to sell potentially life-saving products at an artificially inflated price. This renders them out of reach of those in developing countries.¹⁸ Therefore diseases such as AIDS and Tuberculosis are woefully under-treated in the developing world.²⁵ Also, while compulsory licenses do allow the temporary production of patented drugs, they are notoriously difficult to obtain, and countries that do obtain them often suffer externally imposed trade sanctions.²⁶ In response to those who argue that patents are necessary for innovation, many argue that they create a government-imposed monopoly, which stifles competition and innovation. They point to the computing and automotive industries as examples of areas that have relatively little patent protection, but are highly competitive and innovative.²⁷

The Role of Medical Students

The relationship that medical students share with the pharmaceutical industry is more variable than that of doctors. Many medical students believe they are not influenced by pharmaceutical marketing, and are happy to accept gifts from drug company representatives.³⁶ But there is a sense of trepidation amongst some medical students of the drawbacks inherent in the relationships they have with industry.³⁷ As students we are exposed to the involvement of industry in undergraduate medical education; a topic that continues to gain coverage.³⁸

Our opinions of the pharmaceutical industry are of great importance, as they will shape the way we interact with it in our future careers.³⁹ Some believe this is reflected in the increasing efforts by the pharmaceutical industry to become more involved in undergraduate medical teaching.³⁷ A recent review published by a Royal College of Physicians Working Group recommended that all gifts from industry to students, including food and travel, should be prohibited. It also recommends that any educational funds donated by industry should be given to a centralised administrative unit, which can distribute the money accordingly.⁴¹

Conclusion

The relationship between the pharmaceutical industry and the medical profession is one that has endured for centuries, and will no doubt continue for many years to come. It has played a vital role in the advances in medicine that have occurred in the 20th century, and continue into the 21st. But as time goes on, the evidence showing the drawbacks to this relationship continues to accumulate. The industry has been widely criticised for many of its practices, including its entanglement with the medical profession.

As medical students we have to be actively aware of the influences that our relationships with any industry have on our professionalism, whether real or perceived. The trust of our patients is vital to the healthy function of the patient-doctor relationship. By becoming too close to the pharmaceutical industry, and accepting too many of its bounties, we run the risk of losing that trust.

It may be time to accept the negative impacts of our relationships with the pharmaceutical industry. As professionals, practising evidence-based medicine, we should look at the way we act, and ensure we do not expose ourselves to influences that may be detrimental to the health of our future patients.

Declarations

Omar Jundi is a medical student at Leeds University. He is also an active member of the UK organisation PharmAware, which campaigns for greater regulation of the pharmaceutical industry. He does, therefore, have a conflict of interest in writing this document.

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