

Competing interests of undergraduate medical education and industry: integration into longitudinal curricular themes

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Abstract

Recent changes in curricula around the globe with emphasis on teaching/learning and assessing professionalism in medical schools has been the priority. With the changing public expectations and professional demands, it has become imperative to develop clear guidelines and policies for students and faculty to better understand and meet the expectations of them as part of professionalism. In order to analyse this problem and highlight potential solutions, a literature search was conducted using Eric, Medline, Google Scholar and CINAHL Plus databases from 1985 to February 2013. We reviewed publications regarding the relationship between the pharmaceutical and device industry and medical education which is one of the most debated and divisive ethical issues. We also analysed the tenets of professionalism, including integrity, primary responsibility to our patients, self-regulation, and societal responsibility, as they provide the framework to make decisions that meet our standards and support the public and patient's faith and trust in us. We propose that every lecture to medical students must include a standardised disclosure. Role modelling, on-going education, and creating policies that eliminate, instead of simply mitigating the negative consequences of faculty's conflicts of interest, are specific interventions on which we will need to focus to prevent harm to future physicians, and most importantly, to patients.

Keywords: Conflict of interest, Undergraduate medical education, Gift-giving, Medical students. (JPMA 64: S-108 (Suppl. 2); 2014)

Introduction

To date, there has been little debate about the ethics of pharmaceutical and device industry relationships with medical students.¹ These relationships have a potential to harm the social and moral character of medical students. The contradiction between the formal and hidden curriculums distort students' professional development and can even change behaviours, so they become misaligned with personal and professional values.¹

Medical education has an enduring influence on medical students' characters. Research in the socialisation processes of medical training suggests that students take on their medical identities in line with prevailing medical mores.¹⁻³ Virtue ethics should be used as a guide to inculcate ethically desirable character traits in these growing minds. Few medical schools have policies guiding student-industry interactions,^{4,5} although several schools have created stricter policies for their faculty.^{4,6,7} In 2008 the Association of American Medical Colleges (AAMC) published guidelines about disclosure of competing interests. They recommended that medical school curricula should incorporate formal teaching on the effects of competing interests on evaluation of

medical information.^{8,9} From a developing country perspective, at Aga Khan University in Pakistan, we have ethical guidelines for faculty-industry relations.¹⁰

Methods and Results

With medical education having embraced the transparency movement by shining the light of disclosure on physician-industry interactions, this needs to be taken further to the very start of medical education. In order to analyse this problem and highlight potential solutions, a literature search was conducted using Eric, Medline, Google Scholar and CINAHL Plus databases from 1985 to February 2013.

The literature search bore out that interactions between drug and device companies and medical personnel are pervasive and powerful. In 2004, US pharmaceuticals spent an estimated \$57.5 billion on marketing^{11,12} with \$12 billion to \$18 billion specifically targeting practising physicians and residents.^{11,13-16} This represents approximately \$8,000 to \$13,000 spent on each physician every year.^{11,17,18} There is a substantial body of evidence to suggest that this relationship has a considerable impact on physician decision-making.^{5,11,19-21}

There is currently limited information on relationships between pharmaceuticals and medical students.^{5,11} Monaghan MS et al²² published a cross-sectional survey in

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Table: Possible Solutions.

Educational training of undergraduates
Providing guided experiences in dealing with pharmaceutical company representatives (PCRs)
Seminar using trained pharmacists to portray appropriate interactions with PCRs
Workshop to promote critical thinking about appropriate physician - PCR interactions
Small group discussion sessions
Role plays with simulated PCRs
Seminar on marketing concepts followed by structured evaluation of PCR sales presentations
Lecture dedicated to the topic of physician - industry interactions
Role plays to teach critical analysis of promotional materials

2003 suggesting that health professional students' knowledge and attitudes toward the pharmaceutical industry are formed prior to graduation.

Global Practices

In United States, the American Medical Student Association (AMSA), which had 68,000 members in 2006, was quite vocal in its concerns regarding relationships with drug companies. In 2001, it developed a comprehensive PharmFree policy, which proposed banning all pharmaceutical advertising and sponsorship, and it launched the 'No Free Lunch Campaign'. In 2006, it undertook a national survey of medical school policies on relationships with pharmaceutical companies, which resulted in a PharmFree Scorecard in 2007, ranking medical schools based on their policies to limit the access of pharmaceutical companies and representatives at academic teaching centres.²³⁻²⁵ After mounting controversy nationally regarding the role of the pharmaceutical industry, the influential paper by Brennan et al called for the elimination of even small gifts and funds for physician travel and speaker's bureaus, and modification of industry contribution to continuing medical education (CME).²⁶ Developing a policy on relationships with drug companies was a major agenda item at the Australian Medical Students Association National Council meeting in 2004.¹

In 2005, medical schools in Norway collectively agreed that all pharmaceutical industry-related activity on campuses should be terminated and that educational initiatives should exclude all participation from the pharmaceutical industry.²⁷ In addition, Norwegian medical schools are bound by the guidelines of the Norwegian Medical Association (NMA), which states that "information cannot be given to students unless the education institution has approved it" and "non-professional activities should not be directly or indirectly sponsored by the pharmaceutical industry".²⁷ Other countries have tried a different approach. In the United

Kingdom, some medical schools have initiated a collaboration with pharmaceutical companies aimed at educating medical students.²⁸

In 2008, pharmaceutical companies contributed US \$8.6 million to Harvard for basic science research and US \$3million for CME. Furthermore, 149 members of the medical faculty disclosed financial ties to Pfizer and 130 disclosed ties to Merck.²⁹ The AMSA, which gives medical school ratings based on how well they monitor and manage their money from the drug industry, recently gave Harvard Medical School an F grade.²⁹ This promoted greater disclosure of conflicts of interest by the medical faculty at Harvard Medical School, which became the first school in the United States to require medical professors to disclose to students all of their financial ties with industry.²⁹ Other medical schools are making efforts to be more transparent in their dealings with industry. For instance, the Feinberg School of Medicine at Northwestern University in Chicago, Illinois, has created online faculty profiles that include industry relationships of about 2,000 staff members.²⁹ Other hospitals have taken steps to make physicians' financial relationships publicly available and accessible to students.³⁰

University of Wisconsin School of Medicine and Public Health (UWSMPH) in 2009 introduced a lecture dedicated to the topic of physician-industry interactions to the curriculum of second year students.¹¹ They also suggested a small-group session to facilitate discussion and provide students with an opportunity to ask instructors specific questions.

Elimination Strategies

Other strategies that eliminate or regulate conflicts of interest among medical school instructors may be necessary, such as restricting certain types of gifts or requiring institutional oversight of faculty members' consulting arrangements with industry.^{8,30}

Restricting interactions between medical personnel and pharmaceutical company representatives (PCR) is one approach to eliminating adverse effects of contacts with PCRs.^{31,32} However, medical students and physicians in training will likely deal with such marketing influences once in practice.³¹ The provision of training or guided experiences in dealing with PCRs seems a more reasonable educational strategy for producing a physician who will be aware of the potential conflict of interest from the profit motive inherent in the pharmaceutical and other health related industries.^{21,31,33-36} These seminars have emphasised the legal limits regarding what the PCR could and could not say to the physician. These different strategies have been summarised (Table-1).

The challenge for medical educators is how to incorporate this increasingly important knowledge domain into training programmes.³¹ The growing emphasis on social justice and professionalism should encourage the appropriate distance from and respect for marketing pressures in medicine and add support for this curricular element in medical education.³⁷

Disclosure Policy

A policy that requires disclosure of financial conflicts of interest before the start of any lecture would serve as a powerful reminder to a medical student audience about the potential for bias in the presentation of scientific information and, therefore, the need to be critical evaluators of the material being taught. This was also voiced by medical students at the June 2011 meeting of the American Medical Association,³⁸ where a medical student proposed, and the House of Delegates adopted, a resolution asking the Liaison Committee on Medical Education to consider new standards that would encourage all US medical school faculty to disclose their financial ties with industry when they teach medical students.³⁹

In addition to lessons in the formal curriculum, students are deeply influenced by the behaviour of role models, institutional policies, or other characteristics of the learning environment cumulatively known as the "hidden curriculum".^{30,40} The existence of a disclosure policy would communicate that an institution values the integrity of medical education. The ideal format and content of disclosure to medical students remain unknown. Requiring comprehensive disclosure of 36 months' worth of financial relationships as suggested by the International Committee of Medical Journal Editors (ICMJE),⁴¹ may unnecessarily distract students. We recommend using the second-slide policy created by students and staff at Harvard Medical School.³⁰ Every lecture to the first- and second-year classes must include, as the second slide of the presentation, 1 of 3 standardised disclosures: no financial relationships with commercial entities producing healthcare-related products and/or services; financial relationships with commercial entities that are not relevant to lecture content; or disclosure of relevant conflicts (with basic details) that provide information about the teacher's financial relationships with healthcare-related companies and entities.

Implementation Strategies and Evaluation

After approval from the curriculum committee, course directors for respective modules shall be tasked with ensuring that lecturers are informed about this second-

slide policy. Policy implementation will include a brief presentation to students by the respective year-wise coordinators introducing the disclosure policy, routine conflict of interest disclosure by faculty during lectures, and continuous student online access to faculty disclosures.

To evaluate the effect of this policy we will conduct a survey of Year 1 and Year 2 medical students adapted from Korenstein D et al.⁴⁰ to assess student attitudes toward conflict of interest disclosure and the appropriateness of industry gifts to physicians, industry-sponsored education, and industry-faculty relationships with responses on a 5-point Likert scale. The students will be surveyed during class meetings at the beginning and end of the 2014-15 academic year, comparing attitudes (combined 'agree' and 'strongly agree' responses) before and after implementation using a 2-sided Fisher exact test, with significance defined by p values of less than 0.05. Ethics Review Committee (ERC) approval will be taken for this survey and participation in the survey will be voluntary and anonymous.

In the next phase, this project will be extended to the clinical medical students in Years 3, 4 and 5. A more active posture toward conflict of interest disclosure in medical school should continue once students enter their clinical rotations. That environment will require additional strategies because more teaching occurs informally and in small groups.³⁰

Conclusion

As the relationship between the pharmaceutical / device industry and physicians becomes increasingly complex, medical schools need to work actively to enable medical students develop appropriate ethical standards for interacting with these companies. The Academia must not procrastinate in addressing the issue of conflict of interest. Simultaneously, we should not stop at disclosures. Instead, disclosure policy should be the stepping stone for aggressive endeavours to deal with the negative fallout of conflict of interest on medical students.

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