

A Proposal for the Prevention of Ethical Problems Related to Drug Promotion: A National Network for Drug Information

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Abstract

The promotional activities of pharmaceutical companies are becoming an increasingly hot topic among healthcare workers and the general public. There are many studies in the literature claiming that drug promotion may lead to ethical problems, irrational use of medication, and increased costs, as well as negative effects on the patient-physician relationship and the medical profession. When considering that healthcare workers generally acquire their knowledge from the pharmaceutical industry, the problems mentioned, which are indeed of paramount importance, and the need for effective and sustainable interventions are clearly revealed. Many kinds of interventions have been recommended by various authorities and studies in order to prevent the kinds of problems mentioned above, including training healthcare workers, publishing professional codes to serve as guidelines about which professional values should be protected and how to cope with different situations in relationship to the pharmaceutical industry, or applying the business ethics codes of the pharmaceutical companies. Studies that assessed the effectiveness of different interventions, however, revealed that educating healthcare workers about marketing methods and state regulations are the only effective interventions.

In this article, after defining the problem, a proposed national network for drug information is to decrease the negative effects of drug promotion and to promote the rational choice of medicines is described. According to the World Health Organization, rational use of medicine is the most effective, safe, applicable/suitable, and, lastly, the most cost effective option. A national network that will gather drug information by compiling evidence-based knowledge and taking rational use of medicine measures into account should be established. It should transmit information to all healthcare workers in a fast, equal, up to date, easily accessible, and free way. The network should also support institutional regulations that aim to limit the promotional activities of pharmaceutical companies.

Key Words: Physicians, Professional ethics, Drug industry, Marketing, Drug legislation, Drug prescription

"... Cognitive therapy really is effective for depression, too. That is, there is a biological basis for depression, which is accepted, I am not denying that; but, our practice is only medication therapy, that is biological psychiatry, because for cognitive therapy you need to have gone through special training, there is no support for that. For example no company would support a psychoanalysis conference, or if you want to go to a cognitive behavioral therapy session, none of them make a move, suddenly all of their programs are made.... But, let's say, there is a conference dealing with medications, it is completely a company conference and they even arrange for your air travel. That's how it is. (...) We have access to things like MRI and PET scans. That is, we look at glucose utilization, oxygenation, and if you go and look at the

American Journal of Psychiatry, the British Journal, you will only see these types of studies, there is nothing else. They are all biochemical studies, studies using imaging techniques.... Other than that there is nothing analytical. (...) For example, if you want to propose a dissertation, of course it has a cost, where are you going to get the money to finance it, you can't meet the expenses with your own money, so you look for ways to fund it; however, when you are doing something biological there is support." An expression of a psychiatrist working at a public hospital... (Civaner 2006).

Promotion and Problems

The World Health Organization (WHO) defines the rational use of medicine as using medications that are

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appropriate for the patient's clinical needs, at a dose that will meet individual needs for an appropriate length of time, and at the lowest cost to individuals and society (WHO, 2002). Rational use of medication is using the most effective, most reliable, most practically administered, and most cost effective medication (WHO, 1994). It is estimated that the lack of compliance with rational medication selection criteria, or said another way, the use of medications that are not rational accounts for approximately 50% of all prescription medications worldwide (News-Medical.net 2004). Among the dimensions of this significant problem are writing a large number of prescriptions for one patient (polypharmacy), inappropriate use of antibiotics (generally the wrong dose and use for non-bacterial infections), using an injectable form of a medication when an oral form would be more appropriate, writing prescriptions without consideration of clinical guidelines, and using prescription medications without consulting a healthcare professional (WHO, 2002). One of the important causes of irrational medication use is the promotional methods of pharmaceutical companies (PCs) and profit-driven drug sales (WHO, 2002).

According to the WHO definition, promotion in the pharmaceutical industry is all activities directed at and having the effect of convincing and informing others to increase the prescription, acquisition, purchase, and/or use of medications (WHO, 1986). The legality of promotional activities of pharmaceutical companies (PCs) in Turkey are described in the 2003 Guidelines for the Introductory Activities of Medical Products, in which the concept, "introduction" is used instead of "promotion" for a similar definition (Ministry of Health, 2003): It explains all activities regarding the provision of information for the purpose of increasing the acquisition, purchase, prescription, and use of a medical product for humans by those who have a medical license.

Activities included within the Guidelines' definition are listed below:

The characteristics of introductory activities for medical products for humans are:

- a) Introducing over-the-counter medical products for humans to the public;
- b) Introducing prescription medical products for humans to members of the healthcare profession;
- c) Pharmaceutical sales representative visits to physicians and dentists;

- d) Distribution of samples;
- e) Sponsoring promotional meetings in which members of the healthcare profession participate;
- f) Sponsoring healthcare professionals' participation in scientific conferences and, in particular, the travel and lodging expenses associated with these conferences.

PCs' promotional activities have recently become the topic of conversation among healthcare workers and the general public (Gottlieb, 1999; Giannakakis and Ioannidis, 2000; Sheldon, 2001; Kjaergard and Is-Nielsen, 2002; Marwick, 2002; Tonks, 2002; Abbasi and Smith, 2003; Burton and Rowell, 2003; Koch, 2003; Moynihan, 2003; Lenzer, 2004a, 2004b; Moynihan 2004; Mutlu, 2004). In addition to the activities listed above, illegal practices, such as payment for medication propaganda to respected scientists, controlling the results of scientific research, and giving physicians expensive gifts for writing prescriptions, have begun to be discussed and the negative effects of these practices are reported in the literature. In various references it has been suggested that promotional activities lead to ethical problems, interfere with rational medication selection, have a negative effect on patient-physician relationships and the profession, and increase medication expenses (Norris et al., 2005; WHO, 2006).

INITIATIVES

WHO has published a review with the results of 67 studies that investigated initiatives directed at preventing/decreasing problems resulting from the promotional activities of PCs (Norris et al., 2005). According to the research results the initiatives implemented were classified as effective or ineffective. It classified the pharmaceutical industry's own regulation of business ethics, supervision of journal editors, practice guidelines for advertising and sales representatives, and monitoring after marketing regulations as ineffective initiatives. Effective methods included education about marketing methods, researching and disclosing deceptive marketing methods, and regulations instituted by governments. In summary, 2 methods necessary for the reduction and/or prevention of ethical issues that arise from PCs' promotional activities are educating physicians and governmental regulatory activity.

Educational initiatives have limitations for 2 reasons. The first is what results from the nature of the initiative: education is effective in creating a difference in acquiring coping skills about marketing methods. On the other

hand, companies have to answer these skills. There is an unequal situation here: the side providing services motivated for the benefit of society is at a disadvantage because it has inadequate infrastructure, bureaucracy, and problems with late perception of change, while the side motivated by profit perceives changing conditions and has the ability to quickly produce appropriate responses. Under these conditions the side that directs the changes is not the physicians, it is the industry that is always in a position to implement effective methods to meet its needs. The other limitation is created by the role-models and conditions of the work environment where physicians receive education and work: these variables determine to what degree the educational initiatives will be implemented and how their effectiveness will change over time. For these reasons the primary initiatives directed at managing the ethical problems related to PCs' promotional activities needs to be governmental regulation.

What Kind of Regulation?

Various sources recommend a phased policy that will be able to ensure the rational use of medications (Laing et al., 2001; WHO, 2002):

- A multi-disciplinary organization needs to be founded that will develop a national drug policy.
- Standard practice guidelines need to be developed and founded upon evidence-based research.
- An essential drug list needs to be developed that will meet the healthcare needs of the public and take practice guidelines into consideration.
- Drugs and treatment commissions need to be founded in regions and in hospitals that guarantee the safe and effective use of medications.
- Prior to medical school graduation pharmacotherapy education must be provided using problem-based teaching methods.
- Continuing medical education should be a requirement for license renewal.
- Supervision, inspection, and feedback mechanisms need to be established.
- Independent sources of information need to be created for physicians.

It should be noted that in order to implement these recommendations, first the country's health problems need to be defined quantitatively and qualitatively,

and then they need to be continually monitored; however, this is only possible in connection with providing primary healthcare services that are population-based, approach health problems holistically, and provide care with teamwork, participation of the community, and with home visits. Another requirement is that the healthcare budget be adequate.

The policy, which is defined as a basic outline above, requires labor, time, and financial resources, as well as political decisiveness. According to the needs of this policy it has to be in compliance with the right to access healthcare and be one of the keystones for the general health policies. In this article the formation of a national network for drug information and the creation of independent sources of information for physicians are recommended. The justification for this proposal is related to research results that have examined physicians' relationships with PCs and their opinions about these relationships.

Physicians' Opinions about Relationships with PCs

Various studies have determined that, in general, physicians do not believe that their behaviors are influenced by the promotional activities of PCs (Wazana, 2000; Charatan, 2001; Steinman et al. 2001; WHO 2006); however, they do think their colleagues are influenced (WHO, 2006). Another fact is that the majority of information obtained by healthcare workers today is provided through the activities of PCs (McGettigan et al., 2001). A study that investigated opinions about physicians' relationships with PCs determined that physicians who think that these relationships are acceptable presented their rationales for these judgments as below (Civaner, 2006):

- Marketing methods cannot lead me to prescribe against my will; it cannot interfere with my choosing the best/most appropriate medication for my patient.
- Drugs should be considered commercial property that are priced according to market conditions and sold like other commodities and services. Consequently marketing methods can be used for drug sales.
- If there weren't any PCs new drugs would not have been developed. Consequently, they have a right to sell their products at a high profit and use marketing methods.
- If I don't do it, nothing would change, because;

- ♦ Companies have to spend this money according to the law;

- ♦ If I don't, somebody else will;
- ♦ That's how it is all over the world;
- ♦ Everybody does it so.

- If I refuse, it would be impolite/it would be strange/it would be perceived as an insult/it would be disrespectful.

- It is acceptable for PCs to have a part in contributing to the financial support of scientific education.

In the quoted reference, these arguments were ethically analyzed and it was concluded that none of these are sound or persuasive; however, the arguments that claim that they are acceptable because they support scientific activities and that refusing them would be insulting need to be considered in detail, because these arguments are not grounded on solely false premises.

Support of Scientific Activities

In the argument that the education received from PCs and their financial support can be accepted as their scientific contribution, suggests that physicians need to increase their scientific knowledge to improve the healthcare services that they provide. The result reached is that support to meet this need can be accepted. The value-based premise of this argument points to a value that needs to be protected. It is necessary to improve the quality of healthcare services that are provided. One of the factors ensuring this will happen is ongoing professional development; however, the factual premise of the argument is wrong. Information provided by marketing methods can interfere with physicians appropriately prescribing medications according to rational use of medicine criteria; consequently, it is very doubtful that the support given by PCs is making a scientific contribution (Haayer et al., 1983; Lurie et al., 1990; Caudill et al., 1996). Commercially acquired information is known to be more effective than that from scientific sources in influencing physicians' choice of prescribed medications (Somerset, Weiss et al. 2001). In addition, promotional activities are generally one-sided and include incorrect information, and may be a cause of physicians' incorrectly prescribing medications (WHO, 2006). A compilation of research results on this issue is shown below:

- Physicians' opinions about cerebrovascular vasodilators have been shown to be guided by drug advertisements (Somerset, 2001).

- In research conducted in 230 hospitals in the United Kingdom 42% of information physicians received about new medications were obtained from sales representatives (No Free Lunch, 2006).

- Relationships were found between physicians participating in meetings with representatives and requesting the medications introduced to them to the hospitals' formulary lists, an increase in the cost of prescriptions they write, and a decrease in their rational use of medications (Somerset, 2001).

- As the number of promotional materials received by physicians increase, their belief that they are not affected by promotional activities also increases (Hodges, 1995).

- Physicians who participated in symposiums organized by PCs for 2 drugs significantly wrote more prescriptions for these drugs after the symposium (Orlowski and Wateska, 1992).

- In a study of the effect of physicians being informed scientifically and commercially, the physicians insisted that the information had academic references. When they were asked about information in various medical areas:

- ♦ 71% stated that a cause for dementia is an decrease in cerebral blood flow.

- ♦ 32% stated that cerebral vasodilators are effective for treating confusion in elderly patients.

- ♦ 49% stated that propoxyphene was more effective than aspirin.

This information is not supported by any medical literature (No Free Lunch, 2006).

- Physicians who were informed about a new medication from sales representatives, rather than other physicians:

- ♦ Described the new medication as "advanced" more often.

- ♦ Wrote more prescriptions for the new medication.

- ♦ Chose the new medication over alternatives more often (No Free Lunch, 2006).

- As meetings with sales representatives increase, the rate of physicians prescribing that medication increases (No Free Lunch, 2006).

- As the rate of physicians' confidence in sales rep-

representatives increases the cost of the prescriptions they write increases (No Free Lunch, 2006).

In summary, pharmaceutical company support, based on the scientific information that is shown, can lead physicians away from adhering to scientific practice. Physicians think that PCs contribute to science and for that reason their support is acceptable; however, the argument claims that company support has a positive affect on their professional development and in the quality of the care they provide is internally consistent, but it is not sound.

The negative effects of receiving financial support from PCs also need to be kept in mind. It is accepted that the rational selection of medications by physicians who receive support from PCs is negatively affected and attention is not paid to the need for spending community resources in the most rational manner. A pharmaceutical company can subtract the support from the taxes to be paid and the company's marketing expenses are thus transferred to society. In addition, having PCs meet the needs for service ignores the government's responsibility, disrupts the perception of duty-responsibility of institutions, and after a period of time leads to this support being accepted as natural (Civaner, 2006).

Another argument regarding the acceptability of relationships with PCs is based on the explanation that it would be impolite to refuse them. When physicians meet with sales representatives they may feel that refusing to accept gifts and samples they are given during these meetings would be in conflict with the need to show respect to these sales representatives. For this reason they suggest that it would be impolite and could be regarded as unnatural. At this point physicians are demonstrating the value of showing respect to employees, which is one of the positive cultural values of society, and being compliant with the rules of courtesy during their professional practice, but they are in conflict with the need to protect scientific integrity. The conflict is resolved in favor of cultural values and consequently uses this explanation, but it is not a legitimate reason for the relationships they have with PCs. On the other hand, to accuse solely the individual physician of making this type of choice would be a rough approach. As a pharmaceutical company representative stated, relationships between two people are the foundation of marketing effectiveness (Civaner, 2006): "Establishing a personal relationship with a physician, that is the goal, it is always this." For this reason giving all of the responsibility to the physician means that attention is not paid to the effect of the values of the society in which the physician was raised, lives, and works, to physi-

cians forming moral judgments, or on the effort of PCs' use of relationships with people for marketing.

In conclusion, it is possible to say that the claims of that PCs are contributing to scientific activities and that it would be impolite to refuse them are pointing out the lack of significant needs for providing health care and the use of human relationships and cultural values in marketing activities. Physicians form relationships with PCs within the negative conditions of work life and the healthcare environment, helplessness because of needs unmet by the government, lack of education and awareness about marketing tactics, and insensitivity to the domination of the commercial viewpoint and discourse. In contrast to this, companies are structured to continually monitor the characteristics of their sales areas, to keep up with the rapid pace of changes and even give direction to changes, effectively educate their employees on subjects such as human psychology, sales techniques, communication skills, and continually evaluate the effectiveness of their initiatives. For these reasons physicians are vulnerable and at a disadvantage in their relationships with PCs. The fact that physicians receive the majority of their information about medications from PCs increases the importance of this subject. When physicians' needs for education are not met before graduation or after graduation during continuing professional development, and as physicians continue to meet one-on-one with pharmaceutical company representatives, it is unavoidable that they will experience the types of conflicts mentioned above. Under these conditions the possibility of physicians acting in accordance with the rational use of medicine criteria only depends on each physician's own personal moral values and level of knowledge. Nonetheless, if the right to receive healthcare based on need is recognized, it is expected that scientific criteria and objective standards will be determinative in providing healthcare services; relying only on individual moral maturity and professional competency is simply not enough. Institutional preventive measures are necessary to ensure the protection of the right to adequate healthcare.

The Proposal

The rationalization for the recommendation of the formation of a national network for drug information that will create independent sources of information for physicians was presented above. As the research has shown, relationships, one-on-one or directly with companies, leads to conflict between cultural values and professional values, and also leads to irrational medication choices; consequently, institutional regulations are needed that

will prevent direct relationships between physicians and PCs' representatives. This means that the government must fill the gap that has been filled by PCs. This gap in resources to meet educational needs, as the rationale was given above, has to be filled by the government.

The first phase in accomplishing this is the establishment of a structure called the National Network for Drug Information. The basic purpose of this network should be to evaluate the drugs in the market using rational use of medicine criteria and evidence-based information, and to develop a list of rational medications for physicians. The important thing is to create a source of information that can be easily and rapidly updated, is easily accessed by all healthcare workers, and is reliable and free. The Ministry of Health can create this type of resource by working in cooperation with scientific institutions and representatives of professional organizations, and using the Internet and periodic bulletins. This organization can evaluate medications that are in the marketplace using evidence-based sources of information. These resources can be accessed on the Internet (AGREE Collaboration, 2004; CIRE Public System, 2007; Scottish Intercollegiate Guidelines Network (SIGN), 2007; The Cochrane Collaboration, 2007; WHO, 2007a, 2007b.). In particular, the Essential Medicines Library prepared by WHO is available to all and is a very useful resource from which all cooperating facilities can compile data (WHO, 2007a). The evaluation that will be done using rational medication criteria can be thought of as a filter system; the effectiveness of a medication, particularly according to these criteria, then its reliability, then its practicality/ability to be accepted by patients, and finally its cost need to be taken into consideration. The list that is developed would review the drugs in the marketplace in the first phase and be a guide for physicians planning medication therapy.

The list would need to be sent using the Internet and periodically in a bulletin to healthcare facility administrators and healthcare workers. A bulletin has been shown to be a type of communication tool that has a significant effect on rational medication prescribing behavior (Denig et al., 1990; Dormuth et al., 2004). There are many examples of bulletins because they are easily accessible, easily read, low-cost, and highly reliable (Olsson and Pal, 2006; Drug and Therapeutics Bulletin, 2007; WHO, 2007; Prescriber's Letter, 2007; The Medical Letter on Drugs and Therapeutics, 2007). There is even an international umbrella-organization, the International Society of Drug Bulletins, which has 59 bulletins from 34 countries (International Society

of Drug Bulletins, 2007). The Society has published a handbook with the WHO that shows how to publish drug bulletins (WHO and ISDB, 2005).

The organization that would direct this National Network for Drug Information would need to ensure and maintain the reliability of the publications and should be able to explain all its practices with evidence-based information, as well as making it clear that no personnel or authors have any relationships with the pharmaceutical industry to avoid conflicts of interest, that no financial support has been received from any pharmaceutical company, and there should be no advertising allowed about medications or by PCs.

After creating a current, reliable, and easily accessible source of information, in the second phase, the list needs to be used in a re-imbursement system; this practice is also recommended by WHO for directing physicians in rational medication selection. The organization that directs the National Network for Drug Information, in this phase, would work together with the Ministry of Health in licensing new medications. In this phase the marketing activities of PCs directed at physicians needs to be prevented. Again, in this phase there needs to be studies conducted to direct practices and an effective primary healthcare system with health centers needs to be formed countrywide that will determine and monitor public health problems, a national drug policy that is consistent with general health policies needs, and standard treatment guidelines need to be developed. Another organization that needs to be established is an organization for the evaluation of medications and technology, like NICE in Britain or DACEHTA in Denmark (DACEHTA, 2007; NICE, 2007). As well as evaluation, the production of evidence-based information should be defined as a separate goal; however, this can only effectively happen when there is a national science policy and when scientific studies are supported by public resources that are primarily based on public health problems.

CONCLUSION

PCs' promotional activities can interfere with rational medication choice, have a negative effect on patient-physician relationships and on the profession, and increase costs. The most effective way to prevent/minimize these problems, as research to date has shown, is institutional practices established by the government. Forming a national drug policy that is focused on public health problems and is consistent with general health policies, forming an organization that will evaluate national

medications and technology together with this policy, and developing standard treatment guidelines need to be the basic goals. One of the methods recommended for ensuring rational medication use is the creation of an independent, reliable, easily accessible, and current source of information for physicians. Examples of resources for this goal are Internet web pages and drug bulletins. In this process it is important to create resources to pro-

vide physicians an alternative source of information that is evidence-based. This practice is relatively easy to implement, effective, and facilitates a transition to bigger changes. A resource like this would make promotional activities directed at physicians unnecessary and eliminate the basis of the rationale that they meet educational needs, and will significantly help in decreasing the ethical problems associated with PCs' promotional activities.

REFERENCES

- Abbasi, K. and R. Smith (2003). "No more free lunches." *BMJ* 326(7400): 1155-1156.
- AGREE Collaboration. (2004). "AGREE Collaboration." Retrieved 30 May 2007, from <http://www.agreecollaboration.org/>
- Burton, B. and A. Rowell (2003). "Unhealthy spin." *BMJ* 326(7400): 1205-1207.
- Caudill, T. S., M. S. Johnson, et al. (1996). "Physicians, pharmaceutical sales representatives, and the cost of prescribing." *Arch.Fam.Med.* 5(4): 201-206.
- Charatan, F. (2001). "Doctors say they are not influenced by drug companies' promotions." *BMJ* 322(7294): 1081.
- CIRE Public System. (2007). "CIRE Public System." Retrieved 30 May 2007, from http://www.infoforhealth.org/cire/cire_pub.pl
- Civaner, M. (2006). Türkiye'de İlaç Şirketlerinin Kullandıkları Pazarlama Yöntemleri ve Hekimlerin Bu Konudaki Değerlendirmelerinin Etik Açısından Sorgulanması (yayımlanmamış doktora tezi). Sağlık Bilimleri Enstitüsü. Ankara, Ankara Üniversitesi PhD.
- DACEHTA (2007). "DACEHTA" Retrieved 30 May 2007, from http://www.sst.dk/Planlaegning_og_behandling/Medicinsk_teknologivurdering/Om_CEMTV.aspx?lang=en
- Denig, P., F. M. Haaijer-Ruskamp, et al. (1990). "Impact of a drug bulletin on the knowledge, perception of drug utility, and prescribing behavior of physicians." *Ann Pharmacother* 24(1): 87-93.
- Dormuth, C. R., M. Maclure, et al. (2004). "Effect of periodic letters on evidence-based drug therapy on prescribing behaviour: a randomized trial." *Cmaj* 171(9): 1057-61.
- Drug and Therapeutics Bulletin. (2007). "Drug and Therapeutics Bulletin." Retrieved 30 May 2007, from <http://www.dtb.org.uk/dtb/do/home>
- Giannakakis, I. A. and JP Ioannidis (2000). "Arabian nights-1001 tales of how pharmaceutical companies cater to the material needs of doctors: case report." *BMJ* 321(7276): 1563-1564.
- Gottlieb, S. (1999). "Medical societies accused of being beholden to the drugs industry." *BMJ* 319(7221): 1321.
- Haayer, F. M., G. T. van der Werf, et al. (1983). "Use of cimetidine; parallels and discrepancies between the views of drug regulatory agencies and practicing physicians." *Eur. J. Clin. Pharmacol.* 25(5): 601-607.
- Hodges, B. (1995). "Interactions with the pharmaceutical industry: experiences and attitudes of psychiatry residents, interns and clerks." *CMAJ* 153(5): 553-9.
- Interantional Society of Drug Bulletins. (2007). "INTERNATIONAL SOCIETY OF DRUG BULLETINS." Retrieved 30 May 2007, from <http://66.71.191.169/isdbweb/pag/index.php>
- Kjaergard, L. L. and B. Is-Nielsen (2002). "Association between competing interests and authors' conclusions: epidemiological study of randomised clinical trials published in the BMJ." *BMJ* 325(7358): 249.
- Koch, K. (2003). "Schering uses German medical association to promote HRT." *BMJ* 326(7400): 1161-116a.
- Laing, R., H. Hogerzeil, et al. (2001). "Ten recommendations to improve use of medicines in developing countries." *Health Policy Plan* 16(1): 13-20.
- Lenzer, J. (2004). "FDA's counsel accused of being too close to drug industry." *BMJ* 329(7459): 189.
- Lenzer, J. (2004). "Scandals have eroded US public's confidence in drug industry." *BMJ* 329(7460): 247.
- Lurie, N., E. C. Rich, et al. (1990). "Pharmaceutical representatives in academic medical centers: interaction with faculty and housestaff." *J. Gen. Intern. Med.* 5(3): 240-243.
- Marwick, C. (2002). "US tackles drug company gifts to doctors." *BMJ* 325(7368): 795.
- McGettigan, P., J. Golden, et al. (2001). "Prescribers prefer people: The sources of information used by doctors for prescribing suggest that the medium is more important than the message." *Br J Clin Pharmacol* 51(2): 184-9.
- Moynihan, R. (2003). "Drug company secretly briefed medical societies on HRT." *BMJ* 326(7400): 1161.
- Moynihan, R. (2004). "MPs launch inquiry into influence of drug industry." *BMJ* 329(7466): 587-58a.
- Mutlu, M. (2004). İlaçta promosyon adı altındaki saadet çarkı! Vatan.
- News-Medical.net. (2004). "Almost half of all medicines globally are used irrationally according to WHO." Retrieved 29 May 2007, from <http://www.news-medical.net/?id=184>.
- NICE. (2007). "National Institute for Health and Clinical Excellence." Retrieved 30 May 2007, from <http://www.nice.org.uk/>
- No Free Lunch. (2006, 2006). "The Physician-Pharmaceutical Industry Relationship." Retrieved 2006/04/13/.
- Norris, P., A. Herxheimer, et al. (2005). Drug promotion. Geneva, WHO.
- Olsson, S. and S. Pal (2006). "Drug bulletins: independent information for global use." *Lancet* 368(9539): 903-4.
- Orlowski, J. P. and L. Wateska (1992). "The effects of pharmaceutical firm enticements on physician prescribing patterns. There's no such thing as a free lunch." *Chest* 102(1): 270-3.
- Prescriber's Letter. (2007). "Prescriber's Letter." Retrieved 30 May 2007, from [http://www.prescribersletter.com/\(S\(ixaqlx55c0qguf45bwxsrblyl\)\)/home.aspx?cs=&cs=PRL](http://www.prescribersletter.com/(S(ixaqlx55c0qguf45bwxsrblyl))/home.aspx?cs=&cs=PRL)
- Sağlık Bakanlığı. (2003, 2003). "Beşeri Tıbbi Ürünlerin Tanıtım Faaliyetleri Hakkında Yönetmelik." Retrieved 2006/04/13/.
- Scottish Intercollegiate Guidelines Network (SIGN). (2007). "Scottish Intercollegiate Guidelines Network (SIGN)." Retrieved 30 May 2007, from <http://www.sign.ac.uk/>
- Sheldon, T. (2001). "Drug company fined for excessive hospitality." *BMJ* 322(7283): 382.
- Somerset, M., M. Weiss, et al. (2001). "Dramaturgical study of meetings between general practitioners and representatives of pharmaceutical companies; Commentary: dramaturgical model gives valuable insight." *BMJ* 323(7327): 1481-1484.

Steinman, M. A., M. G. Shlipak, et al. (2001). "Of principles and pens: attitudes and practices of medicine housestaff toward pharmaceutical industry promotions." *Am. J. Med.* 110(7): 551-557.

The Cochrane Collaboration. (2007). "The Cochrane Collaboration." Retrieved 30 May 2007, from <http://www.cochrane.org/index.htm>

The Medical Letter on Drugs and Therapeutics. (2007). "The Medical Letter on Drugs and Therapeutics." Retrieved 30 May 2007, from <http://medletter.com/>

Tonks, A. (2002). "Authors of guidelines have strong links with drugs industry." *BMJ* 324(7334): 383a.

Wazana, A. (2000). "Physicians and the pharmaceutical industry: is a gift ever just a gift?" *JAMA* 283(3): 373-380.

WHO. (1986, 1985). "Criteria for Medicinal Drug Promotion." Retrieved 2006/04/17/, from [http://www.psn.org.uk/weblogs/uploaded_docs/33_Criteria %20 For %20 Drug %20 Promotion.pdf](http://www.psn.org.uk/weblogs/uploaded_docs/33_Criteria%20For%20Drug%20Promotion.pdf).

WHO. (1994). *Guide to Good Prescribing*. Geneva, WHO.

WHO. (2002) "Promoting rational use of medicines: core components." WHO Policy Perspectives on Medicine Volume, 1-6 DOI:

WHO. (2006, 2006). "Drug promotion database." Retrieved 2006/04/13/, from <http://www.drugpromo.info>.

WHO. (2007). "Pharmaceuticals Newsletter." Retrieved 30 May 2007, from <http://www.who.int/medicines/publications/newsletter/en/>

WHO. (2007). "WHO Essential Medicines Library." Retrieved 30 May 2007, from <http://mednet3.who.int/EMLib/index.aspx>

WHO and ISDB. (2005). "Starting or Strengthening a Drug Bulletin." Retrieved 30 May 2007, from www.who.int/entity/medicines/areas/rational_use/startingstrengdrugbulletin.pdf