**Drug Promotion in India since 2000: Continuing Problems, Few Solutions**

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**Abstract**

Pharmaceutical companies spend large amounts of money worldwide promoting their products and India is no exception. The article begins with an analysis of the therapeutic value of medications on the Indian market since by definition if a drug has no therapeutic value or has a negative benefit to harm ratio, then any promotion of that drug is inappropriate. It then moves on to look at two Indian case studies – drug promotion in Mumbai and the misuse of the World Health Organization logo in promotion. Next it describes particular types of promotion – advertisements in medical journals, brochures and pamphlets, the actions of sales representatives and the content of continuing medical education (CME) courses and medical conferences. The next sections examine the exposure to and the education that students receive about promotion, medical students’ attitudes about promotion and the attitudes of doctors about their interactions with the pharmaceutical industry and then whether promotion has an influence on prescribing. The article concludes with a critique of the existing industry, medical professional and government regulatory regimes in India.

**Introduction**

The World Health Organization (WHO) defines the promotion of pharmaceutical as *“all informational and persuasive activities by manufacturers and distributors, the effect of which is to induce the prescription, supply, purchase and/or use of medicinal drugs”* (1). To be blunt, pharmaceutical companies based in low- and middle-middle income countries (LMICs) are there because there is a profit to be made. This point was made clear in the late 1970s when a representative of the British pharmaceutical industry was quoted regarding why drug companies were operating in developing countries: “I would just be talking rubbish if I were to say that the multinational companies were operating in the less developed countries primarily for the welfare of those countries…They are not bishops, they are businessmen” (2). Although this quote is now 40 years old, it is difficult to imagine that the situation is any different considering that in 2010, companies were spending US $34.2 billion on promotion in Latin America, Asia and the Pacific (3). Companies are willing to spend sums of this size on promotion because between 2015 to 2025, sales in emerging markets including Bangladesh, Brazil, Egypt, India and Saudi Arabia, are expected to double from US $135 billion to US $270 billion (4).

In advancing their business interests, pharmaceutical companies face a dilemma when it comes to how to structure their promotional activities. In simplistic terms, on the one hand, they can be accurate and objective with the consequence of possibly limiting sales or on the other hand, their messages can be structured to increase sales by minimizing harms associated with the product and stressing the positive aspects of the drug. Larger sales may mean that more people will benefit but they can also result in what Brody and Light term the inverse benefit law, whereby the ratio of benefits to harms among patients taking new drugs tends to vary inversely with how extensively the drugs are marketed (5). How companies resolve this dilemma will determine whether their promotional practices enhance patients’ health or detract from it. Evidence to date suggests that the latter is the case. Spurling and colleagues undertook a systematic review of the effects on prescribing when doctors received information directly from pharmaceutical companies (6), measuring prescribing on three metrics: cost of the prescriptions, quantity of prescriptions and appropriateness of prescriptions. Out of 58 studies included, one found improvement in one measure of prescribing whereas the remainder either showed that prescribing did not change or it deteriorated.

What the effect of promotion is on prescribing is important in all countries, but especially in LMICs. Health outcomes are the primary concern but there can also be a profound economic impact. As Table 1 shows, in nearly all of these countries spending on medicines is well below US $100, compared to an average of US $550 in high-income countries belonging to the Organisation for Economic Co-operation and Development (7), and medicines’ expenditures generally account for more than 20% of all health spending. Moreover, purchasing one of four basic medicines (a salbutamol inhaler for asthma, glibenclamide for type 2 diabetes, atenolol for high blood pressure and amoxicillin for various infections such as pneumonia), could push up to 86% of the population in some of 15 LMICs into poverty (8). Therefore, to the extent that promotion leads to more expensive or less appropriate prescribing, the little money that these countries have for healthcare is being wasted and poverty conditions are made even worse.

**Table 1: Spending on medicines in low- and middle-income countries, 2014**

|  |  |  |
| --- | --- | --- |
| **Country** | **Pharmaceutical sales (USD per capita)** | **Pharmaceutical sales (% of health expenditure)** |
| Algeria | 119.30 | 33.0 |
| Angola | 13.50 | 7.5 |
| Bangladesh | 12.50 | 40.5 |
| Benin | 11.00 | 29.1 |
| Brazil | 127.90 | 13.5 |
| Cambodia | 14.90 | 24.0 |
| Congo, Democratic Republic | 25.20 | 18.9 |
| Ecuador | 94.30 | 16.3 |
| Egypt | 46.50 | 26.2 |
| Eritrea | 3.90 | 18.2 |
| Ghana | 12.30 | 25.0 |
| Haiti | 4.10 | 3.8 |
| India | 12.10 | 16.1 |
| Jordan | 122.00 | 34.0 |
| Lao | 14.40 | 44.3 |
| Libya | 68.00 | 18.2 |
| Malawi | 11.50 | 46.6 |
| Mozambique | 8.90 | 21.2 |
| Nepal | 9.00 | 21.2 |
| Nigeria | 5.80 | 5.2 |
| Pakistan | 12.40 | 34.2 |
| Peru | 53.10 | 14.9 |
| Saudi Arabia | 244.80 | 21.3 |
| Sierra Leone | 17.90 | 21.5 |
| Sri Lanka | 27.90 | 27.7 |
| Thailand | 66.10 | 18.4 |
| Turkey | 110.40 | 19.8 |
| Vietnam | 41.20 | 29.0 |
| Zambia | 15.30 | 17.9 |

Source: (9)

The aim of this article is to investigate promotional practices in one LMIC, India. India was chosen because the size of its pharmaceutical market was valued at US $33 billion (10) making it extremely attractive as a place for both domestic and multinational companies to promote their products. In 2008, 25% of the annual revenue of pharmaceutical companies in India went on promotion compared to just 7% on research (11).

The article cites a wide range of literature published from 2000 onwards, almost exclusively based on primary research, but it is not comprehensive. Instead, the selection is based on my in-depth knowledge of pharmaceutical promotion gained over a 40-year period including my involvement with a variety of organizations that have focused on this topic among them Health Action International, Healthy Skepticism and Medical Lobby for Appropriate Marketing. In generally, the material used is what has been reported in academic journals rather than anecdotal examples to emphasize the systemic nature of how promotion is carried out. Only articles written in English were used.

The article begins with an analysis of the therapeutic value of medications on the Indian market since by definition if a drug has no therapeutic value or has a negative benefit to harm ratio, then any promotion of that drug is inappropriate. It then moves on to look at two Indian case studies – drug promotion in Mumbai and the misuse of the World Health Organization logo in promotion. Next it describes particular types of promotion – advertisements in medical journals, brochures and pamphlets, the actions of sales representatives and the content of continuing medical education (CME) courses and medical conferences. The next sections examine the exposure to and the education that students receive about promotion, medical students’ attitudes about promotion and the attitudes of doctors about their interactions with the pharmaceutical industry and then whether promotion has an influence on prescribing. The article concludes with a critique of the existing industry, medical professional and government regulatory regimes in India.

**Therapeutic value of medicines being marketed**

Recently, research into the therapeutic value of medicines marketed in India has focused on fixed-dose combination (FDC) drugs marketed in various countries. A FDC is a drug that contains fixed amounts of two or more active ingredients. A total of 8 studies looking into FDCs have been done in India. There were 278 prescriptions for FDCs collected in a tertiary care hospital, of which just 15 were rational. Table 2 categorizes why the remaining 263 should not have been used (12).

**Table 2: Fixed Dose Combination products and reasons for not prescribing them**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Class of FDC** | **Number** | **Rational** | **Irrational** | **Absurd** | **Banned** |
| Antimicrobials | 68 | 6 | 55 | 4 | 3 |
| Anti-inflammatory agents | 65 | 0 | 44 | 10 | 11 |
| Nutritional supplements | 48 | 4 | 29 | 9 | 6 |
| Cough and cold agents | 25 | 0 | 18 | 1 | 6 |
| Anti-ulcers | 12 | 1 | 11 | 0 | 0 |
| Antihypertensives | 11 | 0 | 11 | 0 | 0 |
| Hypolipidemics | 7 | 0 | 7 | 0 | 0 |
| Antidiabetics | 3 | 0 | 3 | 0 | 0 |
| Antihistamines | 7 | 0 | 7 | 0 | 0 |
| Digestive enzymes | 3 | 0 | 2 | 0 | 1 |

Reference: (12)

Over a period of 24 months, 941 prescriptions containing 1647 FDC formulations were collected from pharmacies in a city in India. Irrational FDCs that were banned or FDCs containing irrational active ingredients were 1343 (81.5%) and 203 (12.3%), respectively (13). All 264 FDCs that were entered into the list of drugs maintained by the Central Drugs Standard Control Organization, the national regulatory body for Indian pharmaceuticals and medical devices, were examined and a scoring system for rationality was developed based on the WHO *Guidelines for registration of fixed-dose combination medicinal products* (14)and the *Guideline on fixed combination medicinal products* from the European Medicines Agency (15). Drugs scoring 0-<3 was considered irrational, 3-<6 semi-rational and 6-9 rational.

Fifty-two (19.7%) FDCs were rational, 75 (28.4%) were semi-rational and 137 (51.9%) irrational (16). Table 3 summarizes the results of the remaining 5 Indian studies.

**Table 3: Rationality of Fixed Dose Combination drugs marketed in India**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Diagnosis/condition being treated/Drug class** | **Number of FDC drugs/prescriptions** | **Setting/source** | **Percent irrational** | **Reference** |
| Antimicrobial | 108 | Indian Drug Review | 81 | (17) |
| Cardiovascular (primarily antihypertensive) | 17 | Outpatient department, private hospitals | 100 | (18) |
| Cardiovascular | 18 | General medicine department, tertiary care hospital | 61 | (19) |
| Cardiovascular | 106 | Indian Drug Review | 57 | (20) |
| Central nervous system | 45 | Indian Drug Review | 82 | (20) |
| Cough and cold | 1305 | The Drug Today (drug compendium) | 100 | (21) |
| Respiratory | 101 | Indian Drug Review | 86 | (17) |

**Case studies in promotion**

*Drug promotion in Mumbai*

Between February and August 2003, Roy and colleagues conducted open ended interviews with 15 senior executives in drug companies, 25 pharmacists and 25 doctors in Mumbai. In addition, 36 sales representatives were interviewed in five focus group discussions (22).

Doctors stated that they received information on new drugs primarily through visits by sales representatives. According to doctors, sales representatives rarely mentioned drug

interactions and adverse reactions but they were otherwise generally satisfied with the information provided. However, sales representatives noted that there were often inconsistencies between what they had been told to tell the doctor, what was written in the

flip charts that they used in presentations and what was in the detailed literature.

Sales representatives also provided doctors with a variety of gifts including

minor medical equipment, prescription pads and rubber stamps (with the names of drugs

manufactured by the company). In some cases, it was reported that brand reminders

were increasingly being replaced by gifts of greater value ranging from jewelry to electronic items and even automobiles. Some doctors justified the acceptance of gifts because they

felt that it only compensated them for the time they spent listening to the sales representatives.

Another promotional practice was to finance educational programs and conferences and pay for individual doctors’ travel, stay and conference fees. Once again, doctors felt that these payments were justified on the grounds that otherwise they could not afford to attend these meetings.

*Misuse of the WHO name and emblem in promotion*

Research in the late 2000s by Thawani and Gharpure, found that many domestic Indian companies and multinational subsidiaries were using the standing of the WHO to promote their products in an attempt to enhance the acceptability and reputation of the drugs and vaccines that they were selling (23). The WHO does not give “good manufacturing practice” (GMP) certification to any manufacturing plant but it recommends that regulatory authorities give out a “WHO type” certificate, but without the WHO emblem. However, in India there were multiple examples of companies claiming WHO certification in their promotional literature. Similarly, the WHO emblem was used in the marketing of oral rehydration solutions for the treatment of diarrhea in children.

Sanofi-Aventis used the claim that its rabies vaccine, Rabipur, was recommended by the WHO including distributing a table-top pen stand as promotional material, where the packing and the gift both mentioned “WHO recommended…approved Rabipur”. Ranbaxy Laboratories, at that time an Indian owned generic company, similarly used the WHO name in its flyers for its version of a rabies vaccine. GlaxoSmithKline promoted its combination vaccine Tritanrix HB + Hiberix (for diphtheria, tetanus, pertussis, hepatitis B, polio and haemophilus type B) as “The only WHO approved pentavalent combination”.

**Forms of promotion**

*Medical journal advertisements*

An assessment was done of how well 102 medical journal ads in India complied with the WHO ethical criteria and found that none satisfied all of the criteria. Safe prescribing information on major adverse drug reactions, contraindications and warnings was provided in

only 19 advertisements. Of 292 claims, “only 80 (27%) were supported with reference(s), of which only 7 (9%) claims were unambiguous, or well substantiated with references. 14 references quoted did not substantiate the claim and 15 constituted weak scientific evidence. Superlatives like ‘tested’, ‘trusted’, ‘guarantees success’ and ‘matchless safety’ were used without evidence to substantiate such claims” (24). A second Indian study of 107 medical journal ads came to substantially the same conclusions about the quality of the information included in them (25).

Information from ads in 50 Indian journals was compared to information in ads in 50 journals from the United States (US) and the United Kingdom (UK) (26). In general, ads in the US and UK journals provided more complete drug information as per the recommendations laid down by WHO in comparison to ads in Indian journals. Some information was occasionally absent in the US and UK ads like pharmacological effects (12%), mechanism of action (16%) and pharmacokinetic data (8%). But in the Indian journals, information was “inadequate in nearly all aspects of pharmacological data, clinical information (0%), pharmaceutical information (0-33.3%)…The main stress in national journals appeared to be on brand names (100%), indication (92%) and address of manufacturers (88.88%)”.

*Brochures and pamphlets*

In general, promotional material in brochures and pamphlets followed the pattern in journal ads whereby information about the name of the drug and its indications was typically mentioned but other types of information, especially with regard to cautions and proper usage was much less likely to be present.

Multiple studies have looked at whether ads in brochures in India followed the recommendations developed by the WHO about the inclusion of information. In one, researchers looked at over 500 brochures collected between October 2007 and March 2008 (27). None of the ads fulfilled all the WHO criteria. The large majority of the brochures (92%) had claims about the efficacy of product, whereas only 38% mentioned safety. Out of 1003 references given in support of various claims, under 30% of those claims were supported by valid research. Finally, fewer than 10% of the brochures gave brief prescribing information. A second study examined 200 brochures gathered in 2014 from a hospital associated with a medical school (28). Generic and brand names and dosage forms were almost always mentioned as were indications for use. On the other hand, contraindications, adverse effects, precautions, and drug interactions were only present one-third of the time or less. Fifty percent of the WHO criteria were adhered to in 69% of the brochures. Eight other similar studies in India have all found basically the same pattern (29-36).

*Sales representatives*

Over a third of Indian doctors in a tertiary care hospital interacted with sales representatives at least once a week, and a quarter see sales representatives at least twice a month. Almost two-thirds said that they had received a variety of gifts from sales representatives in the previous year, including stationery items, drug sample, textbooks and journal reprints (37).

Sales representatives in India also participated in what appears to be a uniquely, but common, Indian phenomenon, screening patients at “health camps” that doctors run or participate in (38). Free health camps provide access to affordable medical care for those who would otherwise be unable to easily receive care, such as slum dwellers and transgender people. Some camps focused on a single disease and others provide general care. Not only do these camps create new customers and capture market share, but they allow companies to influence prescribing. At one such camp, sales representatives and technicians from four Indian drug companies screened patients for heart problems, lung disease, diabetes, and other conditions. One of the sales representatives at this camp commented that “I am conducting ECG camp, then doctor is prescribing my brand…This is the main purpose of this camp.” The Indian subsidiaries of Abbott Laboratories were particularly active in participating in camps with each of the company’s business divisions organizing health camps. “An Abbott rep who does screening at diabetes camps told The BMJ that his services are an investment in the doctor and have nothing to do with charity. ‘The only objective is the business transaction.’” Hans Hogerzeil, a professor of global health at Groningen University in the Netherlands and until 2011 director for essential medicines and pharmaceutical policies at the World Health Organization, referred to this type of activity as “market penetration with a label of corporate

social responsibility.”

*Continuing medical education and medical conferences*

About 4,000 doctors registered to attend the Cardiological Society of India’s (CSI) annual conference in 2009 but fewer than half of them participated in the academic program of the conference. Instead the majority could be found in the extracurricular events in the hospitality tent where loud music could be heard, films were screened and pearl, diamond and gold jewellery was sold at one end. Bags, calendars, books, diaries, perfumes and chocolates were distributed for free from stalls and there were lucky draws and on-the-spot quizzes to win prizes (39). However, this may have been an anomaly as most participants attending 40 CME courses in India in 2009 were either sponsored by an institution (40%), self-sponsored (39%) and only 20% were sponsored by a pharmaceutical company (40). In contrast, when Indian pediatricians were surveyed 87.5% of the respondents were in favor of pharmaceutical companies sponsoring a CME event, while under 10% were of the opinion that a delegate should pay for the CME without any sponsorship (41).

**Exposure of students and doctors in training to promotion and education about promotion and attitudes to promotion**

One hundred postgraduate medical students at a single medical school in India were given a drug advertisement and asked to evaluate it according to the 11 criteria in the WHO ethical criteria for medicinal drug promotion (42). Only one third were aware of WHO criteria. Fourteen percent evaluated the importance of references to the scientific literature, 29% the importance of name and address of manufacturer or distributor and 33% the inclusion of the of dosage form or regimen. Indian medical students and interns tended not to be able to critically appraise drug promotion but showed considerable improvement after teaching and training sessions (43).

Forty-five percent of Indian psychiatry residents felt that interactions between psychiatrists and the pharmaceutical industry were of benefit to the psychiatrists and 71% thought that they were beneficial to drug companies. Nearly half said that it was acceptable to take free samples so that they could prescribe to poor patients. Three quarters of residents believed that they were competent enough to decide what they should accept from a pharmaceutical company. While 58% reported being aware of the Medical Council of India guidelines for the regulation of physician-industry interactions, only 35% believed that there should actually be some external regulation of the interactions between a psychiatrist and a pharmaceutical company (44).

Results from a second survey of Indian interns and residents were somewhat different. Three quarters stated that they had never actively sought a gift or service from a sales representative or a pharmaceutical company, but over 80% had received pens and pads and almost 30% had received books. Nearly 90% considered that accepting cash was unethical, but a majority believed that receiving gifts did not affect their prescribing practices. At the same time, over half said that the government should prohibit pharmaceutical companies from giving gifts to doctors and over half supported the amendment in the Medical Council of India code that banned the acceptance of gifts (45).

**Doctors attitudes about the acceptability and accuracy of promotion**

*Sales representatives*

Eighty-four percent of Indian doctors in a tertiary care hospital did not think that a visit from sales representatives was the only way to learn about new drugs, but at the same time, over half thought that they were a source of accurate information about drugs and have a valuable teaching role. To further show how ambivalent doctors were about sales representatives, over two-thirds felt that they exaggerated the benefits of medicines and downplayed the risks and contraindications of medicines. Eighty-percent thought that there was a need to strengthen ethical norms regulating interactions between doctors and the pharmaceutical industry, but only 30% had actually read the existing guidelines.

*Continuing medical education*

Over 60% of Indian doctors felt that drug company sponsored talks were biased (46),

**Importance of promotion to the way that doctors prescribe**

*Promotional in general*

Indian physicians agreed that the most important strategy that influenced prescription

behaviour was the public relations profile of companies, including developing a good rapport

with doctors through methods such as sponsoring physicians to attend conferences

and organizing meetings related to products. Sales promotion and sales representatives’ visits were rated next after public relations (47). Another study of Indian doctors reached essentially the same conclusion, that the three most important factors influencing their prescribing were a company’s sales representatives, followed by the CME and the scientific literature that it offered (48). Two-thirds of Indian doctors working in a tertiary care hospital thought that discussions with sales representatives had an impact on their prescribing (37).

*Gifts*

Doctors, especially young graduates, considered gifts such as direct payments and passes or tickets to non-academic events unethical and were accepted by very few of them. In addition, physicians told the researchers that electronic appliances, home utensils, and dinners for themselves and their partners did not affect how they prescribed (49).

*Continuing medical education*

Doctors ranked conferences and symposia as the form of promotion having the most influence on their prescribing (50).

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| **Regulation of promotion**  Promotion in India is regulated by a mixture of legislation and voluntary codes from government, a statutory body that regulates the medical profession and the pharmaceutical industry. The two pieces of legislation are the Drugs and Cosmetics Act, 1940 and the Drugs and Magic Remedies (Objectionable Advertisements) Act, 1954. In addition, there is the voluntary Uniform Code of Pharmaceuticals Marketing Practices (UCPMP) developed by the Department of Pharmaceuticals that took effect from January 2015, the 2002 code from the Medical Council of India and finally the Code of Pharmaceutical Practices developed by the Organisation of Pharmaceutical Producers of India (OPPI) in 2012 (51). (In addition, two acts – the Consumer Protection Act, 1986 and the Monopolies and Restrictive Trade Practices Act, 1969 and the self-regulatory Code from the Advertising Standards Council of India peripherally apply to pharmaceutical promotion.)  *Drugs and Cosmetics Act and the* *Drugs and Magic Remedies (Objectionable Advertisements) Act*  There does not appear to be any existing formal evaluation of the effectiveness of these two acts in ensuring that promotion is accurate, complete and objective and it is doubtful that the either are able to control modern pharmaceutical promotional practices given that they were passed in 1940 and 1954 and do not appear to have been amended since then. In addition, the purpose of the *Drugs and Magic Remedies Act* is to allow authorities to screen ads and promotional material for any attempt to sell medicines on the basis that they contain “magical” or “miraculous” remedies, not a task that is relevant to regulating promotion in the 21st century.  *Uniform Code of Pharmaceuticals Marketing Practices (UCPMP)*  This code bans all gifts to doctors and continuing medical education events sponsored by industry. The code also laid down rules about advertising and promotional material, claims and comparisons of medicinal products, activities and conduct of medical representatives, samples, hospitality, sponsorship, and meetings with healthcare providers (11). Although preamble to the code says it will be reviewed 6 months after being introduced and made mandatory if it was not being followed (52), at this point, 7 years later there has not been any public evaluation nor has its provisions been made mandatory. One reason for the inaction on the part of the Department of Pharmaceuticals may be that it has a conflict of interest because part of its mandate is to promote the pharmaceutical industry (11).  *Indian Medical Council (Professional Conduct, Etiquette and Ethics) Regulation 2002*  In 2009, the Medical Council of India (MCI, a statutory body charged with establishing standards for medical education in India and now in the process of being replaced by the National Medical Commission) introduced an amendment to regulate the interactions between doctors and the pharmaceutical industry and which nominally prohibited doctors from accepting any gifts, travel facility or hospitality, from any pharmaceutical company. The intent was to develop a healthy relationship between doctors and the pharmaceutical industry based on self-regulation (53). However, the MCI has a poor record of enforcing its guidelines (53) and in one study 5 years after the MCI introduced its restrictions, over 70% of 81 doctors had not read the guidelines (37). A 2010 parliamentary report noted that despite the MCI’s rules there was no diminishment in the acceptance of gifts, hospitality and trips by doctors and pharmaceutical companies continue to to sponsor foreign trips for many doctors and reward them with gifts like air conditioners, cars, music systems and gold chains (54). Moreover, the MCI initially did not prescribe any penalty for the doctors who violate the provisions of its rules. In response to criticism, the MCI suggested various punishments ranging from censure for doctors who accepted gifts worth Rs.1000 – Rs. 5000 (about US $22 to $110 in 2010) to removal from the Indian or State Medical Registry for more than one year (for accepting gifts worth more than Rs.100,000 (US $2200) (55).  *Code of Pharmaceutical Practices*  The response of the Organisation of Pharmaceutical Producers of India (OPPI), the lobby group for the multinational subsidiaries in India, to the MCI’s rules was the *Code of Pharmaceutical Practices* introduced in 2012 and subsequently updated in 2019 (56). In 2013, Ranjit Shahani, vice-chairman and managing director of Novartis India, and president of the OPPI, told the BMJ, “Our code is very specific and stringent and claimed that there were few multinational companies that did not follow the code (11). However, the previously mentioned activities of sales representatives from multinational companies in Indian health camps call that claim into question. The OPPI also explicitly says that its code is based on the one used by the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) (57), the Geneva-based voice of the multinational companies and the Indian code mimics some of the substantial weaknesses in the IFPMA code. Clause 4.1 in the IFPMA code states “It is understood that national laws and regulations usually dictate the format and content of the product information communicated on labelling, packaging, leaflets, data sheets and in all promotional material. Promotion should not be inconsistent with locally approved product information.” Virtually the same clause appears in the Indian code. In practice, this could mean that if weak national regulatory systems allow claims based on dubious science or do not require detailed safety information then companies are under no obligation as far as the code is concerned to provide this level of detail. Like the IFPMA code, the one from the OPPI virtually ignores the role of sales representatives and again like the administration of the IFPMA code, any complaints filed about possible OPPI code violations are handled entirely by people within the industry and sanctions are typically weak, usually consisting of a requirement for the company to stop the offending practice and issue a retraction.  **Conclusion**  The literature reviewed in this article is limited; the quality of some of the material used is poor and sometimes the messages are contradictory. However, the overall themes are clear, pharmaceutical companies spent enormous amounts of money on promotion in India and whether that promotion comes in the form of journal ads, brochures, visits from sales representatives or payments to go to conferences doctors, by and large, available themselves of what is offered. And the information that is offered, even if it is accurate, which it often is not, is usually biased to emphasize the benefits of the drugs being promoted and downplays or completely ignores the harms that they can cause. Moreover, a substantial proportion of the medicines being promoted should never have been allowed on the market in the first place. Medical students are also far too accepting of promotion, with a few exceptions, and receive too little education on the topic. While both medical students and practicing doctors recognize that promotion can affect prescribing behaviour, they usually deny that they personally can be affected, a dangerous position because when you believe yourself to be invulnerable you are not going to take any precautions. Finally, there is little effective regulation of promotion either from the industry, the medical profession or the government.  In his introduction to the book *Deception by Design: Pharmaceutical Promotion in the Third World,* the late Andy Chetley said “For too many years, the pharmaceutical industry has cultivated a cosy relationship with health workers with suggestions that both parties were partners in public health. The evidence is now clear that this is an unhealthy partnership” (58). What was true in 1994 is still true today in India. Uncontrolled pharmaceutical promotion is obviously only one of the many problems in health care, but it is one that has profound implications for how medicines are used. Reliance on promotion as a guide to how to prescribe leads to widespread inappropriate prescribing. Not only is individual health care adversely affected but the limited resources that India spends on health care are also wasted. |

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