

# Sales Promotion and Doctors' Prescribing Decision: A Review of Literature and Implications for the Nepali Pharmaceutical Market

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## ABSTRACT

The pharmaceutical industry operates in a unique environment where doctors, decide medicines for the patients. This makes the doctors main focus of pharmaceutical marketing, especially through sales promotion activities. This review under study explores how various sales promotion strategies affect doctors' decision to prescribe with especial lessons for Nepali pharmaceutical market. The study uses a literature review method and includes studies published between 2019 to 2025 from local and global context. The findings show that different sales promotion tools such as: branded gifts, free medicine samples, conference sponsorship, continuous medical education programs and financial incentives strongly influence doctors' decision to prescribe. Expensive promotions like foreign conference sponsorship, travel support have a greater effect on prescribing decision when compared with small gifts items. Research from many countries including Nepal shows that doctors' who receive such benefits from pharmaceutical company are more likely to prescribe the promoted medicines. Personal interaction with medical representative and relationship based marketing remain the most effective ways to influence prescriptions. However, these activities benefit both pharmaceutical company and the doctors but also create serious ethical concern. Such activities create potential conflict of interest, lack of transparency and risk to the patients'. The review highlights that in Nepal, weak regulatory systems and limited ethical oversight make doctors more vulnerable to promotional pressure. Therefore, stronger policy measures are needed to ensure transparency and accountability in pharmaceutical marketing. Companies should focus on ethical promotion that supports evidence-based prescribing and prioritizes patient welfare. Establishing clear rules, disclosure systems, and professional education on ethical marketing will help create a fair balance between business goals and medical responsibility in Nepal's growing pharmaceutical sector.

## KEYWORDS

Conflict of Interest, Doctors' Prescribing Decision, Ethical Promotion, Pharmaceutical Market, Rational Prescribing, Sales Promotion

## INTRODUCTION

The pharmaceutical industry operates in a unique environment where doctors decide which medicines are used for the patient. This gives doctors an important role in determining the success of the branded medicines produced by pharmaceutical companies. Therefore, pharmaceutical companies use various marketing tools to influence doctors' prescribing decision. Among various pharmaceutical marketing tools sales promotion is an important tool that is used by

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pharmaceutical companies to influence the choices of the medicines prescribed for the patient. The various sales promotion tactics include free medicine samples, gifts (both low value gifts and high value gifts), sponsorship for conferences or training, and financial incentives such as travel support or honoraria. These practices are designed to build relationships with doctors and increase brand awareness. Moreover, many studies have shown that such promotional activities can also affect prescribing decision of the doctors which are not always in the best interest of the patient. Doctors' who receive frequent gifts and financial benefits are more likely to prescribe promoted or the branded medicines of that particular pharmaceutical manufacture. This in turn increases the healthcare costs and raise the ethical concerns about the fairness, transparency and professional integrity. These issues become particularly important as the pharmaceutical industry in Nepal is rapidly growing and regulations on the marketing practices are still developing. So, understanding how sales promotions influences doctors' decision to prescribe can help identify areas for improvement in both marketing practices and health policy. Therefore, this review examines recent global and Nepali research on the relationship between sales promotion and doctors' decision to prescribe, highlighting its ethical, economic, and policy implications for the Nepali pharmaceutical market.

### **METHODS**

A descriptive and interpretivism approach was preferred for this study using recent literature from recent database like: PubMed, Mendeley, Scopus, Google Scholar, and Nepal Journals Online (NepJOL). The review included both global and Nepali studies published between 2018 and 2025 with a focus on research examining the link between sales promotion and doctors' decision to prescribe. The selected studies were thematically analyzed to identify patterns, consensus and contradictions.

**Search Method:** The keywords used to search the articles included sales promotion, pharmaceutical marketing, prescribing behaviour, doctors' decision to prescribe.

**Search Criteria:** Initially title, abstract and research objectives of the articles were reviewed. The selection criteria after reviewing the articles were: 1. The article must be published from 2018 to 2025, 2. Full article must be available and must be written in English, 3. The research objectives must mention the sales promotion as a factor affecting the doctors' decision to prescribe.

**Data Abstraction and processing:** The articles selected were fed into the Mendeley desktop. From each reviewed article the following details were recorded in the research matrix: the author's name, the year of publication, title, name of the journal, research objectives, method used, identified factors and findings.

**Result:** The search criteria identified 25 articles and finally, 10 articles were selected for the review. The descriptive and interpretivism qualitative method was used for data analysis and for driving to a conclusion.

### **RESULTS OF LITERATURE REVIEW**

#### **Sales Promotion Techniques**

Sales promotion in the pharmaceutical industry includes a variety of technique such as high-value and low value gifts, free drug sample, sponsorship of conferences, continuous medical education, financial incentives. Both low value and high value gifts have been widely reported. Low value gifts include brand reminders like stationery items pens, notepads and high value gifts

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includes electronics, travel sponsorship etc. These techniques are aimed at building relationships with doctors and creating brand awareness and loyalty. According to the study conducted by Dar & Hasan (2021) the most effective promotional tools for influencing doctors' decision to prescribe were sponsorship for international conferences and personal tours, followed by personal gifts. Textbook as gifts and free drug samples were moderately effective tools whereas product brochures and regular visit of pharmaceutical medical representative were considered less impactful. Visits from top management team were considered more impactful when compared to visits from medical representatives. Overall the findings suggested that doctors are strongly influenced by high value promotional tools.

Likewise, the study of Atia et al. (2022) also examined how pharmaceutical marketing affects doctors' prescribing behavior in Tripoli, Libya. The study included 122 doctors from public and private health facilities. The study found that frequent visit from medical representatives highly influenced doctors' decision to prescribe. The findings indicate that frequent visit from medical representatives significantly shape prescribing decision from doctors through tools like free drug samples, branded gifts etc. The findings of the study underlined the need for national guidelines and regulations to ensure ethical promotional and rational drug use in Libya.

Moreover, study by Goupil et al. (2019) also investigated whether financial and material gifts influenced the prescribing behaviour of healthcare professionals in French primary care. The study included a retrospective dataset of 41,257 general practitioners from the Transparency in Healthcare and National Health Data System. The study categorized doctors according to the monetary value of gifts received and further assessed prescription patterns. According to this study several types of sales promotion techniques used by pharmaceutical companies to influence doctors' prescribing behavior. These included gifts, such as: pens, notepads, calendars, textbooks, and electronic items, which helped to recall the promoted brand amongst other competitors. Pharmaceutical companies provide free drug samples to the doctors and doctors subsequently prescribe them to the patients. Financial incentives, including sponsorship for conferences, continuing medical education (CME) programs, travel expenses, and consultancy honoraria, also play a major role in shaping doctors' decision to prescribe. Furthermore, the study also mentions that regular visits from medical representatives strengthen the relationship between doctor and pharmaceutical companies. In addition, promotions like sponsored meals, hospitality, research funding, equipment for clinics/hospitals are also used to influence the prescriptions. Such kind of promotional activities makes the doctors' obliged to the pharmaceutical company leading to irrational prescribing practice, thereby increasing healthcare expenditure to the patient.

Likewise, the study by Kabir & Maulan (2021) investigated the impact of direct sales promotion on physicians' prescribing behaviour. The study employed quantitative research method and surveyed 154 medical practitioners from private healthcare system in Malaysia. The data analysis was done using the data using SPSS and SmartPLS. Results from the study concluded that personal selling was the most influencing factor, followed by sales promotion and public relations, while advertising had a relatively minor effect and direct marketing showed no significant influence. Moreover, the study identified five categories of direct-to physician promotional tools based on Kotler's (1999) mix : advertising which uses brochures, leaflets, banners and journal ads to inform doctors' ; sales promotion, involving low and high value gifts,

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free samples, equipment's and sponsorship creating a sense of obligation towards pharmaceutical companies; personal selling where sales representatives influence prescribing through face-to-face detailing, follow ups and relationship building; public relations including product launches, CME programs, seminar and sponsorship to build long-term trust; and direct marketing, using calls, SMS, emails, mails which proved least effective in shaping prescribing behaviour.

In the same vein, Carey et al. (2021) presented a strong evidence that when doctors' receive benefits from pharmaceutical companies it directly affects the way they prescribe the medicines. Such benefits include a range of promotional strategies like: direct monetary incentives (e.g., honoraria, consultancy fees, and speaker engagements), sponsorship of professional activities (such as conference registrations and travel support), as well as more indirect forms of promotion like sponsored meals, free drug samples, and the distribution of branded gifts.

Moreover, Ali et al. (2022) conducted a cross-sectional study to investigate doctors' perceptions and attitudes toward various pharmaceutical promotional tools. The study also examined to what extend these tools influenced prescribing behaviour. The study focused on several common sales promotion strategies employed by pharmaceutical companies, including frequent visits of medical representative (MR), distribution of free drug samples, provision of educational or sponsored events, and the offering of gifts or hospitality. According to the study, MR visits was considered as one of the most frequent and impactful channels, which helped doctors' learn about new product, medical information. Likewise, free drug samples were seen as an important marketing tool which allowed doctors to try new medicines to the patients. Also, this made the doctors' more familiar with the product thereby increasing the likelihood of prescribing the medicine in the future. In addition, the study also highlighted the role of sponsored events, such as conferences, workshops, and educational seminars, which doctors' often consider as sources of continuous medical education. Moreover, the researcher concluded that while many doctors consider this promotion both as professional and educational the researcher themselves were doubtful about personal gifts and financial benefits which they consider it as unethical.

Similarly, Zarei et al. (2023) reviewed the various forms of sales promotion techniques used by pharmaceutical companies to influence doctors' decision to prescribe. The study highlights the use of gifts, free drug samples, sponsored travel as the main promotional direct tool used by pharmaceutical companies to promote their products. Other indirect tools like CME Programs, offering payments for speaking about the products are also discussed in the study. Such activities help to build long-term relationship and brand loyalty among doctors towards the pharmaceutical company. However, the researchers also warn that such kind of activities may reduce doctors' clinical independence and lead to biased prescribing behaviour adding extra cost to the patient. Consequently, the researcher advocate for policy measures: including mandatory disclosure of industry payments, restrictions on high-value incentives, and education on ethical prescribing to the doctors.

**Evidence of Impact on Doctors' Decision to Prescribe**

Doctors are the most important players in the pharmaceutical ecosystem and serve as a major influencing group in prescribing decisions. Doctors function as influencers, gatekeepers,

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and ultimate decision-makers, since they control access to these medications (Jayasooriya & Samarasinghe, 2019).

The past literatures show that sales promotions have influenced doctors' decision to prescribe. Doctors are more likely to prescribe the medicines that are promoted to them via gifts or incentives. Similarly, a study in Nepal by Napit (2018) concluded that gifts, samples, and monetary incentives strongly affect prescription patterns. Likewise, Hailu et al. (2021) concluded that doctors who accepted gifts from pharmaceutical companies were significantly more likely to prescribe the promoted drug. The study was conducted in Ethiopia, South Africa. However, the study also points out that low-value gifts may have limited long-term impact. Moreover, according to the findings from Atia et al. (2022) frequent visit from medical representatives significantly shaped prescribing practices through free drug samples and gifts. The researcher also points out that the relationship between doctors and pharmaceutical companies require the immediate need for national guidelines and regulations for ethical and rational use of drug which benefits patient.

In the same vein, Goupil et al.,(2019) revealed that doctors when not influenced by pharmaceutical companies consistently prescribed more generic medicines and generated low average prescription cost per visit when compared to those who were influenced. Conversely, doctors who received gifts even of low monetary value were more likely to prescribe branded drugs and risk-associated medicines such as benzodiazepines and vasodilators incurring higher cost. Also, in the same context the researcher represented a different promotional strategy like donating equipment, invitations to professional or social events, hospitality expenses, travel and accommodation support, monetary benefits like reimbursement and rebates were adopted to strengthen relationships with physicians and subtly influence prescribing behavior. Moreover, the study of Kabir & Maulan (2021) concludes that relationship-based promotional strategies particularly personal selling, sales promotion, and public relations are the most effective tools influencing physicians' prescribing behaviour in Malaysia. Among these interpersonal engagement was the most significant strategies. Hence, these findings suggest that the pharmaceutical companies should focus more on interpersonal interaction and trust building activities to enhance the prescription generations.

Mitchell et al. (2020) conducted a systematic review to examine how financial relationships between doctors and the pharmaceutical industry affect prescribing behaviour. The findings of this study was consistent with previous findings.

Promotional activities and payments from pharmaceutical industry were associated with increased prescribing behaviour drifting from evidence-based treatment. Physicians who receive such incentives were more likely to prescribe new or branded medicines, which are usually expensive and not superior in terms of existing alternatives. According to the study even a few small forms of promotion, such as free meals, free drug samples, or small gifts, can significantly influence prescribing behavior. This again highlights that repeated, daily interactions with medical representatives may have a strong cumulative effect over the time, challenging the belief that only large payments affect clinical decision-making. Moreover, the study highlights the need for strict rules and stronger policies to prevent conflict of interest and protect rational prescribing.

## ETHICAL CONCERNS

WHO defines pharmaceutical promotions as “all informational and persuasive activities by manufacturers the effect of which is to influence prescription, supply, purchase or use of medicinal drugs.” These include advertisements, on-to-one sales visits, free samples. Pharmaceutical sales promotion often creates ethical dilemmas. Moreover, WHO ethical guidelines ensure that pharmaceutical promotions should align with rational use of medicines, patient centric care with minimal use of advertisement. Likewise, World Health Organization (WHO) has expressed its concern regarding such practices which encourage irrational prescribing, which in turn harm patients and increase healthcare expenditures.

According to Kabir & Maulan, (2021) promotions done by pharmaceutical companies affect medicines accessibility and fair access raising the question on national level policy and ethics of physician targeted promotions. Similarly, Yimer, (2021) also has raised ethical and policy concerns about healthcare costs and patient access, calling for a stronger regulation to protect medical professionalism and affordable care. In the same way Goupil et al. (2019) stated that pharmaceutical gifts are linked to irrational and more expensive prescribing increasing financial burden on patient and the entire health system. Likewise, Carey et al. (2021) raised significant ethical concerns regarding pharmaceutical promotions where commercial and personal growth outweighs patient outcomes.

However, not all influences are negative. Some studies also show that prescribing decision are also shaped by quality of medicines, corporate reputation and patients' need. According to Alowi (2019) concluded that interaction between pharmaceutical companies and doctors can promote knowledge exchange and research collaboration which can indirectly promote patient care. Thus, while sales promotion is influential, it is not the sole determinant of prescribing behavior. Nepal has a weak enforcement of ethical codes and poor transparency making both doctors' and patients' vulnerable. Gifts and sponsorships may bias the clinical judgment, compromise patient safety and put them at a risk.

## CONCLUSION

This review concludes that sales promotion is still one of the most powerful and controversial tools in pharmaceutical marketing. The literature consistently supported that financial and non-financial incentives offered to physicians' directly affect their prescribing behavior. These practices might increase brand awareness and short-term sales they pose a threat to the ethical standard leads to irrational prescribing and raise medical cost. Hence, in pharmaceutical context, persuasion occurs when medical representative use communication and promotional strategies to influence doctors' decision to prescribe in the favor of promoted pharmaceutical company.

However, while persuasion is a legitimate marketing skills, excessive use of promotional tools can cross ethical boundaries. The result of such cross-over include: conflict of interest, irrational prescribing, increased health care expenditure, reduced trust in medical profession. Likewise, in Nepal, where regulatory enforcement and transparency are not strongly enforced, such activities can affect doctors' independent decision making process and patient-centric care. Therefore, a strong policy is needed to create a clear ethical guideline, make payment disclosure mandatory and regulate the interaction between doctor and pharmaceutical company.

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Pharmaceutical companies should focus on responsible promotion strategies like: education, evidence-based knowledge, and ethical engagement. By maintaining a balance between business goals and medical ethics, Nepal's pharmaceutical sector can grow in a sustainable way while ensuring that prescribing decision remains aligned with patients' best interests.

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