JPSIM Journal of Pakistan Society of Internal Medicine

Original Article

Assessing Awareness and Information Sources of Newly Launched Drugs Among Healthcare Providers in Primary and Secondary Hospitals of Sialkot

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Abstract

Objective: To compare the level of awareness of new drug Lefamulin with healthcare providers in primary and secondary hospitals in Sialkot and determine the main sources of information that affect the awareness of this drug, as a case.

Methods: Cross sectional survey was carried out on healthcare providers working in primary and secondary hospitals in Sialkot. The data on awareness of Lefamulin and the source of information about the availability of Lefamulin was collected with the help of a structured questionnaire. The data were examined to identify the level of awareness, the differences among professionals and the most common information channels which were used.

Results: Out of 44 respondents, 43.18% reported being fully aware of Lefamulin, 25.00% were somewhat aware but required additional information, and 31.82% were unaware of the drug. Out of 18 responses, consultants demonstrated the highest level of awareness (44.44%), while out of 4 responses, 2 surgeons exhibited the awareness while 2 were unaware. Among information sources, pharmaceutical sale representatives were the most influential (used by 65.91% of respondents), followed by professional conferences or seminars (11.36%) and colleagues or peers (6.82%). Junior doctors and physicians relied more heavily on pharmaceutical sales representatives, while consultants utilized a broader range of sources.

Conclusion: The study reveals significant disparities in awareness levels and reliance on pharmaceutical representatives for information about the newly launched medicines. Strategies such as enhanced use of professional conferences, medical journals, and digital platforms are recommended to bridge gaps, particularly for junior doctors and rural providers. Future strategies should focus on diversifying information channels to ensure equitable access to updated drug information across all healthcare sectors.

Keywords: Drug awareness, Lefamulin, primary healthcare, secondary healthcare, pharmaceutical sales representatives.

How to cite this:

Rajpoot NR, Eatsham MU, Hussain S, Aslam U, Javed M, Hadi A. Assessing Awareness and Information Sources of Newly Launched Drugs Among Healthcare Providers in Primary and Secondary Hospitals of Sialkot. J Pak Soc Intern Med. 2025;6(3): 268-272

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Received: 27-01-2025 **Revised:** 08-02-2025 **Accepted:** 23-07-2025

DOI: https://doi.org/10.70302/jpsim.v6i3.2550

Introduction

The connection between the pharmaceutical industry and physicians has been a controversial topic in many decades.[1] Past reports have shown that pharmaceutical sales representatives can possibly affect prescribing behavior.[2]

The pharmaceutical firms have been developed so that they are engaged in their efforts to manipulate prescribing patterns by training of sales people. The company provided drug detailers who paid visits to the physicians to explain new drugs and hand over company products. The one of the most frequently employed nowadays method is when the pharmaceutical sales representatives talk directly to the physicians about the characteristics of a specific product.

Considering such intricacies, it is necessary to evaluate how the providers of healthcare in the primary and secondary hospitals in Sialkot are made aware of the newly introduced drugs and what are their main sources of information. Such dynamics may be useful to develop a strategy to improve the dissemination of drug information by understanding what makes it effective and ethically acceptable. This research aims to determine the extent of healthcare provider's knowledge regarding recently introduced drugs, with Lefamulin as an example and determine the most significant sources of information about them. This is what it tries to do in an effort to contribute to the ongoing debate on drug promotion practices and the consequences of the same on the delivery of health care in Pakistan. Moreover, promotional tools employed by the pharmaceutical sale representatives have been studied in terms of their effectiveness. Pharmaceutical sale representative plays a key role in the marketing and sales departments of the pharmaceutical industry which has grown tremendously in Pakistan. Their capability to provide good product information to the doctors is crucial. Nevertheless, the practices and ethical aspects of the given practices deserve further consideration. Considering such intricacies, it is necessary to evaluate how the providers of healthcare in the primary and secondary hospitals in Sialkot are made aware of the newly introduced drugs and what are their main sources of information. Such dynamics may be useful to develop a strategy to improve the dissemination of drug information by understanding what makes it effective and ethically acceptable. The proposed study will focus on determining the degree of awareness of healthcare providers to newly released drugs, and a specific example of a drug called Lefamulin, and the main sources of the information that healthcare providers receive. In this way, it will contribute to the existing discourse on practice of drug promotion and its effects on the delivery of healthcare in Pakistan.[3]

Methods

Study Design: It was a cross sectional study to determine the estimate of awareness of newly launched drugs to the healthcare providers in primary and secondary hospitals of Sialkot. A structured, digital questionnaire was designed and distributed using Kobo Tool box for the study. Data collection and analysis of prescribing practices and information sources were made efficient through the design.

Study Setting and Population: The study targeted doctors with prescribing authority working in both primary and secondary healthcare facilities. Participants included medical professionals across various specializations to ensure a comprehensive understanding of awareness and information dissemination. Inclusion criteria mandated that participants be licensed medical professionals actively involved in patient care and prescribing practices.

Data Collection: Lefamulin, a new drug recently launched, is a measure of awareness levels. Sources of information about the drug (predominant). Principal components of the study were professional roles and workplace settings of the participants. We used Kobo Tool box questionnaire to assess:

- Levels of awareness about Lefamulin, a newly launched drug.
- Predominant sources of information about the drug.
- Professional roles and workplace settings of the participants.

Healthcare providers were able to access the questionnaire link digitally. The responses were collected over two weeks, focusing on getting responses from a representative sample of doctors, working in both urban and rural areas.

Data Analysis: Data cleaning, sorting, and analysis were performed using Microsoft Excel and SPSS respectively. Key steps in the data analysis process included *descriptive statistics*; the distribution of responses on various categories was summarized in terms of percentages and frequencies, *Comparative Analysis*; trends and variations in awareness levels were compared between primary and secondary healthcare providers. Lastly *Visualization*; to represent all of this graphically we have invented graphical representations, e.g. bar charts, pie charts and line graphs.

An awareness level of Lefamulin across different hospital types was different. The proportion of information sources used include (e.g., pharmaceutical sales representatives, clinical meetings, journals). Variations in awareness based on professional categories (e.g., general practitioners vs. specialists).

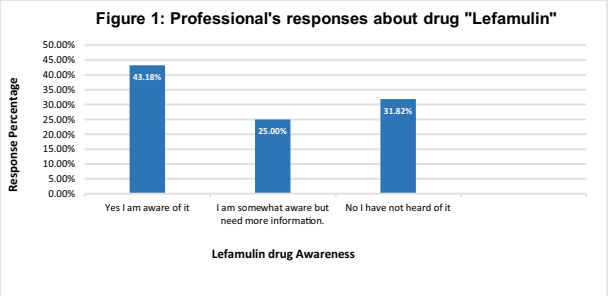
These visuals provided an intuitive understanding of the data, aiding in the identification of dominant patterns and gaps in drug awareness.

Ethical Considerations; The Medical Superintendent gave ethical approval for the study. All respondents provided informed consent digitally and participation was voluntary. The study maintained confidentiality and anonymity of participants.

Results

Awareness Levels

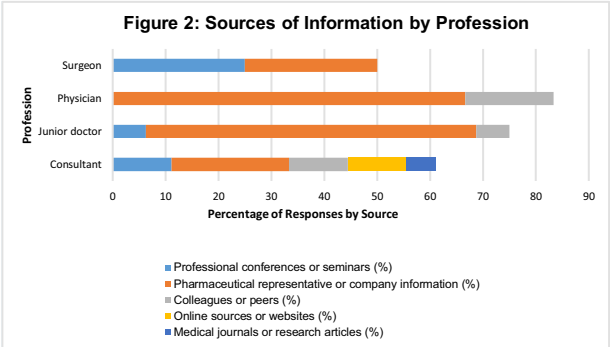
The study assessed awareness levels regarding Lefamulin among 44 healthcare providers, categorized as "fully aware," "somewhat aware," and "unaware." The distribution of responses is summarized in Figure 1. Key Observations include 43.18% of respondents were fully aware of Lefamulin, 25.00% required additional information, indicating partial awareness and 31.82% were unaware, highlighting significant gaps in dissemination.

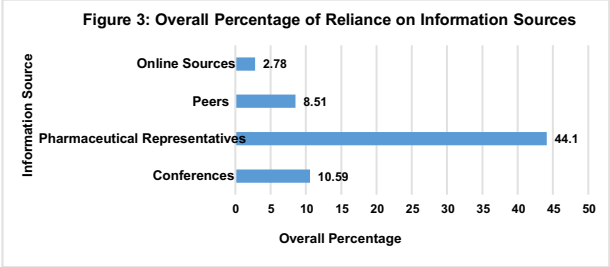


Awareness by Profession

Key Observations include consultants showed the highest awareness, with 44.44% (n=18) fully aware of Lefamulin, junior doctors were evenly distributed across the three categories, with 37.50% (n=16) fully aware and Surgeons exhibited the least awareness, with 50% (n = 6) of respondents unaware of Lefamulin. The variation in awareness levels across professional groups (consultants, junior doctors, physicians, and surgeons) is summarized in Table 1.

Respondents were asked to identify their primary sources of information about Lefamulin. Table 2 summarizes the reliance on different sources across professional groups.





Discussion

One of the most important pharmaceutical care services the clinical pharmacist provides is provision of drug information (DI).[4] DI means delivery of objective, well-referenced, and critically reviewed up-to-date information on drug use.[5] This includes electronic means, Standard treatment guidelines

Table 1: *Showing awareness categories with percentages*

Profession	Awareness category			Overall Responses count	Total Responses	Overall response percentage
	Yes I am aware of it	I am somewhat aware but need more information	No I have not heard of it			
Consultant	8	3	7	18	44	40.91%
Junior doctor	6	6	4	16	44	36.36%
Physician	3	2	1	6	44	13.64%
Surgeon	2	0	2	4	44	9.09%

Table 2: *Reliance on different sources across professional groups*

Profession	Professional conferences or seminars	Pharmaceutical representative or company information	Colleagues or peers	Online sources or websites	Medical journals or research articles	Total responses by profession
Consultant	2	4	2	2	1	18
Junior doctor	1	10	1	0	0	16
Physician	0	4	1	0	0	6
Surgeon	1	1	0	0	0	4

(STGs). In some healthcare settings pharmaceutical sales representatives who visit healthcare providers and inform about newly launched drug through seminars and presentations especially in middle income countries like Pakistan, India and African countries.

Pakistan pharmaceutical market is one of the emerging market among the developing countries with market value of about $3.2 billion.[6] Pharmaceutical companies advertise their products to physicians, patients and sites for health care, in order to reinforce sales revenues; however, the predisposition to make profits and to monopolize the market share generally influences their promotional strategies,[7] and in this study most drugs information was disseminated by the pharmaceutical sales representatives.

While a similar scenario was studied in Nigeria, only 40.8% of the 400 doctors working at the University College Hospital (UCH) participated in the study. Colleagues (161 participants, 98.8%) and reference books (158 participants, 96.9%) were identified as the primary sources of drug information, followed by pharmaceutical sales representatives (PSRs) (152 participants, 93.2%) and promotional materials (151 participants, 92.6%). Over fifty percent of the interviewees considered PSRs as a valid and credible source of information about drugs. Moreover, PSR information raised the awareness of respondents of the drugs under promotion and influenced their prescribing behavior. Different sources of drug information were used by the participants and some of them may not be appropriate, e.g. PSRs.8

In contrast, junior doctors and surgeons exhibited lower awareness levels, consistent with studies suggesting that surgical specialties often rely less on pharmaceutical updates compared to medical specialties.[9]

This study revealed significant disparities in the awareness of Lefamulin among healthcare providers in primary and secondary hospitals in Sialkot. Only 43.18% of respondents reported full awareness of the drug, while 31.82% were unaware, indicating gaps in dissemination strategies. Consultants displayed the highest levels of awareness, likely due to their active participation in professional conferences and seminars. Similar findings have been observed in developing countries, where higher levels of professional engagement often correlate with greater awareness.[10]

The primary source of drug related information was pharmaceutical representatives (44.10%), consistent with earlier findings in South Asia and other developing areas where representatives are often the only connection between pharmaceutical companies and prescribers.[11]

However, it is worrying that evidence based resources like online platforms (2.78%) and medical journals (1.39%) are underutilized. This finding is in line with reports that low digital literacy and limited access to updated clinical resources limit the adoption of evidence based practices in low and middle income countries.[12]

These findings suggest a number of strategies for enhancing the dissemination of drug related information.

Providing increased access to professional conferences and seminars would vastly increase awareness, given that these conferences are still effective means for disseminating knowledge to healthcare providers. Health personnel use educational meetings widely to provide continuing medical education and to promote implementation of innovations or to translate new knowledge to change practice in healthcare systems.[13]

Digital and online platforms are equally important, and provide centralized repositories of drug information and interactive learning modules, but there is a need to improve digital literacy among providers. Data collection, analysis, and communication are facilitated by the use of digital communication tools resulting in improved clinical decision making. Real time access to patient information and multidisciplinary collaboration in telemedicine consultations help improve clinical outcomes.[14]

In addition, continuous medical education (CME) programs around new drugs' launches, and relevance to a specific health sector, facilitate engagement and practical use of conveyed knowledge. Continuing Medical Education (CME) has been viewed traditionally as a lifelong process expected of doctors so that they can offer the right care to their patients. Although CME programs have a long history, outcomes are far from ideal.[15]

Finally, we discuss targeted dissemination strategies for underserved areas such as merging mobile outreach teams with telemedicine to resolve information disparities and facilitate equitable dissemination of healthcare.[16]

The results of this study are useful, yet constrained by a small sample size and limited geographic scope. Other studies that sought to assess healthcare practices in resource limited setting have reported similar challenges.[11] These findings should include larger and more diverse populations. Digital platforms and professional networks may be explored to help enhance awareness.

Conclusion

The study reveals significant disparities in awareness levels and reliance on pharmaceutical representatives for information about the newly launched medicines. Strategies such as enhanced use of professional conferences, medical journals, and digital platforms are recommended to bridge gaps, particularly for junior doctors and rural providers. Future strategies should focus on diversifying information channels to ensure equitable access to updated drug information across all healthcare sectors.

Ethical Approval: The IRB/EC approved this study via letter no. 224/MS-THQ-SMB dated October 8, 2024.

Conflict of Interest: *None*

Funding Source: *None*

Authors' Contribution

NRR,MUE: Conception

SH,MJ: Design of the work

UA,AH: Data acquisition, analysis, or interpretation

SH,UA,MJ,AH: Draft the work

NRR,MUE: Review critically for important intellectual content

All authors approve the version to be published

All authors agree to be accountable for all aspects of the work

References

1. Fickweiler F, Fickweiler W, Urbach E. Interactions between physicians and the pharmaceutical industry generally and sales representatives specifically and their association with physicians' attitudes and prescribing habits: a systematic review. BMJ Open. 2017;7(9):e016408.
2. Mulinari S. Unhealthy marketing of pharmaceutical products: an international public health concern. J Public Health Policy. 2016;37(2):149-59.
3. Dar T. Effectiveness of promotional tools used by medical representatives to generate product prescriptions from doctors with respect to Pakistan's pharmaceutical industry [dissertation]. Pakistan; 2021.
4. Sridhar S, Francis S, Rao PGM. Provision of clinical pharmacy education and services by RAK college of pharmaceutical sciences, Ras Al Khaimah, UAE. Arch Pharm Pract. 2014;4(3):133-6.
5. Raj GM, Raveendran R. Introduction to basics of pharmacology and toxicology: Volume 1: General and molecular pharmacology: principles of drug action. Singapore: Springer; 2019.
6. Khowaja RH, Feroz A. Unethical pharmaceutical marketing in Pakistan: a systematic review. J Pharm Health Serv Res. 2020;11(1):55-60.
7. Gul R, Saeed H, Saleem Z, Rasool F, Hashmi FK, Islam M, et al. Perceptions of and barriers to ethical promotion of pharmaceuticals in Pakistan: perspectives of medical representatives and doctors. BMC Med Ethics. 2021;22(1):1-16.
8. Oshikoya KA, Oreagba I, Adeyemi O. Sources of drug information and their influence on the prescribing behaviour of doctors in a teaching hospital in Ibadan, Nigeria. Pan Afr Med J. 2011;9(1):13.
9. Pakenham-Walsh N, Bukachi F. Information needs of health care workers in developing countries: a literature review with a focus on Africa. Hum Resour Health. 2009;7(1):30.
10. Turkmani S, Smith RM, Tan A, Kamkong CB, Anderson R, Sakulku S, et al. An evaluation of the introduction of telehealth for remote antenatal and postnatal contacts in Bangladesh and Lao People's Democratic Republic during the COVID-19 pandemic. PLOS Glob Public Health. 2023;3(5):e0000786.
11. Ye J, He L, Beestrum M. Implications for implementation and adoption of telehealth in developing countries: a systematic review of China's practices and experiences. npj Digital Medicine. 2023;6(1):174.
12. Zhang M, Doi L, Awua J, Asare H, Stenhouse R. Challenges and possible solutions for accessing scholarly literature among medical and nursing professionals and students in low-and-middle income countries: a systematic review. Nurse Educ Today. 2023;123:105737.
13. Forsetlund L, O'Brien MA, Forsén L, Reinar LM, Okwen MP, Horsley T, et al. Continuing education meetings and workshops: effects on professional practice and healthcare outcomes. Cochrane Database Syst Rev. 2021;9(9):CD003030.
14. Hollander JE, Carr BG. Virtually perfect? Telemedicine for COVID-19. N Engl J Med. 2020;382(18):1679-81.
15. Faghihi SA, Khankeh HR, Hosseini SJ, Soltani Arabshahi SK, Faghih Z, Parikh SV, et al. Improving continuing medical education by enhancing interactivity: lessons from Iran. J Adv Med Educ Prof. 2016;4(2):54-63.
16. Gizaw Z, Astale T, Kassie GM. What improves access to primary healthcare services in rural communities? A systematic review. BMC Prim Care. 2022;23(1):313.