



SHORT COMMUNICATION

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Prescribing patterns: a key factor in rational use of drugs in Lahore, Pakistan

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ABSTRACT

Prescribing pattern is the trending topic now days to promote rational use of drug and to make the drug therapy effective. Many factors like lack of knowledge, improper guidelines and personal interest affects the prescribing behaviour of a physician. To access the prescribing pattern and its relevant features which modulates it in the sector of Lahore, A survey was conducted in which physicians of different expertise were engaged from top hospitals of public and private sector. A questionnaire was designed and 100 physicians were interviewed as per structured questionnaire. The collected data was analysed by using analytical software SPSS 22. Pharmacological factors, cost effectiveness, efficacy of drug, recommended guidelines, psychological expectations and patient adherence are some factors which a prescriber keeps in his mind while prescribing a drug. Personal benefits and polypharmacy is strongly prohibited by physicians. physicians of Lahore prefer patient benefits upon their own in prescribing a drug but there are still some drawbacks like socio-economic factor and social culture which cause hindrance for a physician while prescribing.

Key Words: Prescription writing, rational prescribing, rational use of drug, prescribing behaviour.

According to WHO (1985) the rational use of drug is – “Patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements, for an adequate period of time, and at the lowest cost to them and their community (Kar *et al.*, 2010). The irrational use of drugs results not only in the development of tolerance but also a financial burden on national health system (Gyssens, 2001). Rational prescription ensures the safe and effective use of drugs (Kar *et al.*, 2010).

Incorrect perceptions by doctors regarding patients, results in unnecessary prescribing and poor compliance among which lack of medical investigations plays critical role (Little *et al.*, 2004). Detecting the cause of disease facilitate the physician to make sure the accurate use of drug and promotes rational prescribing (Williams and Heymann, 1998). The behaviour of over estimating the expectations of patients will lead to the inappropriate prescribing (Basu *et al.*, 2008). Interventions including the comparison of physician's behaviour with recommended behaviour enhances and improve the doctor's request for lab tests (Winkers *et al.*, 1995).

Increasing growth in pharmaceutical expenditure is a major concern which emphasizes its effect on the prescribing pattern (Carthy *et al.*, 2000). The trend of polypharmacy in developing countries is more towards personal interest rather than patient benefits. As there being personal interest involved, some physicians also acquire financial benefits from the marketing personals ignoring patient's safety.

The present study was conducted to evaluate the prescribing pattern of physicians. This study was carried out from July 2016 to August 2016 in different hospitals of Lahore, Pakistan. The structured questionnaire was designed and data was analysed with SPSS-22. The study was conducted on 100 physicians. Physicians with the experience of more than 10 years were included in this study.

Prescribing of drug is majorly evident by both pharmacological as well as non-pharmacological factors while cost effectiveness and efficacy is an important criterion for rational prescribing as shown in table 1. Company bonded benefits and recommended guidelines influence the prescription. Patient demand regarding choice of drug is not considered as their major psychological expectation is regarding cost of therapy, not the quality of therapy as in table 2. Low clinical space with patient overload affects the prescribing behaviour of physician. Mostly physicians prefer maximum time to patient to take complete history rather than giving minimum time and maximum number of drugs. Their priority is to complete the course of therapy even if the disease is treated. 60% of prescriber prefers national drugs. Physicians accepts that polypharmacy doesn't justifies rational prescribing. 100% prescribers recall the socio-economic condition of patient before prescribing. According to table 3 different interventions have different influence on prescribing pattern as educational intervention have maximum effect on it (60%).

Majority of physicians are making a trend of rational prescribing but involvement of pharmacist is limited. There are some limitations to our studies that we have not focused all the aspects which affects the prescribing behaviour of a physician by any mean due to limitation of resources but we have diversity in approaching the physician. Another study concludes that behaviour is also affected by the sex of patients as general physicians have more prescribing expectations toward women than to men. (Redman *et al.*, 1991). Every practitioner need separate and specific targeting due to their individual styles and behaviour in prescribing appropriate drug. To compensate it, a three model of change is introduced which targets the individual physician, its clinical practice and changes in the traditional agencies like journal editorials and clinical meetings (Armstrong *et al.*, 1996).

Giving feedback on prescription is not enough for changing the behaviour of physicians (Connell *et al.*, 1999). It is observed that combining the feedback of individual treatment with prescriptions based on recommended guidelines improved the quality of patient care (Lagerlov

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Table 1: Factors direct influencing the prescription.

Factors	Cost effectiveness	Efficacy	Socio-economic status	Presenting complaints
Frequency	24	132	50	150
Percentage	12%	66%	25%	75%

Table 2: Factors influencing the prescribing behavior.

Factors	Company bonded benefits	Recommended guidelines	Prescriber own choice	Social culture
Frequency	30	110	60	60
Percentage	15%	55%	30%	30%

Table 3: Interventions influencing prescribing patterns.

Interventions	Educational	Managerial	Strategical	Prescription review
Frequency	132	50	20	60
Percentage	60%	25%	10%	30%

et al., 2000). Evidence based education have an impact on prescribing behaviour (Gray, 2005).

The physician-industry relation and interaction is affecting the profession and should be discussed at high scale so that company bonded benefits and gifts are discouraged and promote rational use of drug (Wazana, 2000).

The findings of our study are that physicians of Lahore promotes rational prescribing and prefers patient benefits over their own but there are still many drawbacks in prescribing patterns as social culture, socio economic factor, clinical setting and company bonded benefits have their impact in prescription writing. Awareness programs should be conducted to eradicate all these factors so that rational prescribing is promoted.

Involvement of a capable pharmacist will facilitate physician in prescribing. Guidelines should be introduced and improved time to time by comparing it to the most accepted guidelines to ensure the safety and benefit of patient. Educational, managerial, financial and regulatory interventions should be done at both physician and patient level. A strategic plan and monitoring system should be launched which motivate an interactive group process among health providers to appraise the rational use of drug and to involve intellectual qualities of pharmacists.

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