

COUNTER-DETAILING INITIATIVE FOR RATIONAL PRESCRIBING OF DRUGS TO THE GENERAL PRACTITIONERS

ARBAB A GHAFFAR

*Department of Pharmacology,
Postgraduate Medical Institute,
Lady Reading Hospital, Peshawar.*

SUMMARY

656 drug prescriptions were analysed in the light of the WHO action programme on essential drugs issued by 22 general practitioners. These prescriptions were copied after obtaining informed consent. The general practitioners, so selected, had their practice based in the slums of Peshawar. 2.94 drugs were prescribed per prescription, 62% contained antibiotics and 93% has injectables. In 34% diagnosis, in 43% symptoms and in 23% neither diagnosis nor symptoms were mentioned.

INTRODUCTION

The general practitioners due, either to heavy commitments, have little time for keeping abreast with the latest developments in health care, or to aggressive and tempting advertising influences of pharmaceutical firms, generally become less determined in prescribing effective, safe and economic drugs. It may, therefore, result in an irrational tendency of prescribing excessive^{1,4} and expensive medicines.^{5,6,7} especially antibiotics^{8,9} much beyond the requirements of the patients.

The attitude of the general practitioners requires to be changed and attempts made to improve their prescribing behaviour to a more rational approach in drug therapy.

The solution to bad doctoring is to educate the doctor rather than putting restrictions on his prescribing. Therefore, continued medical education is the pressing need of the day to improve the prescribing behaviour of the general practitioners.

This may be achieved by either counter-detailing initiative or conventional methods of medical education. Counter detailing initiative is an approach, whereby appropriate and unbiased scientific knowledge is communicated to the general practitioners, by qualified and experienced clinicians in an inter-personal and educative atmosphere to enable them to consider efficacy, safety, and economy before prescribing any drug, thus conforming to the need of rational prescribing. The pharmaceutical representatives detail their products in their marketing approach, in exactly the same manner.

The counter detailing initiative is proposed to be accomplished in a phased programme, comprising of 3 phases:

- Phase I. Base-line survey and documentation of data, duly completed and described in details later in this paper.
- Phase II. Intervention phase and subsequent
- Phase III. Evaluation phase.

MATERIAL AND METHODS

Base-line survey has been conducted and data documented as under.

1. Study Personnel

Six final year students of Pharmacy Department of Peshawar University opted to participate, after being briefed about the procedure of this study.

2. Study population

Twenty two of the twenty nine qualified general practitioners gave an informed consent to participate in the survey and allowed their prescriptions to be copied.

3. Study sites

The general practitioners in the Shaheen Town (Shah Dand) and adjacent area with a population of 28635 and an area of 35.2 (ha) was selected randomly out of the 27 slum areas in Peshawar.

4. Study method

Each surveyor visited the clinic of the general practitioner, or the retail seller of medicines. The surveyor would then request the retail chemist to allow him to copy the prescriptions of that particular practitioner or, if facilities were available, to get a photostat copy of the prescriptions.

Each surveyor collected 30 prescriptions in all from one general practitioner, but no more than 7 to 8 prescriptions in a single day in order to avoid bias.

Each of the six surveyors thus collected thirty prescriptions from each of the 4 to 5 general practitioners allocated to them during the present survey, except one general practitioner who provided 26 prescriptions only.

The data obtained from the prescriptions thus collected were duly filled into the prescribing indicator forms of

TABLE-1
PHASE - 1 SURVEY COUNTER-
DETAILING INITIATIVE

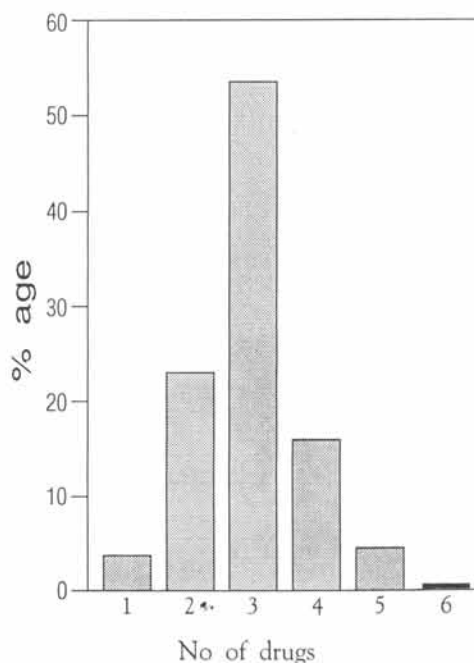
No. of GP.	No. of prescriptions	No. of drugs	Range	Mean
22	656	1929	1-6	2.94

WHO/DAP/93. 1 of the Action Programme on Essential Drugs and analyzed to obtain the following results.

RESULTS

One thousand nine hundred and twenty nine drugs were prescribed in 656 prescriptions collected from 22 general practitioners, with an average of 2.94 drugs per prescription, range 1-6 drugs. (Table 1)

Percentage of prescriptions containing 1, 2, 3, 4, 5 or 6 drugs



Average No. of Drugs prescribed = 2.94

TABLE-2
PRESCRIPTIONS FROM ESSENTIAL DRUG LIST AND GENERICS

Category of Drugs	No. (%age)	EDL No. (%age)	Generics No. (%age)
Antibiotics	406 (61.94)	306 (75)	18 (2.71)
Analgesics	404 (61.58)	145 (22.1)	16 (2.43)
Vit. Tonics	154 (23.47)	90 (13.71)	3 (0.45)
Anti-diarrhoeal	53 (8.0)	1 (0.15)	—
Psychoactive	51 (7.77)	2 (0.30)	1 (0.15)
Steroids	25 (3.81)	9 (1.37)	3 (0.45)

The number and percentage of prescriptions containing 1, 2, 3, 4, 5 and 6 drugs per prescription are presented in histogram.

The various categories of drugs prescribed, with the number and percentage of each category, essential drug list (EDL) and in generics is presented. 62% prescriptions contained antibiotics, 75% from EDL and 2.74% in generic. The rest of the data are presented in Table 2.

The percentage of prescriptions containing injectable drugs was 9.3% out of which as many as 2.4% contained antibiotics. (Table 3) Drugs belonging to the same category, were prescribed more than once in 25% prescriptions.

TABLE-3
PRESCRIPTIONS CONTAINING
INJECTABLES

Category of Drugs	No (%age)	EDL	Generics
Antibiotics	16 (2.42)	7	5
Analgesics	35 (5.33)	0	3
Anti-emetics	9 (1.37)	0	0
Infusions (Rehydration)	6 (0.91)	6	0
Vit.& Tonics	5 (0.76)	1	5
Steroids	5 (0.76)	5	1
Anti-histamine	1 (0.15)	1	1

Antibiotics shared 7.8% of the prescriptions. (Table 4) Diagnosis was given in 34%, symptoms only in 43% and neither diagnosis nor symptoms were mentioned in 23% prescriptions. (Table 5) The relevance of prescriptions of antibiotics to either the diagnosis or symptoms rarely correlated. (Table 6)

DISCUSSION

Most of the surveys, in which the prescribing behaviour of general practitioners was intended to be studied, have been conducted uninformed.¹⁰ But in the present base-line study an informed consent was obtained from all the general practitioners, in order to fulfill the prerequisite of ethics in medical research.

In situations, where the prescriber is conscious of being watched, it is usual to observe bias in prescribing lesser

TABLE-4
PRESCRIPTIONS CONTAINING DRUGS
OF THE SAME CATEGORY
PRESCRIBED MORE THAN ONCE

Category of Drugs	No.	(%age)
Anti-diarrhoeal	7	(1.06)
Psychoactive	1	(0.15)
Steroids	1	(0.15)
Injectables	16	(2.43)

TABLE-5
PRESCRIPTIONS WITH ONLY
DIAGNOSIS/ ONLY
SYMPTOMS/ AND NONE AT ALL

Diagnosis	Symptoms	None
No. (%age)	No. (%age)	No. (%age)
220 (33.5)	284 (43.29)	152 (23.17)

number of drugs in general and antibiotics in particular. In this survey, the mean number of drugs prescribed were 2.94 per prescription, which is quite comparable with the mean of 3.0.^{10,11,17} However, this mean still requires to be reduced to the ideal of 1.4.¹³

Antibiotics were prescribed to as much as 62.0% of patients. This percentage is again comparable to 62.0%¹⁰, but much less than 98%¹⁰ in which prescription collection was done unannounced. Injectable drugs were prescribed in 9.3% of prescriptions, containing as many as 2.43% of antibiotics in injectable form. It is alarming to note that 7.8% prescriptions contained more than one antibiotic which is not recorded by the selected drug indicator forms. Apart from the antibiotics, various other supportive drugs such as analgesics, vitamins and tonics etc. have been prescribed excessively and in some more than once to variable extent. Hence, the mean

TABLE-6
PRESCRIPTIONS WITH INDICATIONS
RELEVANT TO THE DIAGNOSIS AND
OR SYMPTOMS

Category of Drugs	Indication		
	Clear	Possible/ Contro- versial	Not Indicated
Anti-biotics	92 (14.0%)	100 (15.2%)	126 (19.2%)

number of drugs per prescription, the cost and chances of drug-drug interactions are further increased due to the irrational prescribing of supporting drugs, believed to expedite relief of symptoms.

Another observation worth noticing is that certain febrile conditions are more common during the peak winter months, rather than in late summer and early autumn months, during which this survey was conducted, the prescribing of anti-biotics to such an extent clearly depicts over use.^{1,3} The observation, that antibiotics were prescribed to patients, where these were not indicated according to the diagnosis or the symptoms mentioned in the prescriptions^{4,14}, is quite conducive to create serious problems of resistance to subsequent use of these antibiotics.

The basic reasons which lead the general practitioner to adopt this manner of prescribing could be insufficient updating of knowledge about present day concepts in drug treatment of various diseases, and in particular about the hazards of indiscriminate use of antibiotics, promotional detailing by pharmaceutical representatives, to give your patients an immediate relief and cure with the belief that whatever is new and expensive must be the best.

In the first place, continued medical education is a must for the general practitioners in order to keep their professional knowledge up to date and to keep them abreast with the new developments in the current concepts in drug therapy. This may be achieved by conventional means of education, such as lectures, seminars, symposia, workshops, posters and hand-outs, etc, which carry great importance in the transfer of knowledge and should be employed wherever feasible.

The claims made in the promotional information are intended to promote

their use and not impartial evaluation.¹⁵ Therefore, unbiased books on drugs like British National Formulary, Physicians Desk Reference, and FASS as used in Sweden be introduced by the government and made compulsory for the practicing doctor to possess, which may be consulted at the time of confusion on certain drugs treatment.

Clinicians should be encouraged to make enquiries from the Drug Information Centres which should be established in easily accessible medical institutions. The inquiries may be made in person, by telephone, post, or by courier and may range from problems related to drugs, dosage, toxicity, disease complications, even to management of severely ill patients, requiring urgent decision making.¹⁵

Informal discussion is considered more beneficial^{16,17}. This procedure has been found cost-effective.¹⁸ Prescribing by non-proprietary names has reduced irrational use of drugs in most of the developed and the developing countries. Prescribing by generic names from EDL, with the identity of the manufacturer be implemented.

To conclude it is very essential for both the general practitioners and the patients to understand the proper benefits and hazards of drugs therapy before rational drug therapy can become successful. General public need to be educated, regarding the hazards of self medication, excessive use and demand for potent drugs or insisting for injectable drugs.

ACKNOWLEDGEMENTS

I am thankful to Mr. Asif Wasim, Mr. Waheed Raziq, Mr. Ghulam Mohammed, Mr. Mohammed Fahim, Mr. Muzzamil Shah and Mr. Rooh Ullah, Final Year students of the Department of Pharmacy, University of

Peshawar; Dr. Azmat Talat, Paediatric Deptt., Dr. A. Samad Wazir, Pulmonology Deptt., Dr. Lubna Hasan, Gynaecology Deptt., Dr. Ubaid Ullah, Plastic Surgical Deptt., Dr. Khushnud Ali Baz, Orthopaedic Deptt. of Postgraduate Medical Institute, Lady Reading Hospital, Peshawar and Dr. Riaz Shahid General Practitioner at Peshawar, and Dr. Zafar Mirza of the Network of the Association.

Dr. Suleman Daud Khan initiated and Mr. Haider Zaman and Dr. Dai Hozumi of UNICEF facilitated the progress of project.

REFERENCES

1. The rational use of drugs. Report on the conference of experts. Nairobi, 25-29 November, 1985. Geneva, World Health Organization. 1987; 196-300.
2. Drug use in the third world (Editorial) *Lancet*. 1980; (1): 1231-2.
3. Hogerzeil H V. The use of essential drugs in rural Ghana *Int J Health Serv.* 1986; 16: 423.
4. Palombo F B. et al Detecting prescribing problems through drug usage review: a case study. *Am J Hosp Pharm.* 1977; 34: 152.
5. Nyazema N Z. Control of drug supply and drug monitoring. *C Afr J Med.* 1983; 29: 109.
6. Leighton R J, Epstein AM. Aspirin and its expensive substitutes: Prescribing patterns and cost implications. *J. Comm Health* 1984; 9(3): 216.
7. Speight ANP. Cost-effectiveness and drug therapy. *Trop. Doctor* 1975; 5: 89.
8. Vass K. Misuse of antibiotics in the third world. *The Listener* 1985; 11:2.
9. Kunin CM et al. Social, behavioural and practical factors affecting antibiotic use world-wide: Report of Taskforce 4. *Rev Int Dis.* 19887; 9(Suppl. 3): 270.

10. Tasleem Akhtar, Bakht Biland, Nisar Ahmad, Arbab Ghaffar. Prescribing patterns of Medical Practitioners. *Pakistan J Med Res.* 1982; 21: 1.
11. Maitai CK, Watkins WM. A survey of outpatient prescriptions prescribed in kenyatta National Hospital. *East Afr Med J.* 1980; 58: 641.
12. Evaluation of the National Policy Programme in Democratic Yemen, Geneva, World Health Organization 1988. DOC DAP 88. 9: P.
13. Hogerzeil HV, Walker GJA, Sallami AO Fernando G. Impact of an essential drugs programme on availability and rational use of drug, *Lancet* 1989; (i): 414.
14. Maki DG, Schuna AA. A study of antimicrobial misuse in a University Hospital. *Am. J. Med Sc.* 1978; 275: 271.
15. Andrew Herxheimer. The drug information cascade. *The Pharmaceut J.* 1993; 250: 412.
16. Klein LE., Charache P., Johannes RS. Effect of physician tutorials on prescribing patterns of graduate physicians. *J Med Edu.* 1981; 56: 504.
17. Johnson WJ, Mitch WE, Heller AH, Spector R. The impact of an educational programme on gentamycin use in a teaching hospital. *Am J Med.* 1982; 73: 9.
18. Soumerai SB, Avorn J. Economic and policy analysis of university based drug "detailing". *Medical care* 1986; 24: 313.