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ORIGINAL ARTICLE

A Study of Drug Prescribing Practices at a Tertiary Care Hospital

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ABSTRACT

Objectives: To study the drug prescribing practices at a tertiary care hospital using some of the WHO core drug prescribing indicators.

Materials and Methods: The study was conducted at a tertiary care hospital in Goa, in the year 2008. Drug prescriptions were randomly selected from the out-patient pharmacy of the hospital. Fifty prescriptions were selected per month, over a period of one year and a total of 600 drug prescriptions were studied. Data collection was done with the help of a pretested predesigned format. The data was entered in an excel spreadsheet to prepare a database. WHO drug use core indicators for out-patient facilities were used to study the various drug prescribing practices.

Results: The average number of drugs per prescription was 2.9. Around 6.38 percent of the drugs which were prescribed were antibiotics, 2.58 percent of the drugs were injections, only 13.34 percent of drugs were prescribed with generic names and 60.98 percent of drugs were from the essential list of drugs.

Conclusions: Periodic appraisal of drug prescribing practices at a health facility would eventually help to promote rational drug use.

Key Words: Drugs, prescription, rational use, practices.

Key Messages:

1. Rational drug prescribing is linked to both, the efficient use of resources and the quality of care.
2. The core drug use indicators provide a simple tool to quickly and reliably assess the critical aspects of pharmaceutical use in health care.
3. Periodic appraisal of drug prescribing practices at a health facility would help to promote rational drug use.

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Introduction

The premise of any drug policy is to encourage the rational use of drugs. Rational use implies use in accordance with scientific knowledge to satisfy needs [1]. Within most health systems, the provision of curative care is a far more substantial activity in terms of

staff time, the money spent on drugs and patient demand, and yet simple indicators of drug use do not widely exist. The

International Network of the Rational Use of Drugs (INRUD) has developed a list of indicators of rational prescribing [2]. Only a small number of basic indicators are recommended, which are referred to as the core indicators. These are highly standardized, they do not need national adaptation and they are recommended for inclusion in any drug use study. These indicators have already been tested in twelve countries [3]. The core drug use indicators provide a simple tool to quickly and reliably

assess the critical aspects of pharmaceutical use in health care. The estimates with these indicators should point to particular drug use issues that would need examination in more detail. Health managers benefit immensely from the use of these indicators as it helps them to correct drug usage problems and to monitor drug use over time.

Material and Methods

The study was conducted at a tertiary care hospital in Goa in the year 2008. Drug prescriptions were randomly selected from the out-patient pharmacy of the hospital. Fifty prescriptions were selected per month, over a period of one year. A total of 600 drug prescriptions were studied. Data collected with the help of a predesigned format was entered in a MS Excel spreadsheet to prepare the database. *WHO drug use core indicators for out-patient facilities* [4] were used to study the prescribing practices. The core drug use indicators included: the average number of drugs per prescription, the percentage of drugs prescribed under generic names, the percentage of drugs prescribed which contained an antibiotic, the percentage of drugs prescribed in injection form and the percentage of drugs from the essential drugs formulary.

Results and Discussion

A sample of 600 randomly selected prescriptions was studied at the hospital in 2008. A total of 1740 drugs were prescribed in these prescriptions. The average number of drugs per prescription was 2.9 [Table/Fig 1]. The optimal value of the number of drugs per prescription was less than two drugs [4]. Sarkar AP et al [5] in their study in West Bengal, India, reported 2.94 as the average number of drugs prescribed per prescription, while Kafle et al⁶ reported a figure of 2.1 drugs per prescription in the Nepal study.

There appeared to be a preference to prescribe drugs under brand names, as only 13.34% of the drugs were prescribed under generic names, while the optimal value is set at 100% [4]. In the West Bengal study [5], 38.2% of the drugs were prescribed under generic names, while this proportion was 44% in the Nepal study [6].

The rational use of drugs demands that less than 30% of the drugs which are prescribed, should be antibiotics [4]. In the present study, antibiotics constituted 6.38% of the drugs prescribed. Around 18.68% of the drugs prescribed were antibiotics in West Bengal [5] and 43% in Nepal [6].

Only 2.58% of the drugs prescribed were injections, which was well below the optimal value of less than 20%. Both Sarkar AP et al [5] and Kafle KK et al [6] reported that 5% of the prescribed drugs were injections in their respective studies.

Ideally, all the drugs prescribed must be from the essential drugs formulary of the hospital (optimal value: 100%) [4]. In the present study, only 60.98% of the drugs prescribed were from the essential drugs formulary. Kafle KK et al [6] reported that the majority of the drugs (86%) were from the essential drugs formulary, while only 68.10 % were found to be from the essential drug list in the West Bengal study [5].

(Table/Fig 1) Core Drug Prescribing Indicators at the Tertiary Care Hospital

Core Drug Indicator	Value	Number (N= 1740)	Optimal value
Percentage of drugs under generic names	13%	232	100%
Percentage of drugs containing an antibiotic	6.38%	111	<30%
Percentage of drugs in form of injections	2.58%	45	<20%
Percentage of drugs from essential drug formulary	60.98%	1061	100%
Average number of drugs per prescription	2.9 ± 1.29	-----	<2.0

Conclusion

The present study analysed drug prescribing practices at a tertiary care hospital. Although some parameters were within optimal limits, the study identified deviations from rational prescribing. These deviations included excess number of drugs per prescription, non use of generic names and prescribing drugs beyond the essential drug formulary of the hospital.

Rational drug prescribing is linked to both, the efficient use of resources and the quality of care. Periodic appraisal of drug prescribing practices at a health facility would eventually help to promote rational drug use.

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