



ORIGINAL ARTICLE

Distribution of Diseases and their Prescription Pattern at Outpatients Department of Gynecology and Obstetrics in a Tertiary Care Hospital in Bangladesh

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Abstract

Background: Different gynaecological and obstetrics conditions are commonly encountered by the physicians in the outdoor patient. **Objective:** The purpose of the present study was to observe the distribution of diseases and their prescription pattern at outpatients Department of Gynaecology and Obstetrics in a tertiary care hospital in Bangladesh. **Methodology:** This cross-sectional study was carried out among patients attending the outpatient's department (OPD) of Obstetrics and Gynaecology from October 2014 to April 2015 in Rajshahi Medical College and Hospital, Rajshahi, Bangladesh. The demographic details, average number of drugs per prescriptions, percentage of drugs prescribed by generic names, percentage of encounters with an antibiotic and an injection prescribed, percentage of drugs prescribed from essential drug list (EDL) of Bangladesh, percentage of encounters with prescription of antiulcerant, NSAID, multivitamin and multimineral, iron preparation and a calcium preparation were noted. **Results:** A total number of 384 prescriptions were collected from Out Patient Department of Obstetrics and Gynaecology of Rajshahi Medical College and Hospital, Rajshahi, Bangladesh. Among 384 prescriptions date, name and age of the patient was written in 384 prescriptions which was 100.0% cases. Weight was written in 190(49.5%) and absent in 194(50.5%) prescriptions. Strength of drugs were written in 11(2.9%) prescriptions and not written in 373(97.1%) prescriptions. Duration of treatment was written in 100.0% prescriptions. Subscription is absent in 100.0% prescriptions. Direction to the patient was present in all prescriptions, but follow up advice were written only in 9(2.3%) prescriptions. Sign present in all prescriptions. There were about 169(44.0%) prescriptions have written the diagnosis and 215(56.0%) prescriptions did not have any diagnosis written. **Conclusion:** In conclusion the date, name and age of the patient are written in all prescriptions and strength of drugs are absent in almost all prescriptions. [*Journal of Current and Advance Medical Research, January 2023;10(1):13-18*]

Keywords: Diseases variation; prescription pattern; outpatients' department; gynaecology and obstetrics; tertiary care hospital

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Introduction

The prescription is a health-care program implemented by a physician or other qualified practitioner in the form of instructions that govern the plan of care for an individual patient¹. The qualified practitioner might be a physician, physician assistant, dentist, nurse practitioner, pharmacist, psychologist or other health care providers. Prescriptions may include orders to be performed by a patient, caretaker, nurse, pharmacist, physician, other therapist, or by automated equipment such as an intravenous infusion pump². Formerly, prescriptions often included detailed instructions regarding compounding of medications but as medications have increasingly become pre-packaged manufactured products³.

Prescriptions have legal implications, as they may indicate that the prescriber takes responsibility for the clinical care of the patient and in particular for monitoring efficacy and safety⁴. As medical practice has become increasingly complex, the scope of meaning of the term "prescription" has broadened to also include clinical assessments, laboratory tests and imaging studies relevant to optimizing the safety or efficacy of medical treatment⁵. This prescription may be handwritten on printed prescription forms that are assembled into pads or printed onto similar forms using a computer printer. In some cases, a prescription may be transmitted from the physician to the pharmacist verbally by telephone, although this practice may increase the risk of medical error⁶. The content of the prescription includes the name and address of the prescribing provider and any other legal requirement such as registration number.

Irrational prescription of drugs is a common occurrence in clinical practice⁷. Important reasons of irrational drug prescription are lack of knowledge about drugs, unethical drug promotions and irrational prescribing habit of clinicians⁸. Irrational drug use is a major health problem worldwide, with far reaching health and economic consequences including rise of antimicrobial resistance. It has been reported that more than 50.0% of all medicines are prescribed, dispensed or sold inappropriately, and 50.0% of all patients take them incorrectly⁹. Irrational use of drugs takes several forms including; over prescribing, multidrug prescribing, inappropriate use of antibiotics, and use of unnecessary expensive drugs. There are many factors behind the irrational drug use; including self-medication, insufficient neutral unbiased drug information, in access to the increasingly relevant clinical research and therapeutic guidelines¹⁰. The purpose of the present study was to observe the

distribution of diseases and their prescription pattern at outpatients Department of Gynaecology and Obstetrics in a tertiary care hospital in Bangladesh.

Methodology

Study Design and Population: This cross-sectional study was conducted in the Department of Pharmacology and Therapeutics at Rajshahi Medical College, Rajshahi, Bangladesh. The total duration of the study was from July 2014 to June 2015 for a period of one year. The study population was comprised to all the patients who were attended in the OPD of Obstetrics and Gynaecology were selected as study population. The data was collected in the Out Patient Department (OPD) of Obstetrics and Gynaecology in Rajshahi Medical College Hospital, Rajshahi, Bangladesh. The patients who were visited the emergency department, patients who were transferred to another department, patients who got admitted during OPD visit, patients unwilling to participate in the study or prescriptions without format will not be accepted. were excluded from the study.

Study Procedure: New patients attending the outpatient department (OPD) of Obstetrics and Gynaecology in Rajshahi Medical College Hospital, Rajshahi, Bangladesh during the study period were considered for analysis. All the prescriptions were used for analysis. The information in the prescription was used to complete some customized pro-forma. The following information were recorded like Reg. number, Age, Marital status, Occupation, Diagnosis, Name of drugs, Route of administration, Number of drugs prescribed per prescription, most commonly prescribed Antibiotics, most commonly prescribed group of drugs, percentage of drugs prescribed by generic names, percentage of drugs prescribed from Essential Drug List (EDL) of Bangladesh. The data was expressed as percentage, mean and total number.

Data Analysis: All relevant information's were recorded on the basis of a prescription checklist. After data analysis, results were according to objectives, study results were presented in the form of tables, charts, and description of the key findings according to need. Statistical analyses were performed with SPSS software, versions 22.0 (IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.). Continuous data that were normally distributed were summarized in terms of the mean, standard deviation, median, minimum, maximum and number of observations. Categorical or discrete data were summarized in terms of frequency counts and percentages. When values were missing, the denominator was stated.

Ethical Clearance: The study was approved by Institutional Review Board (IRB) of Rajshahi Medical College and ethical clearance was undertaken by Ethical Review Committee (ERC) of the same institute. Permission was taken from RMCH authority prior to this study. Patients were asked for informed consent. Confidentiality of the participants and data were strictly maintained. Permission was taken from the concern departments and authorities.

Results

A total number of 384 prescriptions were collected from Out Patient Department of Obstetrics and Gynaecology of RMCH. The percentage of presence of particular items in each parameters of prescription were recorded. Among 384 prescriptions date, name and age of the patient was written in 384 prescriptions, that is 100%. Weight was written in 190 (49.47%) and absent in 194 (50.52%) prescriptions. Strength of drugs were written in 11 (2.86%) prescriptions and not written in 373 (97.13%) prescriptions. Duration of treatment was written in 100% prescriptions. Subscription is absent in 100% prescriptions. Direction to the patient was present in all prescriptions, but follow up advice were written only in 9 (2.34%) prescriptions. Sign present in all prescriptions (Table 1).

Table 1: Showing comparison (%) of the mechanics of prescription order writing.

Comparison in particular item	Present
Superscription	
• Date of Prescription issued	384(100.0%)
• Name of the Patient	384(100.0%)
• Age of the Patient	384(100.0%)
• Weight of the patient	190(49.5%)
Inscription	
• Strength of Drugs	11(2.9%)
• Duration of treatment	384(100.0%)
• Instruction to the Pharmacist	0(0.0%)
Directions to Patient	384(100.0%)
Signature: Follow up advice	9(2.3%)
Signature: Sign	384(100.0%)

The number of prescriptions with diagnosis and without diagnosis were recorded. There were about 169 (44%) prescriptions have written the diagnosis and 215 (56%) prescriptions did not have any diagnosis written (Figure I).

The ten most common individual illnesses among out patients were recorded. Out of 384 prescriptions there was about 169(44%) prescriptions have written

the diagnosis and rest of 215(56%) prescriptions did not have any written diagnosis.

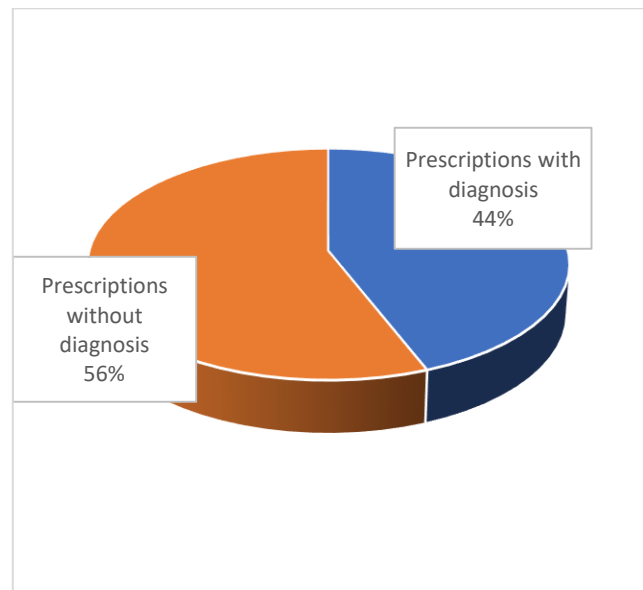


Figure I: Prescriptions with Diagnosis and without Diagnosis (n=384)

The missing diagnoses were classified as diagnosis not written. Most of the patient came for anti-natal checkup 85(50.29%). Patients also came with the complaints of urinary tract infection (UTI) 18(10.65%), pregnancy with urinary tract infection 15(8.87%) was the second and third most common diagnosis followed by PUD 12(7.10%), leucorrhoea 10(5.91%), vaginitis 9(5.32%), menorrhagia 8(4.73%), low back pain (LBP) 6(3.55%), fibrocystic disease of breast 5(2.95%) and dysmenorrhoea 1(0.59%) (Table 2).

Table 2: Different Disease Condition among the Study Population

Diagnosis	n(%)
ANC (Anti Natal Checkup)	85 (50.3)
UTI	18 (10.7)
Pregnancy with UTI	15 (8.9)
PUD	12 (7.1)
Leucorrhoea	10 (5.9)
Vaginitis	9 (5.3)
Menorrhagia	8 (4.7)
LBP	6 (3.6)
Fibrocystic Disease of Breast	5 (2.9)
Dysmenorrhea	1 (0.6)

The most commonly prescribed group of drugs were recorded. Groups of drug which commonly prescribed were antiulcerant (247). The other commonly prescribed group of drugs were iron preparations (235), calcium preparations (182),

antimicrobials (160), multivitamins and multiminerals (147), antispasmodics (120), NSAIDs (67), hormone preparations (65), anti-emetics (56) and anti-depressants (27) (Table 3).

Table 3: Different Drug Distribution Pattern among Outpatients

Groups of Drugs	Frequency
Anti-ulcerants	247
Iron Preparations	235
Calcium Preparations	182
Antimicrobials	160
Multi-vitamins and Multi minerals	147
Antispasmodics	120
NSAIDs	67
Hormone Preparations	65
Anti-emetics	56
Antidepressants	27

Discussion

Common gynaecological problems for which patients usually come to OPD are dysmenorrhea, premenstrual symptoms, pelvic inflammatory disease, urinary tract infection, leukorrhea, vaginitis, cervicitis, candidiasis, trichomoniasis, bacterial vaginitis by gardnerella and bartholin cyst and abscess, polycystic ovary syndrome¹¹⁻¹⁴. Some other problems are endometriosis, abnormal and dysfunctional uterine bleeding, pelvic masses, fibroid uterus, salpingitis, twisted ovarian tumor, benign and malignant breast disease, cervical dysplasia and cancer¹⁵. Patient can also come for Contraceptive counselling and Hormone Replacement Therapy.

It is medically, therapeutically and scientifically sound and it ensures rational use of drugs¹⁶. It limits the use of irrational and hazardous drugs and decreases the risks of iatrogenesis (drug and doctor-induced disease). It improves the possibility of monitoring adverse drug reactions in patients. It is economically beneficial to the nation because it prevents wastage of scarce resources on non-essentials. The economies of scale achieved in the larger production of priority drugs bring down their prices. It curtails the aggressive marketing of non-essential formulations. It is economically beneficial to the patient because it prevents wastage on irrational and non-essentials¹⁷.

Urinary tract infections are one of the frequently encountered problems facing the family physician⁹. UTIS during pregnancy are among the commonest health problems worldwide, especially in developing

countries. Urinary tract infections which are caused by the presence and growth of microorganisms in the urinary tract, are perhaps the single commonest bacterial infections of mankind and in pregnancy; it may involve the lower urinary tract or the bladder. UTI has been reported among 20% of the pregnant women and it is the most common cause of admission in obstetrical wards¹⁸. To assess the scope for improvement in rational drug use in outpatient practice, the World Health Organization (WHO) has formulated a set of core drug use indicators. The core prescribing indicators measure the performance of prescribers, the patient care indicators measure what patients experience at health facilities and the facility indicators measure whether the health personnel can function effectively¹³.

The rational use of drugs requires the patient to receive medicines appropriate to their needs in doses that meet their individual requirement for adequate period of time and at lowest cost¹⁵. It has been studied Gynecological problems of married women in the reproductive age group of urban area of India¹⁷. In that study, married women were interviewed using a pre-tested, pre-designed, semi structured questionnaire. The participants were subjected to medical examination by a qualified gynecologist and subjected to lab investigations as required and prescribed medication. It is consistent with my study.

In another study¹⁶, it has studied on prescription auditing in a tertiary care teaching hospital of Eastern India and has found similar results. The objective of this study was assessment of quality of medical care in a tertiary care teaching hospital, quantifying and describing the appropriateness of medical care by measuring the WHO core prescribing indicators, and assessment of rational prescription pattern. In another observational study¹⁸, this was undertaken at the OPD of Burdwan Medical College, west Bengal, India and data for only first encounter prescriptions collected from the patients attending the OPD after fulfillment of inclusion criteria with the help of pre-inserted carbon and was analyzed by the parameters based on the objectives.

There are some limitations. It represented a limited population of patients. The time period of the study was limited. This study did not include patients of other departments like Medicine, Surgery, Paediatrics, Cardiology, Orthopaedics, Dermatology, Urology that is overall drug use pattern of the hospital. other than the OPD of Obstetrics & Gynaecology. So it does not reflect the scenario. This study was done in only one tertiary level hospital. So variation of prescribing patterns in

different hospitals could not be evaluated. Average dispensing time, percentage of drugs actually dispensed, percentage of drugs adequately labelled, patients knowledge of correct dosage was not recorded. Cost analysis was not calculated.

Conclusion

In conclusion among prescriptions, the date, name and age of the patient are written in all prescriptions. Weight is written in half of the study population. Strength of drugs are written in very few prescriptions and absent in almost all prescriptions. Duration of treatment is written in prescriptions. Subscription is absent in all prescriptions. These findings from the present study revealed that there was a trend towards inappropriate prescribing. Hence, it is precise to need for effective intervention programme to encourage the physicians and dispensing pharmacists in promoting more appropriate use of drugs. The following recommendations could be suggested based on present study. Prescribing pattern and dispensing facilities of essential drugs in OPD should be improved. Number of doctors should be inadequate in relation to patient. There is not enough space for patients and their attendants to wait.

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None

Conflict of Interest

The authors have no conflicts of interest to disclose

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Contributions to authors: Shahnawaz SS, Sharif MH prepared the manuscript from protocol preparation upto report writing. Shahnawaz SS, Sharif MH have revised the manuscript. Shahnawaz SS, Sharif MH has prepared the manuscript. All the authors have involved from protocol preparation up to manuscript writing & revision.

Data Availability

Any inquiries regarding supporting data availability of this study should be directed to the corresponding author and are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate

Ethical approval for the study was obtained from the Institutional Review Board. As this was a prospective study the written informed consent was obtained from all study participants. All methods were performed in accordance with the relevant guidelines and regulations.

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