



**COMPARATIVE STUDY OF PRESCRIBING BEHAVIOURS OF GOVERNMENT  
DOCTORS OF TEACHING HOSPITAL AND PRIVATE PRACTITIONERS  
IN BILASPUR CITY**

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**Abstract:**

The following study was done to compare various aspects of prescribing behaviours of government hospital doctors and private practitioners. Prescription audit was conducted for a period of 3 months for outpatient departments (OPDs) in tertiary hospital and Private clinics of Bilaspur. The most of the prescription were found to have certain important parameter missing and the drugs prescribed are irrational to certain extent. The legibility of the prescription is not up to the mark in significant number of prescription. The article also stress on the method to minimize error that were found during the study.

**1. Introduction**

A prescription order is a written instruction of doctors to pharmacist to supply drugs in particular form to a patient and the directions to the patients regarding the use of medicines. It is important therapeutic transaction between the clinician and the patient [1]. Medicines should be used only when essential but in practice, they are used too readily. According to planning commission paper of 2009, health care expenses were responsible over half of all

cases decline into poverty. It was estimated in 2004-05, an additional 39 million people were pushed into poverty due to out of pocket payment. NSSO data for same year had shown that of the total medical expenditure per capita, medicines alone accounted for 74% of the expenses in the rural and 67% in urban areas. It is more when we are considering non government sector. It indicates huge impact of rising price on health expenditure. This expenditure can be minimized by prescribing drugs by generic name and selection of drugs from essential medicine list. Generic drugs are substitute of branded drug without any patent protections with similar efficacy but 40 to 60 percent cheaper than branded drugs [1]. Ideally doctors should bind to prescribed affordable and essential medicines to their patients

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however they are blamed to write costly branded medicines. WHO has defined "Essential medicines are those that satisfy the priority health care needs of the population" [2] In India, the availability and utilization of health service is very poor with the government sector meeting the demands of only 18% of the out-patients 40% of inpatients care [1]. In other word, around 80% of out- patient care and 60% of in-patient care mainly done by private sector. Thus appropriate policy cannot be formulated by government without considering private sector. This motivated us to do comparative study of prescribing behaviours of government doctors (GDs) and private practitioners (PP) in a district of Bilaspur (India).

## 2. Materials & Methods

Comparative cross sectional study was carried out for a period of 3 month in two different set up Government Doctors of Government hospitals and private practitioner.

### 2. 1. Mode of collection of prescriptions for government doctors

A patient based prescription audit was done using cross sectional study design for a period of 3

months (September 12 to October 12) on various outpatient departments (OPDs). Patient consent was taken after explaining purpose of the study and their respective prescription was copied using digital camera, the data was collected on random basis to minimize bias. Eight hundred ninety two (892) prescriptions were collected from teaching hospital for government doctors (GDs).

### 2. 2. Mode of collection of prescriptions for private Practitioners

Across section study during the same period was done, prescriptions were collected during same period from patients at six retail medical shops located at least four kilometer away from government tertiary hospital, investigator had copied prescriptions by digital camera after taking consent of patient. Those patients who had not given consent to copy their

prescriptions by digital camera, there prescription were directly noted on WHO prescribing indicator form. Four hundred twenty four prescriptions (424) were collected from retail shops of medicine for evolution of prescriptions for private practitioners (PPs). All prescriptions were studied to examine whether they conform following parameters of a typical prescription.

#### (A) Evaluation on clarity of prescription was made by following four points

- 1) All aspects of prescription were very clear to read
- 2) All aspects of prescription were clear but effort required reading it.
- 3) Any one aspect (e.g.name of drug/dose/duration) not clearly written
- 4) At least one aspect of prescription partially unclear.

The scoring of the prescription is based on the Likert scale which score as follow [3-8]

- 1) Legible: - that could be read easily
- 2) Legible with effort: - which could be read with some effort.
- 3) Illegible: - which could not be read.

#### (B.) Format of prescription [9]:

(a) *Superscription*: It includes the date on which prescriptions order were written; the name, address, weight, age of the patient; and the Rx. an abbreviation for recipe meaning though (you) take. This sign is deemed to be an invocation to Jupiter, the Roman God of healing and its appearance on the prescription is purely symbolic and traditional.

(b) *Inscription*: It is the body of prescription containing the name, amount and strength of each ingredient to be given.

(c) *Subscription*; It is the direction to the pharmacist, usually consisting of a short sentence like make a solution, mix, dispense 100ml, dispense with oral syringe and dispense 20 capsules or tablet.

(d) *Signa* or "Sig": It is the instruction for the patient as to how to take the medicines written in prescriptions.

(e) Prescriber's identity: It includes name, address qualifications and MCI registration which were generally written at the top of prescriptions and signed at end of prescriptions.

The following parameters were analyzed in the prescriptions

- 1) Name of the patient
- 2) Date
- 3) Weight of the patients.
- 4) Sex
- 5) Rx
- 6) Dose, duration and frequency of drug administration.
- 7) Instruction to the pharmacist.
- 8) Dosage form
- 9) Signature of prescriber
- 10) Complete instruction to the patients.

### 3. Results

In the prescription audit it was found that in case of government doctors dosage form is the parameter factors like weight of the patient (13%), instruction to the pharmacist (15%) and complete instruction to the patient regarding the drugs and other parameter of the prescription is present in very significantly less of prescription. [Figure 1].

In case of private Practitioners instruction to the pharmacist (19%) followed by complete instruction to the patients (25%), weight of the patient (26%) dose, duration and frequency of administration (38%) were the common parameters which are more commonly absent in the prescription prescribed.

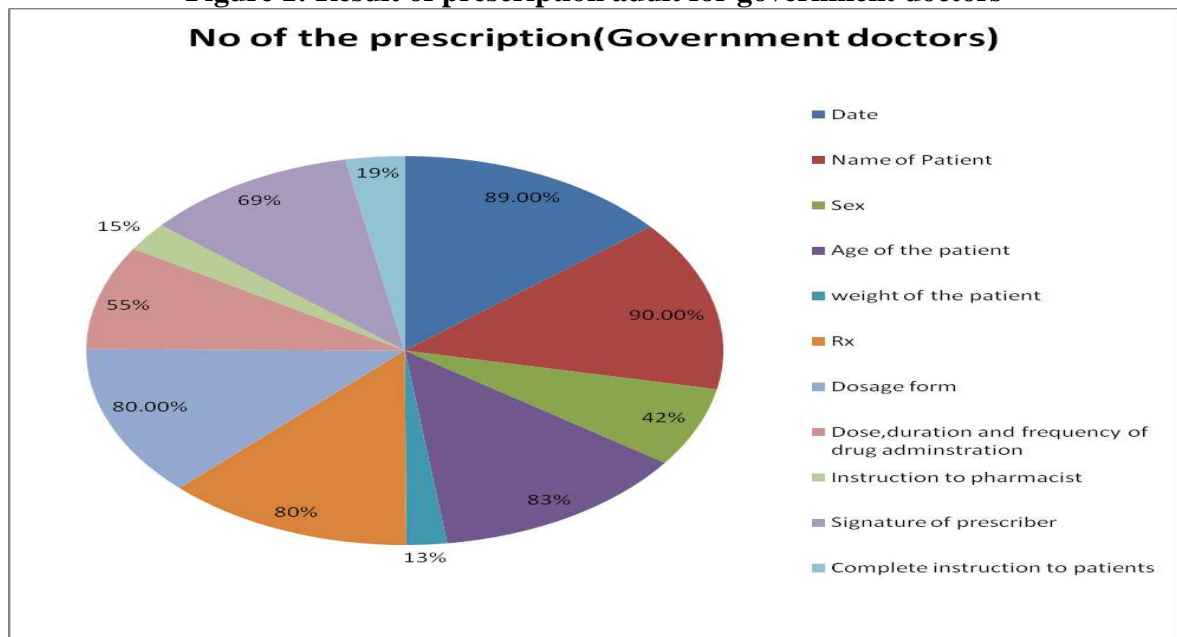
The only 47.26% of prescription were legible in case of the government doctors. 36.52% prescription were legible with effort and 5.87% prescription were illegible. [Figure 3] In case of private Practitioners 53.72% prescription were legible, 35.78 % were legible with effort and 10.5 % prescription were illegible. [Figure 4]

Antimicrobials (27.2%) were the most common drug prescribed by the government doctors. NSAIDS (19.7%), H-2 Blockers (11.21%), hypertensive drugs(13.56%) were also most frequently prescribed.

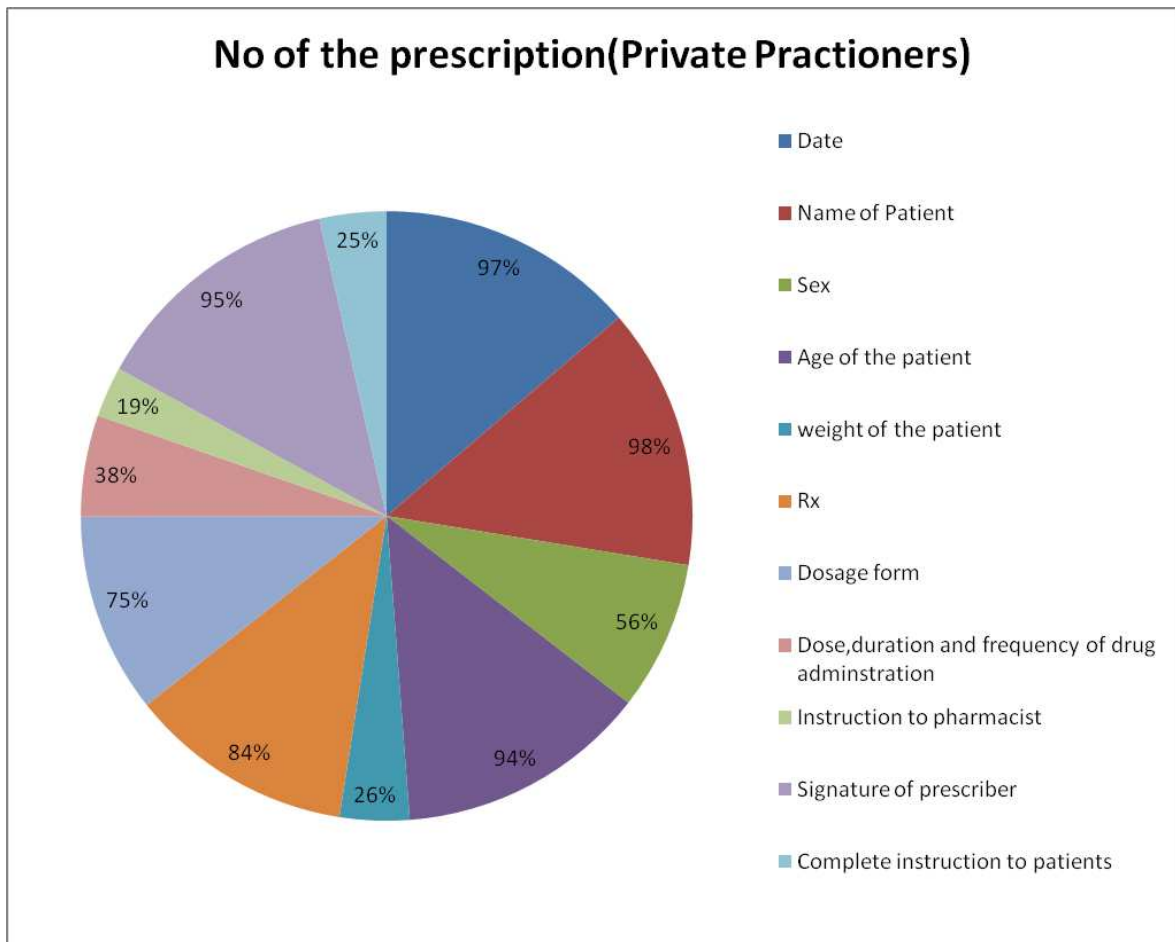
In case of private practitioners Antimicrobials (27.2%) were the most common drug prescribed.

. NSAIDS (21.66%), Vitamins / minerals (16.22%) and Anti histaminics (10.03%) were also most frequently prescribed.

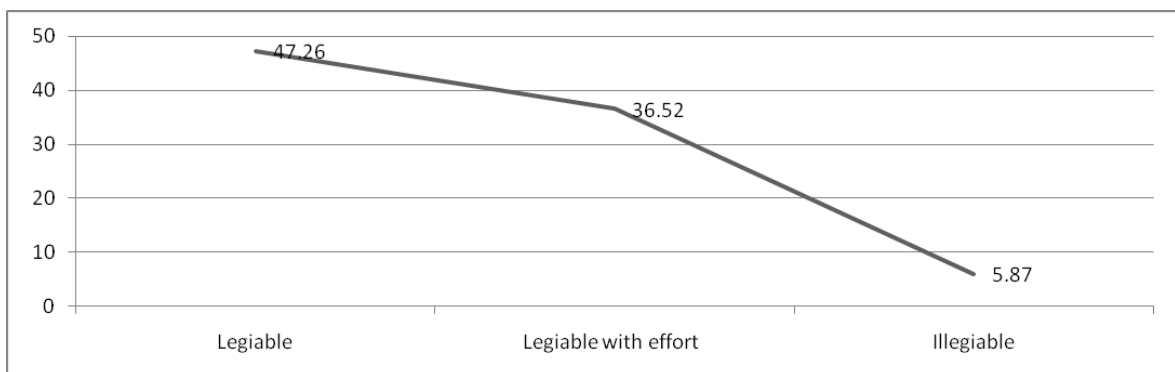
**Figure 1: Result of prescription audit for government doctors**



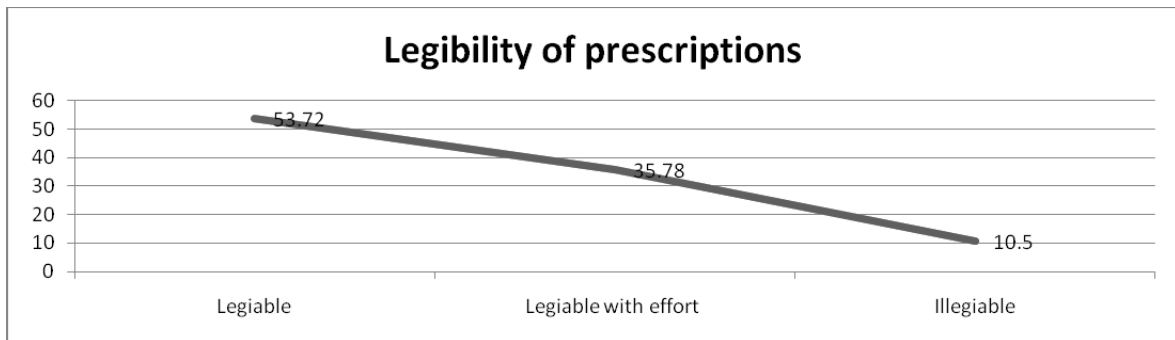
**Figure 2: Result of prescription audit for Private practioners**



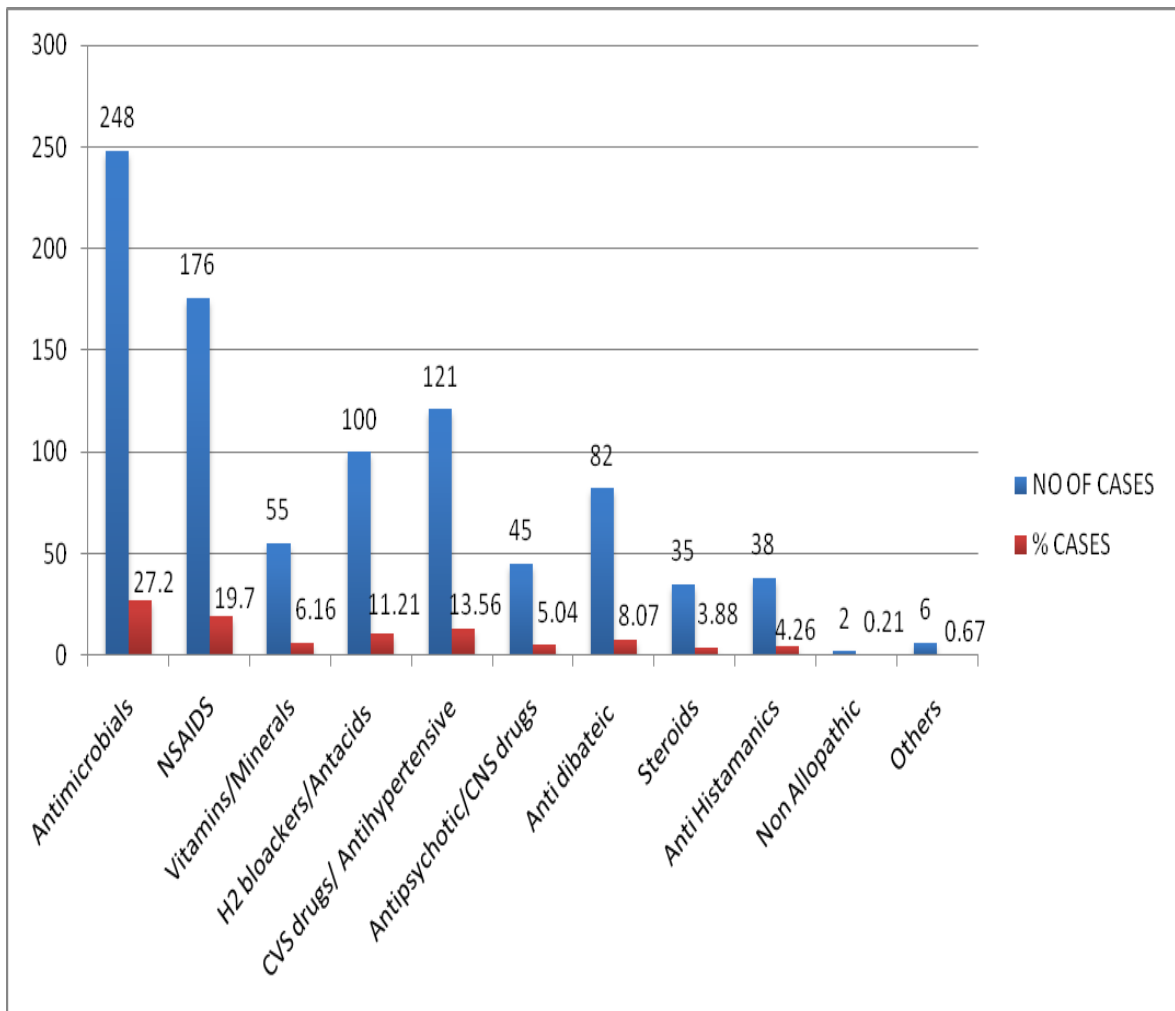
**Figure 3: Legibility of prescriptions (Government Doctors)**



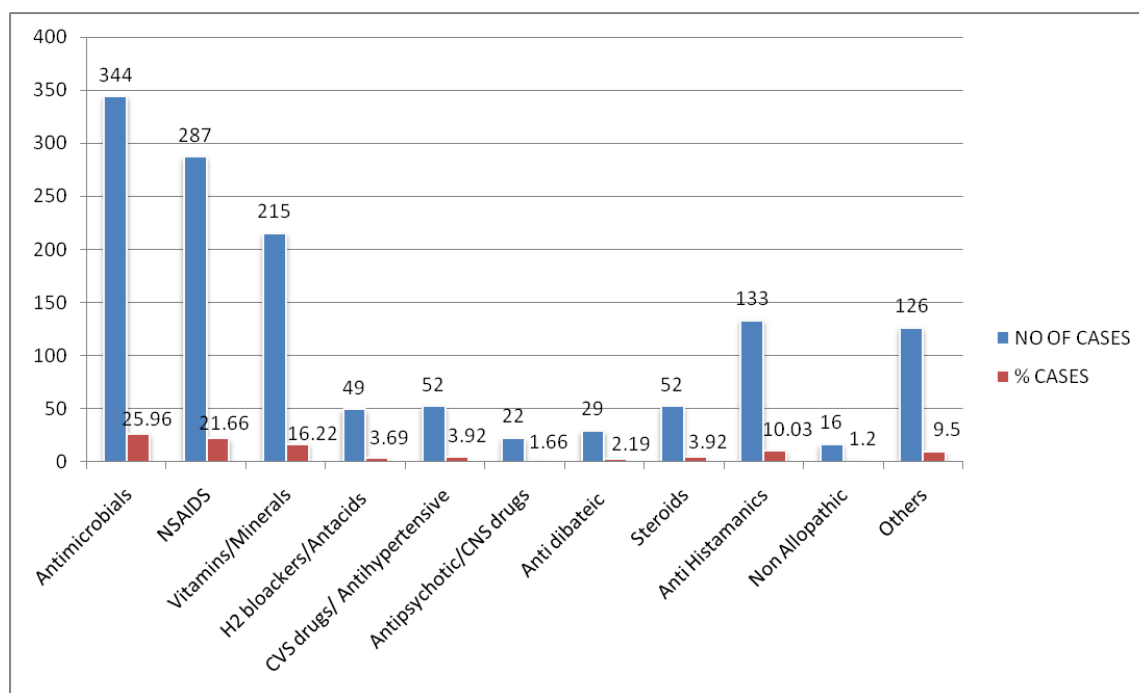
**Figure 4: Legibility of prescriptions (Private Practitioners)**



**Figure 5: Study of the drug prescribed (Government Hospitals)**



**Figure 6: Study of the drug prescribed (Private Practitioners)**



#### 4. Discussion

The prescription audited study found that certain parameters like weight of the patient, instruction to the pharmacist, complete instruction to the patient regarding the drugs, dose, duration and frequency of administration were absent. These factors were present in the prescription with aim to improvise and standardized the treatment of the subject. For example consider the parameter of weight; it is an important parameter in deciding the dose, but if it is absent from the prescription chances of drug error increases. Similarly the parameters like instruction to the pharmacist, complete instruction to the patients were absent which may cause problems like medication error, lack of patient compliance and serious adverse reactions. Problem with legibility of prescription were also found in significant number of prescriptions Excessive uses of antimicrobials were also observed, which is causing the problem of “Superbugs” or in other the drug resistance. [10-15]

One of the possible solution to the many problem listed above is use of “Electronic

prescription system” Electronic prescribing or e-prescribing (e-Rx) is the computer-based electronic generation, transmission and filling of a medical prescription, taking the place of paper and faxed prescriptions. It outlines the ability to send error-free, accurate, and understandable prescriptions electronically from the healthcare provider to the pharmacy. E-prescribing is meant to reduce the risks associated with traditional prescription script writing. [16]

#### Conclusion

Proper prescription writing and drug selection are two important pillars for proper healthcare system. If any of these above are compromised then the mission of the optimum healthcare is very difficult to attain.

A proper society is developed when it is healthy and a healthy society would be developed when there is a proper drug selection and communication of the best selected drug with the corrected prescription.

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