Study on prescription writing practices in a tertiary care teaching hospital, Mysore

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**ABSTRACT**

Accurate Use of Prescription betters the well being of patients. It becomes very essential to study Prescription Writing practices. The main goal of the study was to study the Prescription writing Practices and to assess the gaps in Prescription Writing so that it would be beneficial to the Patients. The study was conducted at a tertiary care teaching hospital in Mysore for Period of 6 months. Data was collected by both Retrospective and Prospective ways, A total of 2825 prescriptions were randomly collected from outpatients visiting the study site, and analyzed. Sixteen Criteria were analyzed pertaining to the Prescription writing Practices the most significant criteria for Clinical diagnosis, which is crucial for avoiding misdistribution of drug to patients was missing in majority of the prescriptions. Prescribers initials, Seal with MRC of the prescriber in 6 months data it was seen that most of criteria which is mandated by MCI (medical council of India) not being followed by physicians. The study recommends for Medical Practitioners to follow the MCI Protocol in order to avoid errors in Prescription.

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**INTRODUCTION**

A prescription is a written order from the physician to pharmacist, which consists of drug’s name, dose, strength, and duration of use. Prescription should contain the prescriber name, address, contact number; and signature and also mention name, address, contact member; age, gender of patient, and also directions, instructions, and warnings for patients (Ramachandrudu, 2016). Prescription is an authoritative report that contains point by point data in regards to modified pharmacological treatment structured by a Physician for a patient. It very well may be a document during medico-lawful Conditions (Sudheer et al., 2015). It additionally fills in as a correspondence among Registered Medical Practitioner and drug specialists. Such a significant record ought to be composed cautiously. Be that as it may, it is exceptionally regular to see some missing subtleties or indistinct data in medicines composed by specialists (Shelat, 2015). Prescription Writing is educated for clinical understudies in their initial academic year alongside different subjects of pharmacology (Ather et al., 2013). Extraordinary accentuation is given to this subject by remembering it for functional assessment (Kumari et al., 2014) (Prescription composition, analysis and amendment of solution) (Kumari et al, 2008). Notwithstanding such cautious preparing, adequate measures in solution composing are invisible (Prabhu et al., 2013). One of the significant reasons could be the patient–specialist proportion in the emergency clinics (Vijayakuma et al., 2011).
### Table 1: Details of December

| SL NO | VARIABLES                          | DECEMBER |   |
|-------|------------------------------------|----------|---|
| 1     | Date of prescription               | 100%     | 0% |
| 2     | OP Number                          | 66%      | 34%|
| 3     | Name of the Patient                | 96%      | 4% |
| 4     | Age of the Patient                 | 70%      | 30%|
| 5     | Sex                                | 72%      | 28%|
| 6     | Clinical Diagnosis                 | 2%       | 98%|
| 7     | Dosage Form Mentioned              | 0%       | 100%|
| 8     | Name of the DRUG is legible        | 93%      | 7% |
| 9     | Name of the DRUGS in CAPITAL letters | 93%    | 7% |
| 10    | Dose of the DRUG is clear          | 100%     | 0% |
| 11    | UNITS of the dose is clear         | 99%      | 1% |
| 12    | FREQUENCY Of the dose is clear     | 0%       | 100%|
| 13    | DURATION of the THERAPY is mentioned | 0%       | 100%|
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 94% | 6% |
| 15    | Prescriber’s initials              | 99%      | 1% |
| 16    | Seal with MRC of the prescriber    | 71%      | 29%|

### Table 2: Details of January

| SL NO | VARIABLES                                         | JANUARY |   |
|-------|---------------------------------------------------|---------|---|
| 1     | Date of prescription                              | 98%     | 2% |
| 2     | OP Number                                         | 58%     | 42%|
| 3     | Name of the Patient                               | 96%     | 4% |
| 4     | Age of the Patient                                | 53%     | 47%|
| 5     | Sex                                               | 51%     | 49%|
| 6     | Clinical Diagnosis                                | 8%      | 92%|
| 7     | Dosage Form Mentioned                             | 99%     | 1% |
| 8     | Name of the DRUG is legible                       | 96%     | 4% |
| 9     | Name of the DRUGS in CAPITAL letters              | 51%     | 49%|
| 10    | Dose of the DRUG is clear                         | 74%     | 26%|
| 11    | UNITS of the dose is clear                         | 61%     | 39%|
| 12    | FREQUENCY Of the dose is clear                    | 96%     | 4% |
| 13    | DURATION of the THERAPY is mentioned               | 91%     | 9% |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 97% | 3% |
| 15    | Prescriber’s initials                             | 97%     | 3% |
| 16    | Seal with MRC of the prescriber                   | 46%     | 54%|
Table 3: Details of February

| SL NO | VARIABLES                          | FEBRUARY |
|-------|------------------------------------|----------|
|       |                                    | YES      | NO     |
| 1     | Date of prescription               | 99%      | 1%     |
| 2     | OP Number                          | 68%      | 32%    |
| 3     | Name of the Patient                | 98%      | 2%     |
| 4     | Age of the Patient                 | 56%      | 44%    |
| 5     | Sex                                | 55%      | 45%    |
| 6     | Clinical Diagnosis                 | 0%       | 100%   |
| 7     | Dosage Form Mentioned              | 99%      | 1%     |
| 8     | Name of the DRUG is legible        | 99%      | 1%     |
| 9     | Name of the DRUGS in CAPITAL letters | 52%  | 48%    |
| 10    | Dose of the DRUG is clear          | 90%      | 10%    |
| 11    | UNITS of the dose is clear         | 82%      | 18%    |
| 12    | FREQUENCY Of the dose is clear     | 99%      | 1%     |
| 13    | DURATION of the THERAPY is mentioned | 92%  | 8%     |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 27%  | 73%    |
| 15    | Prescriber's initials              | 99%      | 1%     |
| 16    | Seal with MRC of the prescriber    | 54%      | 46%    |

Table 4: Details of March

| SL NO | VARIABLES                          | MARCH |
|-------|------------------------------------|-------|
|       |                                    | YES   | NO    |
| 1     | Date of prescription               | 96%   | 4%    |
| 2     | OP Number                          | 71%   | 29%   |
| 3     | Name of the Patient                | 0%    | 100%  |
| 4     | Age of the Patient                 | 66%   | 34%   |
| 5     | Sex                                | 67%   | 33%   |
| 6     | Clinical Diagnosis                 | 0%    | 100%  |
| 7     | Dosage Form Mentioned              | 2%    | 98%   |
| 8     | Name of the DRUG is legible        | 96%   | 4%    |
| 9     | Name of the DRUGS in CAPITAL letters | 71%  | 29%    |
| 10    | Dose of the DRUG is clear          | 77%   | 23%   |
| 11    | UNITS of the dose is clear         | 73%   | 27%   |
| 12    | FREQUENCY Of the dose is clear     | 91%   | 9%    |
| 13    | DURATION of the THERAPY is mentioned | 22%  | 78%    |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 13%  | 87%    |
| 15    | Prescriber's initials              | 99%   | 1%    |
| 16    | Seal with MRC of the prescriber    | 64%   | 36%   |
### Table 5: Details of April

| SL NO | VARIABLES                                      | APRIL |  |
|-------|-----------------------------------------------|-------|-----|
| 1     | Date of prescription                          | 93%   | 7%  |
| 2     | OP Number                                     | 65%   | 35% |
| 3     | Name of the Patient                           | 95%   | 5%  |
| 4     | Age of the Patient                            | 68%   | 32% |
| 5     | Sex                                           | 72%   | 28% |
| 6     | Clinical Diagnosis                            | 2%    | 98% |
| 7     | Dosage Form Mentioned                         | 72%   | 28% |
| 8     | Name of the DRUG is legible                   | 88%   | 12% |
| 9     | Name of the DRUGS in CAPITAL letters          | 64%   | 36% |
| 10    | Dose of the DRUG is clear                     | 52%   | 48% |
| 11    | UNITS of the dose is clear                    | 44%   | 56% |
| 12    | FREQUENCY Of the dose is clear                | 71%   | 29% |
| 13    | DURATION of the THERAPY is mentioned          | 29%   | 71% |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 5%    | 95% |
| 15    | Prescriber’s initials                         | 71%   | 29% |
| 16    | Seal with MRC of the prescriber               | 61%   | 39% |

### Table 6: Details of May

| SL NO | VARIABLES                                      | MAY |  |
|-------|-----------------------------------------------|-----|-----|
| 1     | Date of prescription                          | 95% | 5%  |
| 2     | OP Number                                     | 67% | 33% |
| 3     | Name of the Patient                           | 97% | 3%  |
| 4     | Age of the Patient                            | 68% | 32% |
| 5     | Sex                                           | 85% | 15% |
| 6     | Clinical Diagnosis                            | 99% | 1%  |
| 7     | Dosage Form Mentioned                         | 84% | 16% |
| 8     | Name of the DRUG is legible                   | 93% | 7%  |
| 9     | Name of the DRUGS in CAPITAL letters          | 66% | 34% |
| 10    | Dose of the DRUG is clear                     | 64% | 36% |
| 11    | UNITS of the dose is clear                    | 58% | 42% |
| 12    | FREQUENCY Of the dose is clear                | 80% | 20% |
| 13    | DURATION of the THERAPY is mentioned          | 33% | 67% |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 8%  | 92% |
| 15    | Prescriber’s initials                         | 83% | 17% |
| 16    | Seal with MRC of the prescriber               | 62% | 38% |
Table 7: The Detailed Study of First 3 Months December-February months and were tabulated in Prescription Audit Data

| SI No | Variables                        | Dec  |                | Jan  |                | Feb  |                |
|-------|----------------------------------|------|----------------|------|----------------|------|----------------|
|       |                                  | Yes  | No             | Yes  | No             | Yes  | No             |
| 1     | Date of Prescription             | 100  | 0              | 98   | 2              | 99   | 1              |
| 2     | OP Number                        | 66   | 34             | 58   | 42             | 68   | 32             |
| 3     | Name of the Patient              | 96   | 4              | 96   | 4              | 98   | 2              |
| 4     | Age of the Patient               | 70   | 30             | 53   | 47             | 56   | 44             |
| 5     | Sex                              | 72   | 28             | 51   | 49             | 55   | 45             |
| 6     | Clinical Diagnosis               | 2    | 98             | 8    | 92             | 0    | 100            |
| 7     | Dosage Form Mentioned            | 0    | 100            | 99   | 1              | 99   | 1              |
| 8     | Name of the DRUG is legible      | 93   | 7              | 96   | 4              | 99   | 1              |
| 9     | Name of the DRUGS in CAPITAL letters| 93   | 7             | 51   | 49             | 52   | 48             |
| 10    | Dose of the DRUG is clear        | 100  | 0              | 74   | 26             | 90   | 10             |
| 11    | UNITS of the dose is clear       | 99   | 1              | 61   | 39             | 82   | 18             |
| 12    | FREQUENCY Of the dose is clear   | 0    | 100            | 96   | 4              | 99   | 1              |
| 13    | DURATION of the THERAPY is mentioned| 0    | 100          | 91   | 9              | 92   | 8              |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 94   | 6              | 97   | 3              | 27   | 73             |
| 15    | Prescriber’s initials            | 99   | 1              | 97   | 3              | 99   | 1              |
| 16    | Seal with MRC of the prescriber  | 71   | 29             | 46   | 54             | 54   | 46             |

Table 8: The Detailed Study of Next 3 Months March-May months and were tabulated in Prescription Audit Data

| SI No | Variables                        | Mar  |                | Apr  |                | May  |                |
|-------|----------------------------------|------|----------------|------|----------------|------|----------------|
|       |                                  | Yes  | No             | Yes  | No             | Yes  | No             |
| 1     | Date of Prescription             | 96   | 4              | 93   | 7              | 95   | 5              |
| 2     | OP Number                        | 71   | 29             | 65   | 35             | 67   | 33             |
| 3     | Name of the Patient              | 0    | 100            | 95   | 5              | 97   | 3              |
| 4     | Age of the Patient               | 66   | 34             | 68   | 32             | 68   | 32             |
| 5     | Sex                              | 67   | 33             | 72   | 28             | 85   | 15             |
| 6     | Clinical Diagnosis               | 0    | 100            | 2    | 98             | 99   | 1              |
| 7     | Dosage Form Mentioned            | 2    | 98             | 72   | 28             | 84   | 16             |
| 8     | Name of the DRUG is legible      | 96   | 4              | 88   | 12             | 93   | 7              |
| 9     | Name of the DRUGS in CAPITAL letters | 71   | 29             | 64   | 36             | 66   | 34             |
| 10    | Dose of the DRUG is clear        | 77   | 23             | 52   | 48             | 64   | 36             |
| 11    | UNITS of the dose is clear       | 73   | 27             | 44   | 56             | 58   | 42             |
| 12    | FREQUENCY Of the dose is clear   | 91   | 9              | 71   | 29             | 80   | 20             |
| 13    | DURATION of the THERAPY is mentioned | 22   | 78             | 29   | 71             | 33   | 67             |
| 14    | Instructions to take the DRUG mentioned (i.e. Before food of After Food) | 13   | 87             | 5    | 95             | 8    | 92             |
| 15    | Prescriber’s initials            | 99   | 1              | 71   | 29             | 83   | 17             |
| 16    | Seal with MRC of the prescriber  | 64   | 36             | 61   | 39             | 62   | 38             |
On occasion, a solitary specialist needs to treat several patients in medical clinics (Abdellah and Abdelrahman, 2012). This is especially clear in government medical clinics. So the explanation behind such sort of medicine composing might be credited to over-burden of patients thus specialists should not generally be censured (Seden et al., 2013).

**MATERIALS AND METHODS**

**Study Location:**
The study was conducted at a tertiary care teaching hospital, Mysore. The hospital has state of art infrastructure with 37 speciality and super speciality services. Hospital also provides critical and emergency care services round the clock with 260 beds (Siddarth et al., 2014).

**Study area**
The study was conducted at the outpatient pharmacy department.

**Study period**
Study was conducted for a period of 6 months from December-May 2019.

**Data collection methods:**
Data was collected for the study in 2 ways,
1. Retrospective
2. Prospective

**Retrospective data:**
Retrospective data were collected from clinical pharmacy department of the hospital (Nehru et al., 2005).

**Prospective data:**
Prescription was collected irrespective of diagnosis, age, gender, etc across various departments of the hospital (Ruwan et al., 2009). we took photographs of the prescription using digital camera. A total of 2825 prescriptions were randomly collected from out patients visiting the study site, and analysed (Potharaju and Kabra, 2011).

**RESULTS AND DISCUSSION**
The study was carried out for the duration of 6 months and were tabulated in Prescription Audit Data Table

**December**
A sum of 442 Prescriptions were arbitrarily gathered from out patients visiting the examination site, and investigated. All solutions apparently had some missing/indistinct data Missing data about patient and prescription was regularly found in this examination detail Result are Presented in Table 1

**January**
A sum of 535 Prescriptions was arbitrarily gathered from out patients visiting the examination site, and investigated. All solutions supposedly had some missing/indistinct data. Missing data about patient and drugs was ordinarily found in this investigation. Detail Result are Presented in Table 2

**February**
A sum of 557 prescriptions was arbitrarily gathered from out patients visiting the investigation site, and dissected. All remedies apparently had some missing/indistinct data. Missing data about patients and drugs was ordinarily found in this investigation. Detail Result are Presented in Table 3

**March**
An aggregate of 370 solutions was arbitrarily gathered from out patients visiting the investigation site, and broke down. All solutions supposedly had some missing/hazy data. Missing data about patients and prescriptions was ordinarily found in this investigation. Detail Result are Presented in Table 4

**April**
A sum of 421 remedies was arbitrarily gathered from out patients visiting the examination site, and dissected. All remedies apparently had some missing/indistinct data. Missing data about patients and prescriptions was ordinarily found in this investigation. Detail Result are Presented in Table 5

**May**
A sum of 500 prescriptions was arbitrarily gathered from out patients visiting the examination site, and Analyzed. Every remedies supposedly had some missing/hazy data. Missing data about patients and medicine was normally found in this investigation. Detail Result are Presented in Table 6

**December-May**
A total of 2825 prescriptions were randomly collected from out patients visiting the study site and analysed during this Six Months Period. All remedies apparently had some missing/indistinct data. Missing data about patients and prescriptions was ordinarily found in this investigation. Detail Result are Presented in Tables 7 and 8 respectively.

**CONCLUSIONS**
The study highlights that most of the critical factors, which is mandated by MCI (medical council of India) are not being followed by doctors during prescription writing. Further, nearly 99 % were clinical
diagnosis less prescribers did not mention the frequency of dose, instruction to take the drug, and seal with the MRC of the prescribers, which may lead to adverse drug reaction or mis-distribution of drugs. To sum up, it is highly advisable for the prescribers to follow MCI standard protocol, so as to avoid undesirable outcomes in near future.

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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