

PRESCRIPTION ANALYSIS REPORT

State Health Resource Centre is a pioneer institute in designing Drafting & making changes in state policy & health care services in Chhattisgarh SHRC has given a kaleidoscopic vision and improvement regarding health in Chhattisgarh.

SHRC had assigned a small task of Prescription Analysis of Prescribes in C.G. Initially the work assigned was designing and framing the format of the prescription of Dhamtari District. After few meeting & discussion with Dr. Sundara Raman, seven more districts were included in the analysis. There were 312 prescriptions comprising of eight districts.

| | | |
|----|----------------|------------|
| 1. | Jagdalpur | 28 |
| 2. | Dhamtari | 63 |
| 3. | Rajnandgaon | 40 |
| 4. | Bhilai | 13 |
| 5. | Care (Raipur) | 35 |
| 6. | Raigarh | 62 |
| 7. | Dhamtari | 35 |
| 8. | Mahasamund | 36 |
| | Total | 312 |

A retrospective study was conducted for a period of five months of all the collected 312 Prescription, which was obtained from SHRC written by Govt. & Private Practitioners. The study was done to

1. Asses the prescribing pattern of the Doctors
2. Evaluate the prescriptions for their rational approach.

All 312 prescriptions were analyzed. The prescription in which duration was not mentioned calculation was done for one day requirement. All the price calculation was done excluding sale tax. Combined drugs with brand name have been counted as a single drug. Following team of faculties conducted the work.

1. Dr. Manju Toppo, Asstt. Prof. Department of Community Medicine
2. Dr. Nirmal Verma, Asstt. Prof. Department of Community Medicine

& Assisted by

- Dr. Teeku Sinha, P.G. in Community Medicine
Dr. Subhra Agrawal, P.G. in Community Medicine

Table No.- 1
Format Adequacy

| Format Adequacy | Yes | No. | Total |
|-----------------|--------------|--------------|-------|
| Name | 297 (95.19%) | 15 (4.81%) | 312 |
| Age | 246 (78.85%) | 66 (21.15%) | 312 |
| Sex | 178 (57.05%) | 134 (42.95%) | 312 |
| Diagnosis | - | 33 (10.58%) | |
| Complete | 158 (50.64%) | | |
| Incomplete | 11 (3.52%) | | |
| Symptoms | 110 (35.26%) | | |

Above Table describes about the adequacy of format. Out of 312 Prescriptions, Name of the patient was written in maximum of prescription i.e. 297 (95%) followed by Age & Sex i.e. 246 (78%) & 178 (57%) Regarding Diagnosis Almost half the prescriptions had complete diagnosis written i.e. 158 (50.64%) followed by symptom writing i.e. 110 (35.26%). Around 33 (10.58%) of the prescriptions had no diagnosis/symptom written & about 11 (3.52%) prescriptions had incomplete diagnosis written.

Table No. – 2
Type of Prescribed Drugs

| Type of drugs | No. | % of drugs |
|---------------|------|------------|
| Generic Name | 485 | 43.00% |
| Brand Name | 563 | 49.91% |
| Illegible | 80 | 7.09% |
| Total Drugs | 1128 | 100% |

Average No. of Drugs / Prescription = 3.62 / Prescriptions.

Average No. of Generic Drugs / Prescription = 1.55/ Prescriptions.

Average No. Brand / Prescription = 1.80/ Prescriptions.

No. of Prescriptions with only Generic = 75 (24.04%).

No. of Prescriptions with only Brand = 68 (21.80%).

No. of Prescriptions with Brand & Generic = 166 (53.21%).

(Note :- Three Pts. referred with out prescription of any drug)

Above table shows the prescription pattern of drugs out of 1128 drugs prescribed brand drugs occupied a majority of 563 (49.19%) followed by Generic drugs i.e. 483 (43.00%) & Illegible was 80 (7.09%) .

Average no. of drugs per prescription was found to be 3.62/ Prescriptions followed by Average no. of brand drugs / prescription which was 1.80/ prescriptions & Average no. of Generic drug was only 1.55/ Prescriptions no. of prescription comprising of Generic & Brand which formed a majority of 166 (53.21%) & no. of Prescription with only Generic was 75 (24.04%) & no. of Prescription with only brand name was 68 (21.80%).

Table No. – 3
Pattern of Prescription of Antibiotics & Analgesics

| Drugs | Prescribed No. | Average no Prescription | Total cost | Average cost / Drug | Average cost for Drug / Prescription |
|-------------|----------------|-------------------------|------------|---------------------|--------------------------------------|
| Antibiotics | 220 | 0.71 | 7884.27 | 35.83 | 25.27 |
| Analgesics | 176 | 0.56 | 1699.99 | 9.65 | 5.45 |

Above table shows the Pattern of Prescription of antibiotics & Analgesics. Total Prescribed Antibiotics were 220 that contribute 0.71/ prescription & the total cost of these antibiotics was Rs. 7884.27. Average cost / antibiotic was Rs. 35.83 & average expense on these antibiotics/ Prescription was Rs. 25.27.

Similarly, total prescribed analgesics were 176 (including some FDC) that contribute 0.56/ prescriptions. The total costs of these analgesics are Rs. 1699.99. Average cost / analgesic was Rs. 09.65 & average expense on these analgesics / Prescription was Rs.05.45.

Table No. - 4
Comparative Table of Prescribed Drugs & Their Cost

| Type of Drugs | No | % | Total Cost | No. of drugs/ Prescription | Average cost Rs. Of Drugs / Prescriptions |
|---|------|--------|---|----------------------------|---|
| Essential Drugs | 622 | 55.14% | 15106.28/- | 1.99 | 48.41/- |
| Irrational Drugs | 426 | 37.77% | 10680.24/- | 1.37 | 34.23/- |
| Illegible | 80 | 7.09% | - | 0.26 | - |
| Total | 1128 | 100% | 25786.3/-(excluding 80 drugs illegible) | 3.62 | 82.64/- (excl. illegible. drugs) |
| Cheaper Alternative of Essential Drugs | - | - | 8619.9/- | - | 27.62/- |
| Total Possible savings if RDT followed | - | - | 17167.27- | - | 55.02/- |

Above table highlights & compares the prescribed drugs & their cost. Out of 1128 drugs prescribed a majority of drugs were essential i.e. 622 (55.14%) followed by irrational drugs i.e. 426 (37.77%) & illegible amounting to a small number of 80 (7.09%).

The total cost incurred in essential drugs was Rs.15106.28 where as irrational Drugs amounted to about Rs. 10680.24.

Average 1.99 drugs / prescription were found essential drugs while 1.37 drugs / prescription were irrational. Average cost of drugs/ Prescription amounted to be Rs 82.64/-. Out of which Rs. 48.41 per prescription was spent for essential drugs and Rs. 34.23 per prescription for irrational drugs. Whereas Cheaper Alternative of Essential drugs was Rs. 8619.19/- costing to Average cost of Drug/ Prescription i.e. Rs. 27.62. The most remarkable finding was the total possible saving if RDT followed amounted to about 17167.27. Thus, **Rs. 55.02** per prescription could be **saved** if drugs were prescribed as per **RDT guidelines**.

Table No. – 5
Pattern of Use of Irrational Drugs

| Drugs | No./ Prescribed | % |
|-----------------|-----------------|--------|
| Antibiotics | 77 | 18.08% |
| Analgesics | 32 | 07.51% |
| Banned drugs | 40 | 09.39 |
| Tonic | 04 | 00.94% |
| Cough formula | 32 | 07.51% |
| Multivitamins | 60 | 14.09% |
| Vit. B.C. | 49 | 11.50% |
| Ayurvedic Drugs | 10 | 02.35% |
| OFD Combination | 15 | 03.21% |
| Others | 107 | 25.12% |
| Total | 426 | 100% |

Above table highlights the pattern of use of irrational drugs. Out of total 423 excessive drugs majority of them were multivitamins & Vitamin B. Complex 109 (25.59%) followed by other group comprising of antacids, antiallergic etc.107 (25.12%), antibiotics 77 (18.08%) banned drugs 40 (09.39%), Analgesics & cough formula 32 (7.51% each group), OFD combination 15 (3.21%), Ayurvedic drugs 10 (2.35%) and least were tonics 04 (0.94%).

Table No. – 6
NO.OF DRUGS PER PRESCRIPTION

| No of Drugs in prescriptions | Only Generic | Only Brand | Both Generic & Brand (mixed) | Total |
|------------------------------|--------------|-------------|------------------------------|--------------|
| 1-2 | 24 (7.69%) | 30 (9.62%) | 14 (4.49%) | 68 (21.80%) |
| 3-5 | 51 (16.35%) | 37 (11.86%) | 123 (39.425) | 211 (67.63%) |
| >5 | 00 | 01 (0.32%) | 29 (9.30%) | 30 (9.62%) |
| Total | 75 | 68 | 166 | 309 |

(Note: - three Pts referred with out prescription any drugs)

Above table shows the no. & type of Drugs prescribed in all prescriptions. In a total 309 Prescription 75 were only Generic in which maximum prescription had 3-5 Generic drug i.e. 51 (16.35%) Brand drugs were 68 in number in which maximum prescription had 3-5 Brand drug i.e. 37 (11.86%) Mixed drugs amounted to 166 in which maximum prescriptions had 3-5 mixed drug i.e. 123 (39.42%) followed by prescription more than 5 drugs i.e. 29 (9.30%).

Table No. -7
Dose & Duration Inadequacy

| Variants | No of Prescription | % of Prescriptions |
|------------------------------------|--------------------|--------------------|
| Both Dose & Duration Inadequacy | 83 | 26.60% |
| Only Duration inadequacy | 52 | 16.67% |
| Only Dose inadequacy | 06 | 01.92% |
| Total | 141 | 45.10% |

Above total signifies the dose & durations inadequacy of drugs prescribed. Out of 312 prescriptions, 141 (45.19%) were such prescription, which had inadequacy. Out of 312 prescriptions 83 (26.60%) prescriptions had both dose & duration inadequacy, which was in great majority. Duration inadequacy also formed a large no of 52 (16.67%). Only Dose inadequacy was 06 (01.92%) respectively.

Table No. – 8
Injection Practices of Prescriptions

| Injection | Total | % of Prescriptions |
|---|-------|--------------------|
| Necessary Injection | 44 | 14.10 % |
| Unnecessary Injection Of Necessary Drugs | 51 | 16.35 % |
| Irrational Inj. | 71 | 22.76 % |
| Total Prescription | 312 | |

Above table shows the injection practices amongst prescribers. Out of total 312 prescription, Irrational Injection were in majority i.e. 71 (22.76 %) followed by use of Unnecessary injection of Necessary Drugs i.e. 51 (16.35 %) Necessary injection practice was 44 (14.10 %) only.

CONCLUSION

1. Evaluation for format adequacy patient identity & out of 312 prescriptions Majority of the prescriptions had Name, Age & Sex written i.e. (95.19%), 78.85% & 57.05 % and 50.64% had complete diagnosis written.
2. Type of Drug: - Generic name usage is only 43 % & Brand name usage is 49.91% & illegible drugs were 07.09%.
3. Majority of the prescriptions consisted of both generic & brand drugs (53.21 %).
4. A majority of the drugs prescribed was Essential i.e. 55.14%, Costing to Rs. 48.41 where cheaper alternative amounted to Rs. 27.62. Thus, the possible saving if RDT followed would have been Rs. 55.02 per prescription.
5. The major irrational use drugs were multivitamins & B-complex (25.59 %).
6. Dose & Duration inadequacy was found in 45.19 % of prescriptions.
7. Cost of Antibiotics & Analgesics was Rs. 35.23/- & Rs. 09.65/- respectively, and average expense on these antibiotics per prescription & analgesic per prescription was Rs. 25.27/- & Rs. 5.45/-.

Necessary Injection Practice amongst prescriptions was only 14.10 % of prescription, Irrational& Unnecessary injections of necessary Injection use was 39.10 % of prescription

RECOMMENDATIONS

The findings obtained after auditing the prescriptions indicates that majority of the prescriptions do adhere to the ideal pattern of the prescription writing. Over prescription & mixed prescriptions of Generic & Brand was found prevalent indicating the increasing tendency of polypharmacy. This tendency is due to the patient expectations & demand of quick relief .

Incorrect diagnosis & excessive use of antibiotics may be mainly due to influence of the lucrative, promotional programme of different drug companies to attract as many as doctors as possible to increase their sale.

More than 45% prescriptions were dose & duration inadequate which shows that prescribers need updating regarding prescription writing.

Using cheaper alternatives, which are equally effective & equally good, can minimize the cost of essential drugs prescribed. Govt. of Chhattisgarh should make a policy & training for practitioner at regular intervals for rational use of drug. These help the nation & society in a long way to help a sick person by saving his pocket as much as possible.