Prescription Audit

QI-NHSRC

Audit

A systematic review and analysis of any service delivered and its evaluation in terms of quality within given resources.

Prescription Audit

- A prescription audit is a part of the holistic clinical audit
- It is process that seeks to improve patient care and outcomes through a systematic review of care against explicit criteria and the implementation of change

Objectives Of Conducting Prescription Audit

- Detection of prescribing errors with their reasons
- To assess & reduce the irrational usage of antibiotics, syrups, injections etc
- To identify opportunities for the improvement and developing benchmarks.
- To channelize the good practice of writing complete, legible and rational prescriptions

Pre Requisites for Prescription Audit

Prescription Format	• Correct Prescription Format • Standardise the prescription format
Essential Medical List	• Different Level of facility
STG & Policy for Medicine Use	• For common conditions & case management • Antibiotic & rational use of drug Policies to reduce irrational use
Understanding the Audit Philosophy	• Identify why did it happen instead of who went wrong

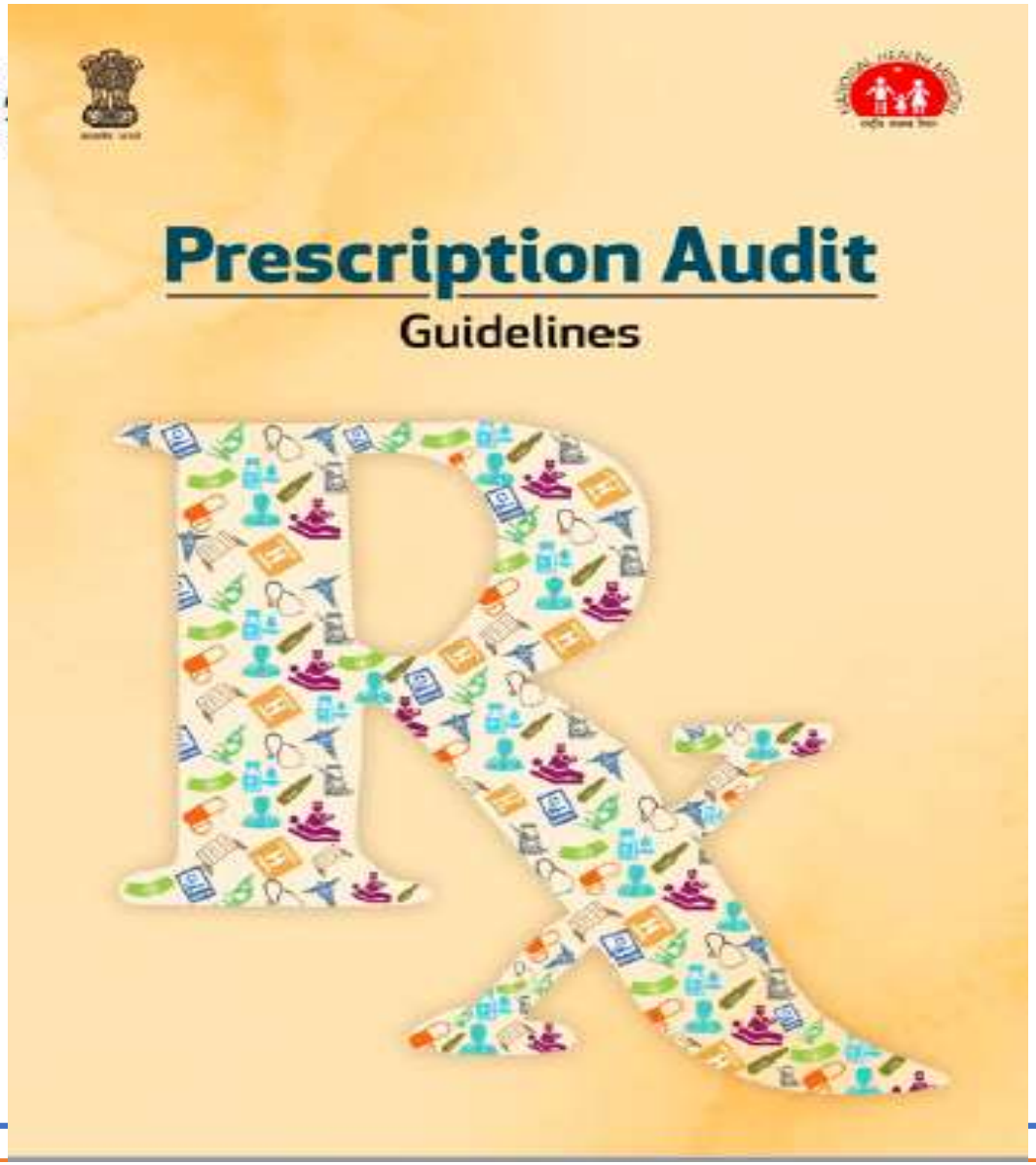
Expected Outcome

- Improve prescription quality at public health facilities.
- Promote the rational use of drugs
- Reduce the cost of treatment (on Hospital & patient) by reducing unnecessary prescriptions (e.g. Antibiotics), efficient use of therapeutic agents,
- Encourage generic medicines, and reducing polypharmacy.

Target Audience

- Primary and Secondary care public health facilities providing Out-Patient Services,
    - District Hospitals (DHs),
    - Sub-divisional Hospitals (SDHs),
    - Community Health Centres (CHCs),
    - Primary Health Centres (PHCs), (Both Urban & Rural)

- Authorised personnel's prescriptions would be used for the Prescription audit except medicines given under the National Health Programmes.
- It will be prudent to exclude the prescriptions of medico-legal cases.
- Prescriptions, written for the admitted patients, are examined at time of conduct of medical audit, which



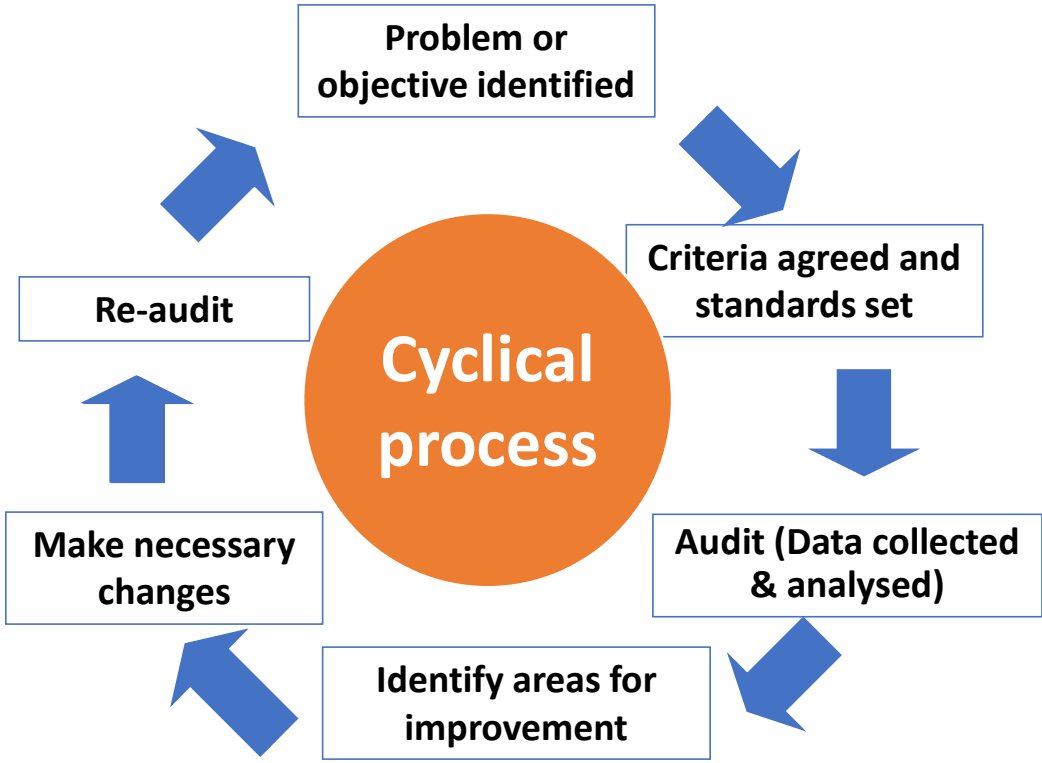
Audit Methodology

Remember

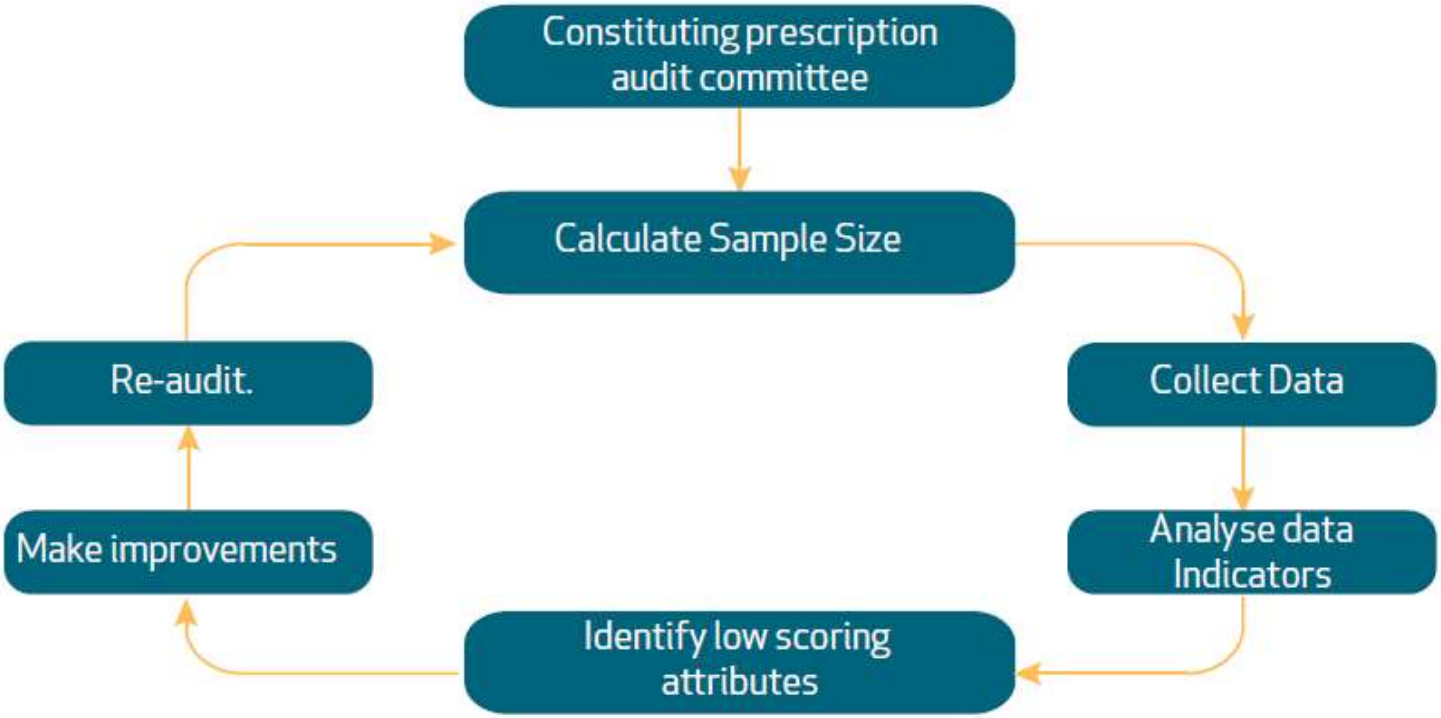
- Audit is not a **Fault-finding** Exercise
- But a **Fact-finding** Exercise

- Audits are not For **POLICING**
- But for **POLISHING**

- An **internal** mechanism for **Quality Improvement**
- Audit is not an **external Quality Assurance** method.



Overview of Prescription Audit Methodology



Step 1: Formulating an Audit Committee

- Audit Committee is part or subcommittee of 'Medicines and Therapeutic Committee'.
- The prescription audit committee should cover the practice of the different clinical and managerial disciplines
- Committee should know the aim of the audit & their role.

- **Suggested members of the Audit Committee:**

  At **DH/SDH and CHC** level:

  - **Hospital In-charge** (MS/CMO) (overall Responsibility)
  - **Hospital Administrator/Manager** (wherever available, for conducting and analysing Prescriptions' findings),
  - **One Clinician from each department**,
  - **In charge Nursing Services/Matron,**
  - **Chief Pharmacist/Senior most pharmacists managing dispensary and Medical Store**.

Step 1: Formulating an Audit Committee

- In small healthcare facilities like **UPHC and PHCs**, **Medical Officer, Pharmacist and one senior nurse** may be part of the Audit Committee.
- Specific details (like antibiotics prescribed, medicines prescribed as per STGs, no medicines given, etc.) can be audited through peer review by another Medical Officer of neighbouring health facility.

OR Scanned copies of minimum 30 prescriptions can be sent to District Quality Assurance Unit (DQAU) for review.

Define the Core Indicators

Indicators to Check the completeness of Prescription

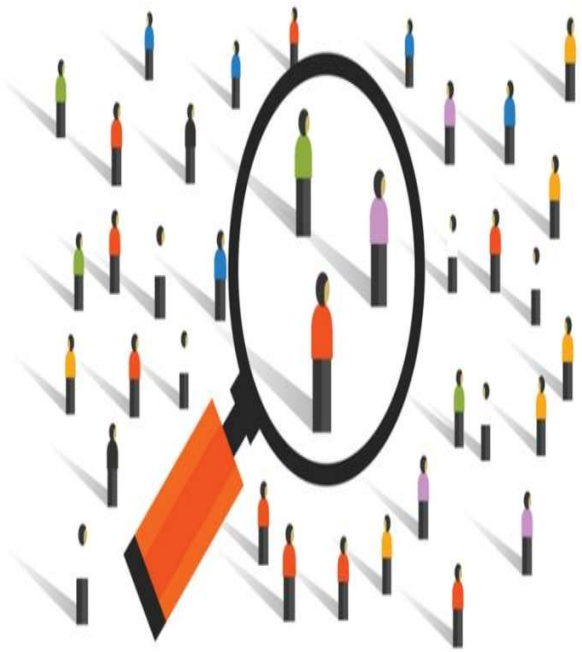
- Patient details- name, age, sex, address, reported allergy, Date of consultation/registration in OPD date.
- Chief Complaint- History
- Diagnosis
- Medicine information- Name of medicines prescribed in full or abbreviation, strength of formulation, dose, advisory (before/after food, at bedtime, etc.) duration of therapy, medicine interactions
- Non-pharmacological treatment description
- Signature and information about the prescriber– doctor's name, qualification, registration no

Indicators For Legibility and Rationality of the Prescription

- % of prescription with legible handwriting.
- % of prescription where medicines prescribed are in line with STG.
- % of prescription where allergies are mentioned.
- % of prescription with brief history written.
- % of prescription with provisional or Final Diagnosis
- % of prescription where salient features of clinical examination are recorded.
- % of prescription where schedule/Dosages are written.
- % of prescription with Vitamins, Tonics, or Enzymes.
- % of prescription wherein Antibiotics are prescribed as per Hospital Antibiotic Policy.

Step 2: Calculate Sample Size

- Adequate sample size is essential for Audit and meaningful evaluation of prescriptions.
- A sample size calculator is provided below with the Margin of Error (-10%) and Confidence Level (95%). Facilities having resources may aspire for calculating sample size on -5% margin of error.
- The sample (prescriptions selected for audit) should be representative of the total OPD attendance.



Population (OPD attendance)	Sample Size (No. of Prescriptions to be audited)
	Margin of Error -10%; confidence level 95%
10	9
20	17
50	34
100	50
200	66
300	73
500	81
1000	88
3000	94
5000	95
10,000	96
15,000	96
20,000	96
30,000	96
50,000	96
1,00,000	96

Sample Size Calculator given on page 10-11 of the guidelines

Step 3: Data Collection

- **Simple random sampling** techniques may be used.
- Half of the sample should be taken from first two weeks and half from remaining two weeks.
- Pharmacist/Nurse/Hospital Manger may be assigned the responsibility of collecting the sample prescriptions.
- Standardise format can be used for Data collection (Facilities can follow the format provided Annexure D (Page 37 &38)of the guidelines
- The states have the flexibility to make any changes (addition/deletion/modification) in the attributes as per the state's policy after approval of the State Quality Assurance Committee (SQAC)

Sr No	Criteria/Attributes
1	OPD Registration Number mentioned?
2	Complete Name of the patient is written?
3	Age in years (≥ 5 in years) in case of < 5 years (in months)
4	Weight in Kg (only patients of paediatric age group)
5	Date of consultation - day / month / year
6	Gender of the patient:
7	Handwriting is Legible in Capital letter
8	Brief history Written
9	Allergy status mentioned
10	Salient features of Clinical Examination recorded
11	Presumptive / definitive diagnosis written
12	Medicines are prescribed by generic names
13	Medicines prescribed are in line with STG
14	Medicine Schedule / doses clearly written

Sr No	Criteria/Attributes
15	Duration of treatment written
16	Date of next visit (review) written
17	In case of referral, the relevant clinical details and reason for referral given.
18	Follow-up advise and precautions (do's and don'ts) are recorded
19	Prescription duly signed (legibly)
20	Medicines Prescribed are as per EML/ Formulary
21	Medicines advised are available in the dispensary
22	Vitamins, Tonics or Enzymes prescribed
23	Antibiotics prescribed?
24	Antibiotics are prescribed as per facility's Antibiotic Policy
25	Investigations advised?
26	Injections prescribed
27	Number of Medicines prescribed.

Step 4: Data Analysis

- Once the calculated number of prescriptions have been received, all attributes need to be written in a tabular form.
- Afterward, each prescription is evaluated against these attributes in the form of observed response as ‘YES’ or ‘NO’.
- The collected information is then transferred into an excel sheet to get a comprehensive view of prescription practices, indicators’ calculation, gap identification, and best practices.
- The compliance & noncompliance need to convert into Percentage
- Two lowest-performing attributes have been identified to prepare an action plan with a defined timeline.

Data Analysis & Calculation

S.No.	Criteria	P1	P2	P3	P4	P5	Indicator
1	OPD Registration Number mentioned?	Y	Y	Y	Y	Y	% of prescription with OPD Registration Number
2	Complete Name of the patient is written?	Y	Y	Y	N	Y	% of prescription with Complete Name of the patient
3	Age in years (≥ 5 in years) in case of < 5 years (in months)	N	Y	Y	Y	Y	% of prescription with correct age of the patient.
4	Date of consultation - day/month/year	Y	Y	Y	Y	Y	% of prescription with date
5	Gender of the patient	Y	Y	Y	Y	Y	% of prescription with sex of the patient.
6	Handwriting is Legible in Capital Letters	N	N	N	N	Y	% of prescription with legible handwriting, preferably in Capital letters.

Data Analysis & Calculation

Formula	Calculation
No. of Prescriptions with OPD registration/No. of prescription audited. X 100	5/5 X 100= **100%**
No. of prescription with Complete Name of the patient/No. of prescription audited. X 100	4/5 X 100=**80%**
No. of prescription with correct age of the patient. /No. of prescription audited. X 100	4/5 X 100=**80%**
No. of prescription with date/No. of prescription audited. X 100	5/5 X 100=**100%**
No. of prescription with sex of the patient. /No. of prescription audited. X 100	5/5 X 100=**100%**
No. of prescription with legible handwriting. /No. of prescription audited. X 100	1/5 X 100=**20%**

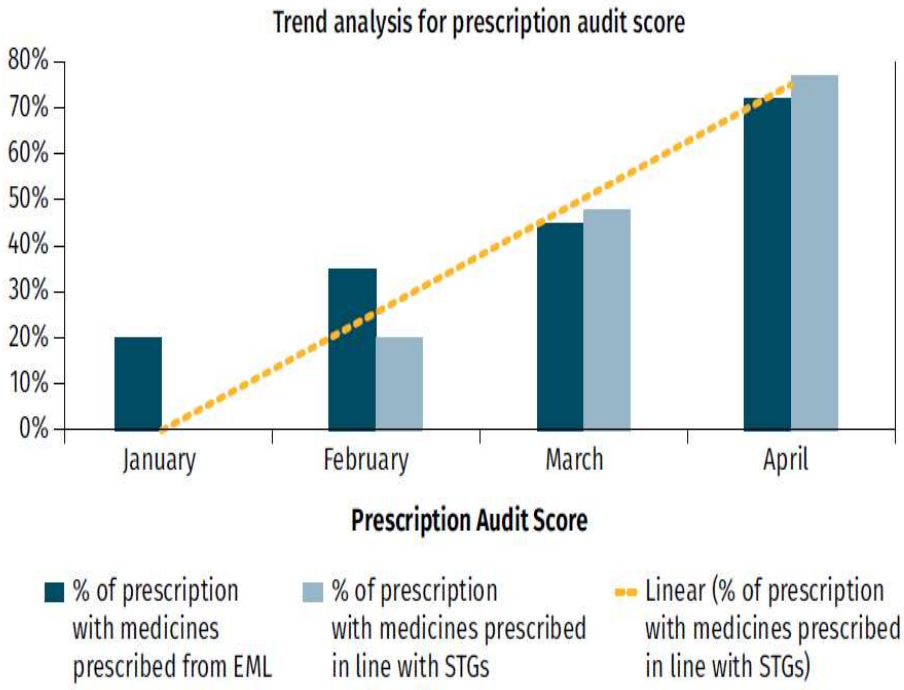
Step 5: Take Action & Make Improvement

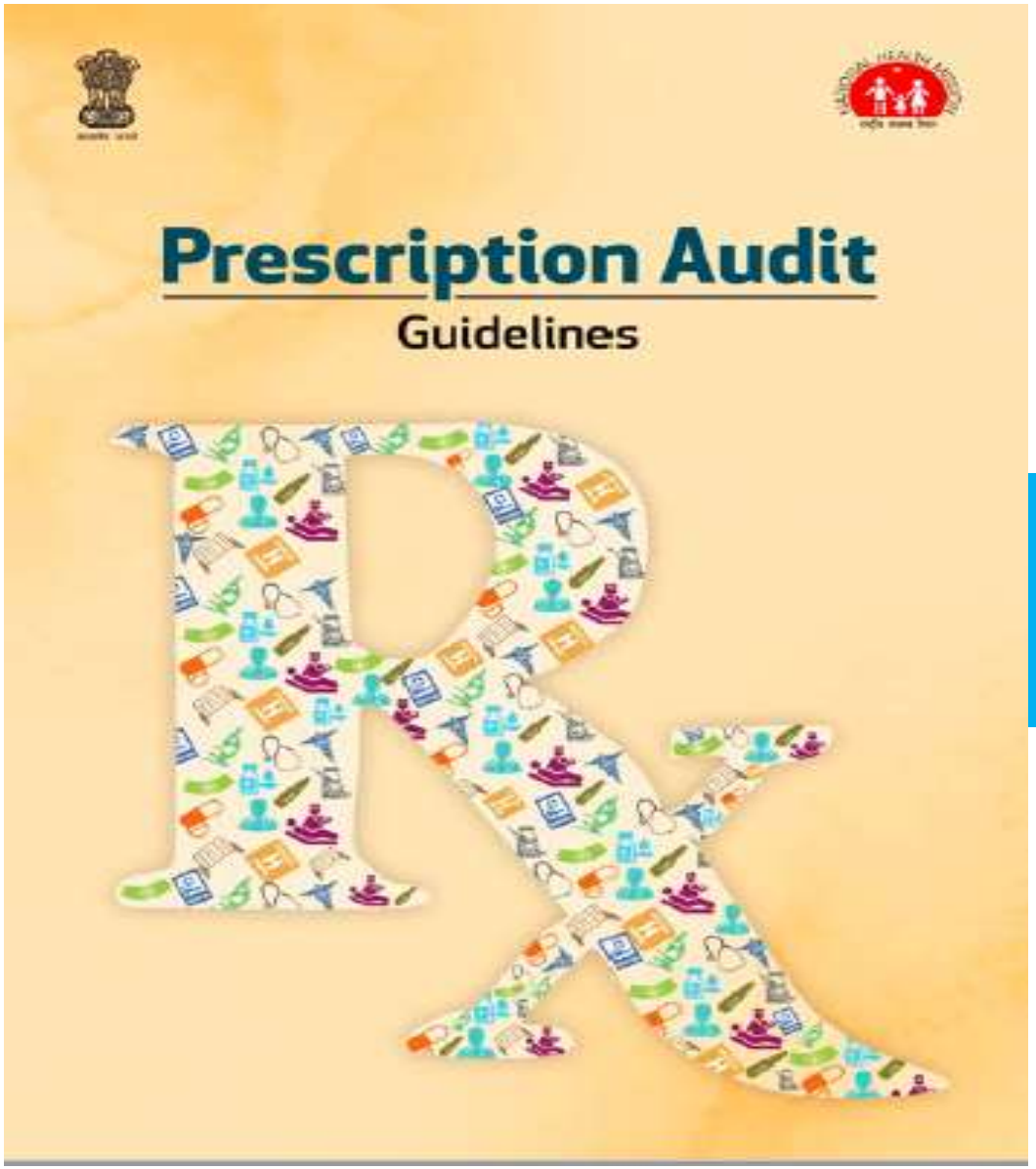
1. Low performing attributes need to identify
2. Do the root cause Analysis –using Brainstorming &Why –why analysis etc.
3. Develop the time bound action plan
4. Share the finding & action plan with all physicians of the Hospitals
5. Improve the lowest performing attributes using PDCA Cycles
6. Sustain the Improvement

Step 6: Follow up Audit

- A follow-up audit should be performed on a regular basis
- To ensure that the improvement cycle is completed and identified gaps have been closed.
- To analysis the trends over a period

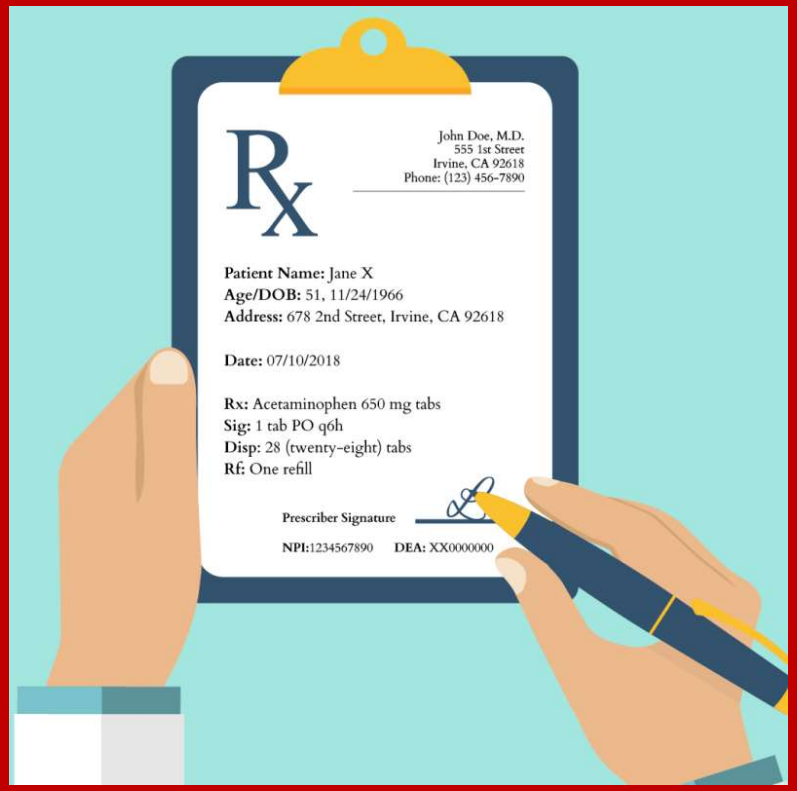
Figure 4: Trend analysis over period of time (continued from our example)





Thank you

PRESCRIPTION AUDIT



Prescription should be "*Effective, Safe, Suitable & Cost Efficient*" *for a patient*