

Audit at SGPGIMS: A simplified approach

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Disclaimer

- This is a broad and oversimplified overview of what an audit is.
- Meant for beginners
- Meant primarily for doctors and hospital staff
- Explained in plain and simple, non-technical language

- *Kindly refer to textbooks, audit guidelines, accreditation programs or speak to experts for further concepts and better understanding*



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Types of audits in tertiary care

3 main types:

- Clinical (performed by doctors and paramedicals)
- Service (performed by doctors, paramedicals, administration, finance, engineers, others)
- Academic (performed by doctors, academicians)

Other audits: Financial audits

Clinical audit

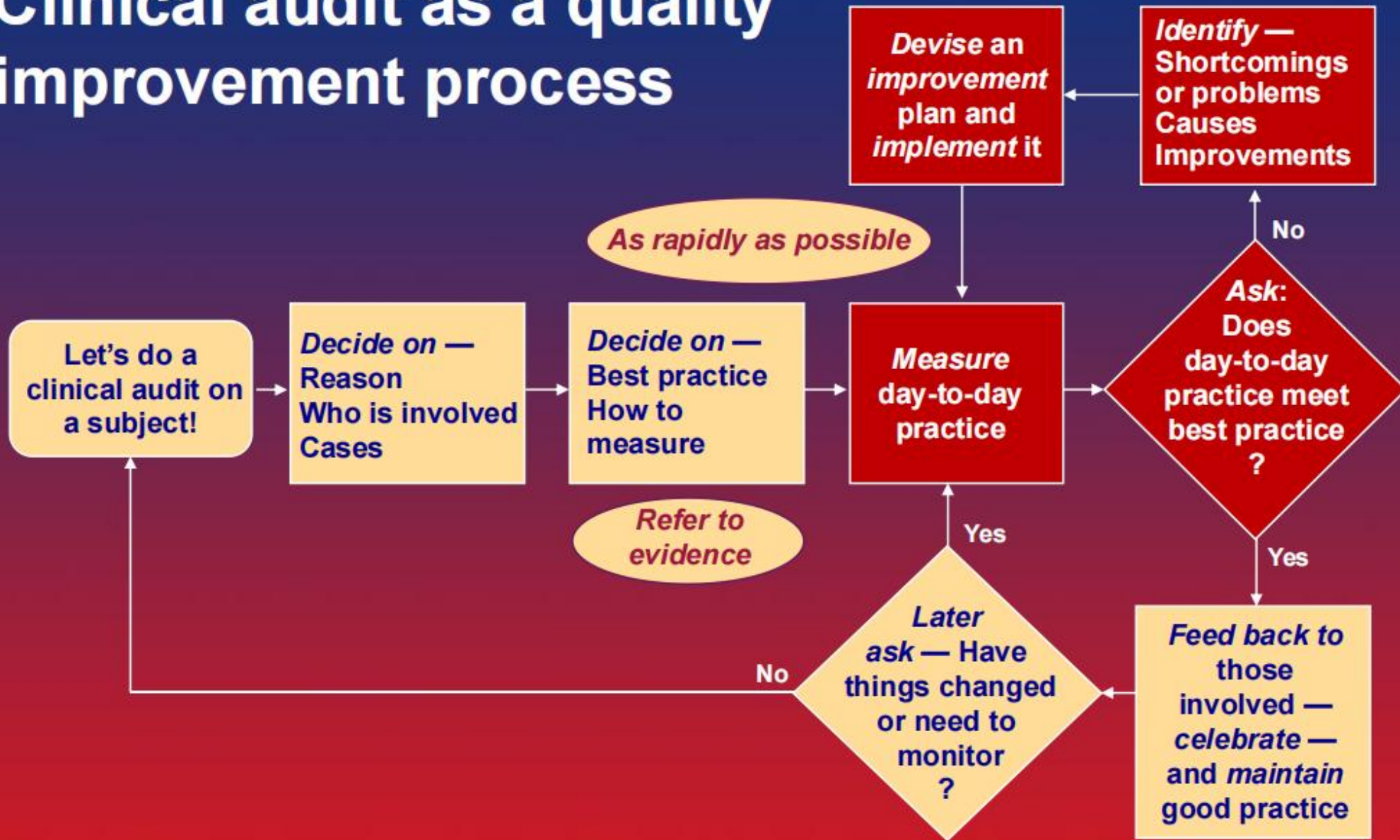


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Background and purpose of **clinical audit**

- Most clinical audits arise from the “conscience” of a doctor when he/she observes a “pattern of events” that do not seem correct in patient care
- The events may be omission or commission
- He/ she evaluates and addresses the “gaps” in the system
- The ultimate purpose is the benefit of patient, reduce morbidity, mortality or provide better quality of care
- Provides a sense of “fulfillment” and achievement to the doctor if the gaps are mended

Clinical audit as a quality improvement process



Why should we do an audit at all?

- We attend CMEs and conferences as we have a “quest for knowledge”
- Similarly we must perform audits as a “quest for quality care”
- Both are directed towards improvements in medical science
- Every clinician/doctor should ask themselves:
 - *What am I doing?*
 - *How am I doing it?*
 - *Why did I do it that way?*
 - *Can I do it better?*


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All audits require a certain degree of honesty and transparency by the auditor

What is the endpoint for an audit?

- A clinical audit may never have an “endpoint of satisfaction”
- An “audit cycle” is most essential for continual improvement and sustenance in quality of health care
- Once a policy is implemented to mend a gap, it is important to evaluate if the policy is working at all?
- With each level of improvement, a new benchmark is set
- With each new benchmark, a new audit is designed
- ...and the process/cycle goes on
- Hence “re-auditing” is the key to success

Where do I begin?

- You can begin anywhere in the chain of events!
- Begin where you are most comfortable, a clinical question that has been bothering you for sometime.
- It could be as simple as “improvement in waiting period for admission” to “evaluation of rare surgical technique”
- There will be numerous variables, infinite probabilities and varied solutions for an index question
- For beginners, it is important to address one issue at a time

What is my benchmark?

- In developing countries, the benchmark will mostly be the “standard of care” in developed countries
- Some clinical questions have a known standard of achievement or benchmark to compare
- Others may not have any. Hence the doctor relies on his/her wisdom, designs his/her own benchmark and proceed towards achieving the same.



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Who should design my audit?

- One can design his or her own audit!
- Better designed with an expert help of a hospital administrator who can provide an algorithm, can identify the loopholes in the system and provide guidance at each step
- Audit can be single departmental or multidepartmental if a certain service is being shared



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Is audit the same as research?

Research	Audit
Discovers the right thing to do	Determines whether the right thing is being done
A series of 'on off' projects	A cyclical series of reviews
Collects complex data	Collects routine data
Experiment rigorously defined	Review of what clinicians actually do
Often possible to generalize the findings	Not possible to generalize from the findings

How do I go about it?

- Identify a niche area in your speciality
- The problem could be a hurdle or an unanswered question in daily practice related to
 - Structure: manpower/premises/facilities
 - Process: provision of care
 - Outcome: Results in patients
- Ask yourself a single question and set a standard of reference
- Analyse the current chain of events/process with a keen eye of detailing each step
- Design the audit by questioning at each level in a step-by-step process

What should I do next?

- Collect the data systematically
- It is better to have an objective or semiquantitative value for each parameter than a subjective answer
- Analyse the data
- Look the results obtained
- Implement an action plan
- After some time, apply the same audit and reanalyse to see if improvements have occurred



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The audit cycle

Identify the need for change:

e.g. a problem identified in daily practice-something that could / should have been done better. 3 basic areas:

Structure:

manpower/premises/facilities

Process: provision of care

Outcome: Results in patients



Set a criteria:

i.e. an item of care used to assess quality

Needs a standard of reference (invent one - minimum, ideal, optimum)



Collect data:

What data?

How and in what form?

Who collects it?



Assess performance against criteria / standards:

Identify an area of care below predetermined levels—develop an action plan

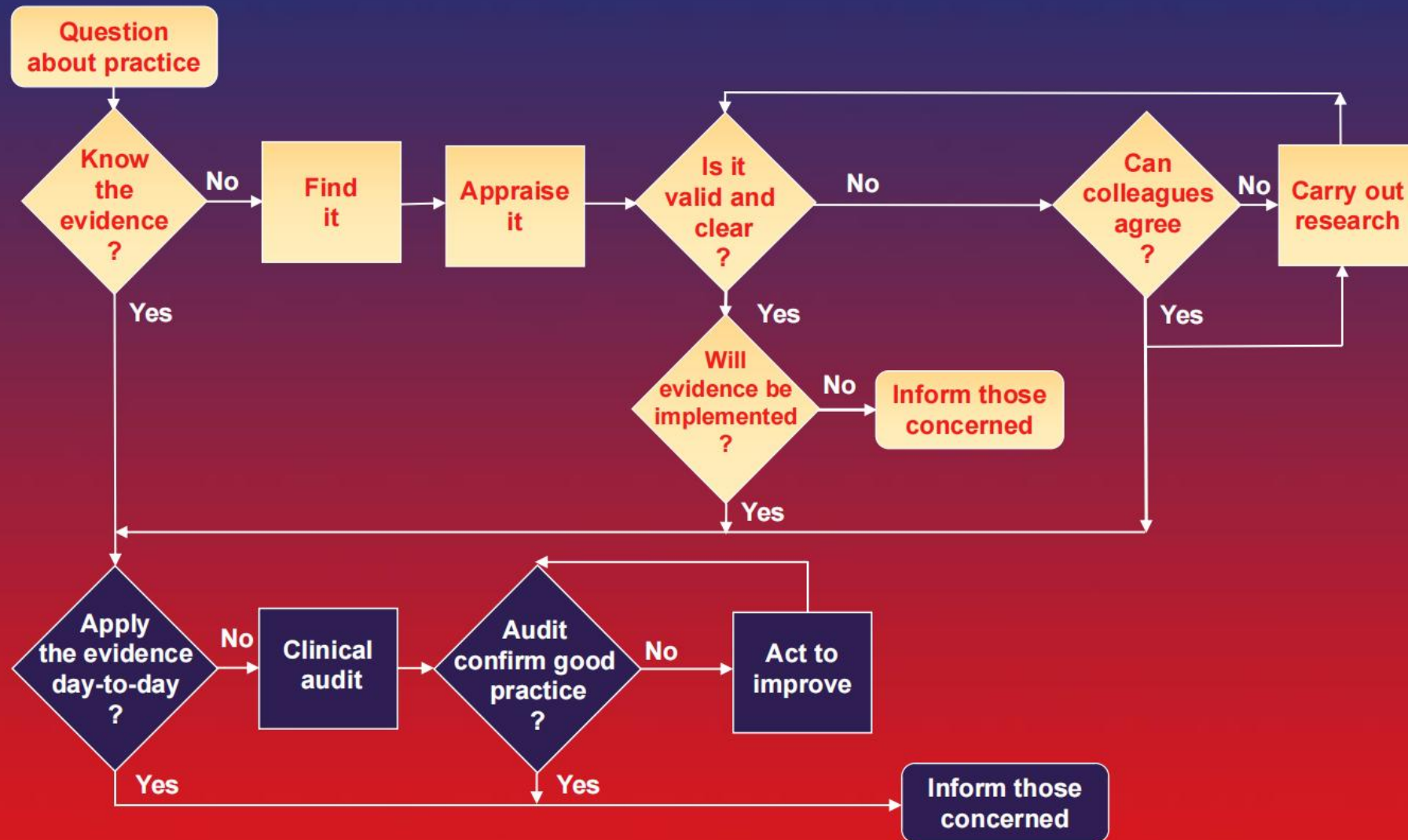


Implement recommendations:

And then re-audit

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The evidence-based medicine process — linked with clinical audit



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Let's see a practical example



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Example: Problem statement

Clinical Observation:

- It has been recently noted that children after undergoing endoscopy frequently complain of transient loose stools and bloating

Clinical question by endoscopist?

- Are my endoscopes being sterilised properly? Are all steps being followed by the protocol?

Expected outcome?

- Some gaps may be identified in the chain of process of sterilisation

What should I do?

- Run the checklist and see which step is not being performed with dedication

Is there a reference standard?

- Yes (partially). In the international endoscopic disinfection guidelines

Example continued...

What do I do with the endoscopy data?

- Analyse and find out where the gap is. Rectify by implementing a solution eg: change of detergent, change of water supply

What next?

- Re-audit in the next set of patients and see whether the gastrointestinal complaints are persisting or resolved
- If persistent, go back to the audit and see what you are missing or possibly the solution is not suitable

What is the ultimate goal?

- To have zero morbidity/ cross-infection in children undergoing endoscopy

Example of audit

Audit of disinfection of endoscopes: Dept of Pediatric Gastroenterology, SGPGIMS, Lucknow		
1.	Endoscope used	UGI scope/ colonoscope/ sideviewing
2.	Number of disinfections done per day	
3.	Last procedure done prior to disinfection	Infected/uninfected
4.	HIV testing of last patient	Yes/ No
5.	HBsAg testing of last patient	Yes/No
6.	HCV testing of last patient	Yes/No
7.	Type of last procedure	Diagnostic/ Therapeutic
8.	Invasive procedure	Yes/ No
9.	Description of last procedure	Biopsy/ Stenting/ Balloon sweep/Drain/ Sclerotherapy/ Banding/ Dilatation/Others (specify)
10.	Number of procedures prior to disinfection	
11.	Number of procedures performed totally with index scope	
12.	Disinfection protocol followed	Yes/No/ Partial
13.	Processing	Manual/Automatic
	If manual follow the steps from 13-47	

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14.	Predisinfection cleaning	Yes/No
15.	Type of cleaning	Limited/ medium extensive/ All levels (extensive)
16.	Sucking water through working channel	Yes/No
17.	Sucking detergent through working channel	Yes/No
18.	Wiping of surface with wipe/tissue	Yes/No
19.	Flushing	Yes/No
20.	Checking for bite marks and surface irregularities	Yes/No
21.	Detachment from processor	Yes/No
22.	Transport in a closed container	Yes/No
23.	Immersion in detergent/ soap solution	Yes/No
24.	Type of detergent	
25.	Brushing of channels	Yes/No
26.	Use of dedicated brush	Yes/No
27.	No of times brush was used prior to disinfection	
28.	Is the brush autoclavable?	Yes/No
29.	Cleaning of valve	Yes/No
30.	Valve wiped	Yes/No
31.	Valve cleaned with brush	Yes/No
32.	Detergent renewed	Yes/No
33.	No of times endoscopes immersed in same detergent	
34.	Type of detergent used	
35.	Concentration of detergent	
36.	Immersion time for each endoscope	
37.	Irrigation of all channels	Yes/No
38.	Number of times rinsed water replaced	
39.	After detergent cleaning, cleansing with water	Yes/No
40.	Rewiping of surface	Yes/No
41.	Drying	Yes/No
42.	Type of drying	Air drying/ Compressed air/ 70% alcohol flush/ Combination/ None
43.	Storage cabinet available	Yes/No
44.	Type of storage cabinet lining	Metallic/nonmetallic
45.	Antimicrobial coating in storage cabinet	Yes/No
46.	Time interval before reuse	
47.	Time interval protocol followed	Yes/No

	If automatic, follow the steps from 13-47	
48.	Prior manual cleaning, all steps	Yes/No
49.	Prior rinsing	Yes/No
50.	Prior wiping of surface	Yes/No
51.	Prior immersion in detergent	Yes/No
52.	Detergent contact time	
53.	Total manual cleaning time	
54.	Automatic cleaning	Single use/ double use
55.	Basin capacity	One/ two
56.	Cycle	Synchronous/asynchronous
57.	Cycle time	
58.	Interruptions during disinfection	Yes/No
59.	Number of interruptions	
60.	Duration of interruptions	
61.	RO plant in place	Yes/No
62.	RO water used	Yes/No
	Postprocedure , follow steps 40-47	


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Issues with the above audit example

- Assesses only **one facet**: structure (equipment), not process or outcome
- Hence parallel clinical studies may be conducted to evaluate the prevalence of this problem, pre-audit and post-audit



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Are there any additional benefits of the above audit example?

- Can also assess longevity of the equipment
- Can give an idea of preventive maintenance
- May identify technical issues underreported by hospital cleaning staff
- May give ideas to improve efficiency yet cut down on the recycle time
- Enhance research publications with minimal investments/ costs



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More ideas/topics of clinical audit

- *Hospital acquired infections in wards/ OT*
- *Sedation for procedures*
- *Radiation during procedures*
- *Disinfection of surgical tools*

Each department needs to customise

Niche areas of superspecialities need to be identified

Cannot be a blanket design for all departments



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Service audit

Service audit in hospitals

- Service audit in hospitals are more patient convenience oriented
- May have overlap with clinical audits
- Needs to be performed in same lines as clinical audit
- *Examples: assessment of diet, kitchen, public conveniences, availability of medicines, blood products, crash carts, door to procedure time, waiting time in OPD, waiting time for admissions etc.*
- Service audits can also be related to specific diseases based on case-sheets
- *Examples: Vitals recorded by nurses in bleeding patients, time to obtain blood gas analysis in respiratory failure etc*



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Service audits in administration

Some examples:

- **Financial audits:** *How much money was dispensed in Kamdhenu fund for a certain department? What was the outcome?*
- **Engineering audits:** *Does central heating of neonatal ICU prevent hypothermia in newborns?*
- **Pharmacy audits:** *How much of unused drug expired in a year and what was the outcome?*
- **Annual confidential performance report** of faculties and hospital staff
- **Work environment related audits** for resident, staff etc:
Does duty off enhance work efficiency of residents?

Financial audits

- **Purpose:** A financial audit is an objective evaluation of the financial statements of an organization to make sure that the financial records are a fair and accurate representation of the transactions.
- The audit can be conducted internally by employees of the organization or externally by an outside certified firm.



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Financial audit

- Areas involving financial transactions in the Institute which can be represented:
 - Procedures for maintaining account statements in various sections
 - Procedures of audit/review
 - Procedures for verification of bills
 - Procedures of disbursement e.g. salary, other payments etc.
 - Procedures of purchase of equipments/consumables
 - Procedures for handling of research grants
 - Departmental expenditures (e.g. Imprest)



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Academic audits

Academic audits in teaching hospitals

- **Purpose:** to produce, assure and improve quality of teaching
- It asks how a faculty or resident approaches educational decisions, organises work, collects resources and works collegially
- Can be self assessment or peer review (within department/ institute or outside institute)
- Can be used to improve curriculums, enhance skills, implement new educational tools

Examples:

- *How does a resident collect articles before preparing a seminar?*
- *Does carrying a tablet phone help in diagnosis during clinical rounds?*

Academic audits for students/residents

- Formal training programs need student assessment and feedback for improvement

Examples:

- *Does a question bank help resident in exams?*
- *Do back to back exams worsen or improve theory performance?*
- *Does anonymous feedback from resident improve faculty teaching?*
- *Should mock tests be conducted?*