CLINICAL AUDIT FOR ENHANCING DIAGNOSTIC SAFETY

Improving diagnosis for patient safety

"Get it right , make it safe"


Each year,
1 in 20 adults
will
experience a
diagnostic
error in the
outpatient
setting


~250,000
HARMFUL DIAGNOSTIC ERRORS OCCUR
ANNUALLY IN US HOSPITALS

SAFETY IN DIAGNOSTIC SERVICES

Safety in diagnostic services in healthcare includes patient safety in laboratory medicine, patient safety in medical imaging, and diagnostic safety for physicians:

Patient safety in laboratory medicine

This involves preventing harm to patients, improving the total testing process, and enhancing safe care outcomes. Laboratory professionals should maintain a high level of skills, participate in risk management procedures, and develop new competencies.

Patient safety in medical imaging

This involves providing patients with clear and timely information about the benefits and risks of radiological procedures. It also involves seeking patient consent before any examination or treatment.

Diagnostic safety for physicians

This is a key consideration for physicians and their teams because diagnosis is central to their professional identity. However, there are challenges to measuring diagnostic safety, such as a lack of robust evidence, unintended consequences, and alienating caregivers.

To improve safety in diagnostic services, healthcare organizations can adopt a proactive approach by examining processes of care for threats to safety and redesigning them before accidents occur.

What is Clinical Audit?

- A quality improvement process that seeks to improve patient care & outcomes through a systematic review of care against explicit criteria & the implementation of envisaged change.—NICE

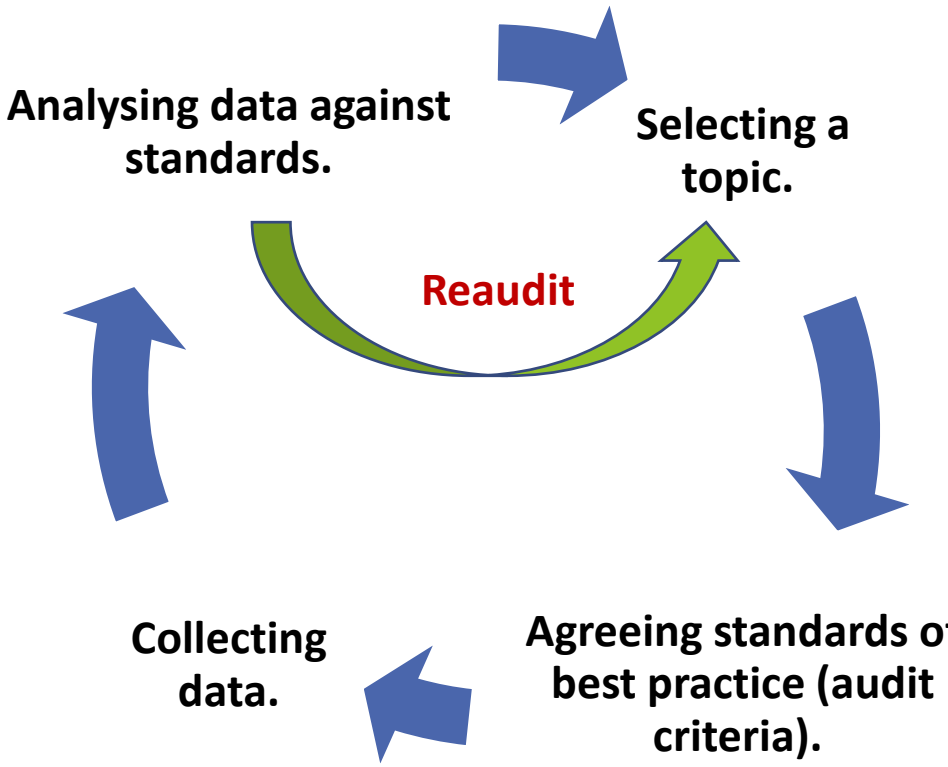
Key Features of Clinical Audit

- **Key Features:**
  - Identifies the strengths & weaknesses of care
  - Generates evidence for what can be improved
  - Carries out meticulous data analysis
  - Enhances patient safety,
  - Ensures medical practices align with established standards and guidelines
  - Fosters a CQI culture

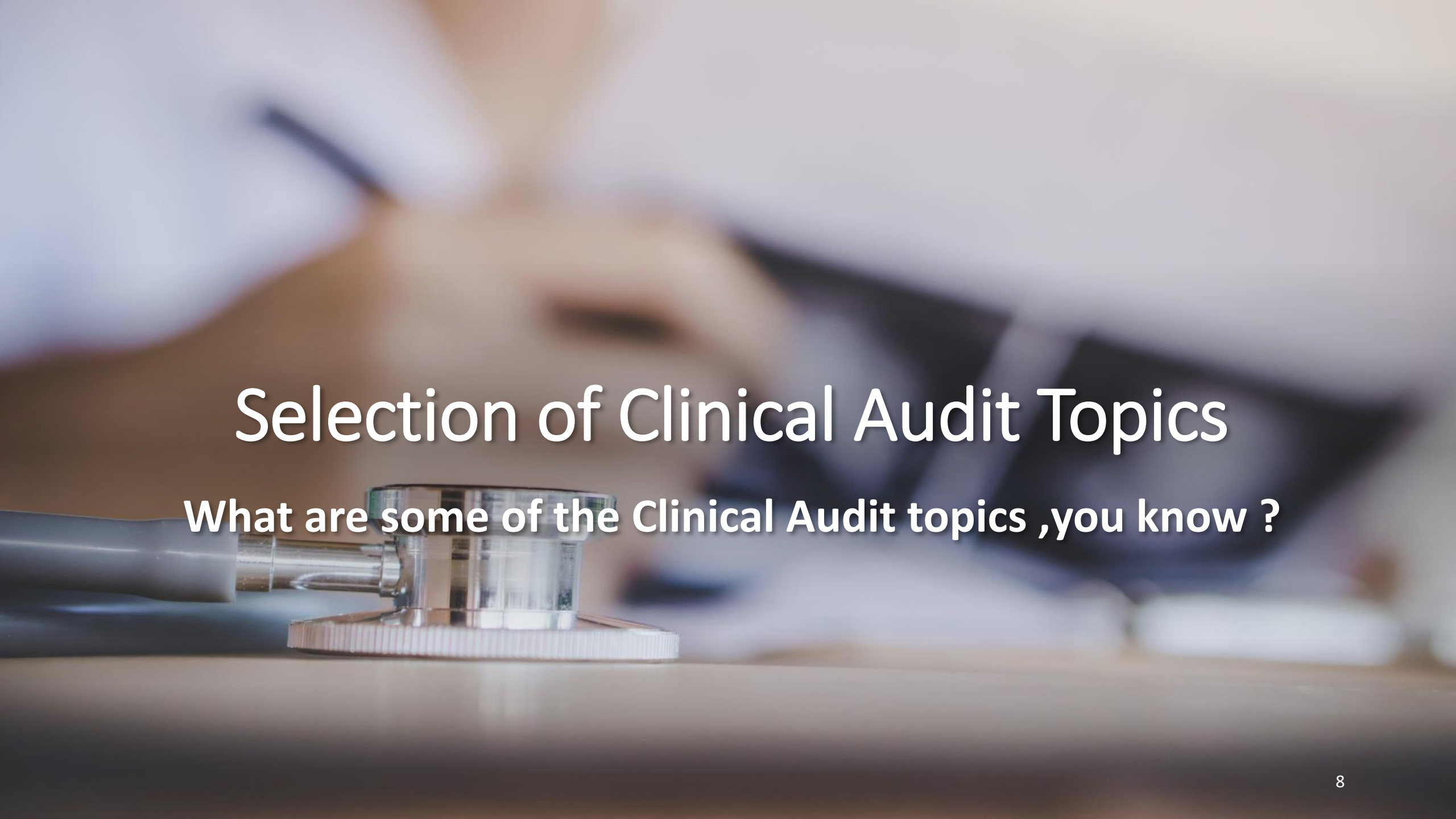
Steps of Clinical Audit to Enhance Diagnostic Safety

Intent of Audit

- Solving problems associated with process or outcome
- Monitoring process reliability & validation
- Monitoring workload in the context of controlling demand
- Monitoring adherence with best practices (eg, with guidelines)
- Monitoring of analytical quality.
- Monitoring the introduction of new tests and/ or changes in practice



Steps of Audit



Selection of Clinical Audit Topics

What are some of the Clinical Audit topics ,you know ?

Usual Clinical Audit Topics

- **Medication Safety:** ensuring the safe prescribing, dispensing, and administration of medications--assessing proper documentation, verification processes, and staff training to prevent medication errors and adverse reactions.
- **Infection Control:** evaluate the effectiveness of practices to prevent and manage --assessing hand hygiene protocols, cleanliness of medical equipment, and compliance with isolation precautions.
- **Patient Satisfaction:** gathering feedback from patients regarding their experiences with service providers, facilities, and communication, helping identify areas for improvement.
- **Adherence to Clinical Guidelines:** evaluates adherence to these guidelines in their decision-making and treatment plans, ensuring evidence-based practices.
- **Patient Safety Incidents:** Review incidents related to patient safety/ harm-- falls, pressure ulcers, or other adverse events.

Topics for Enhancing Diagnostic Safety

- **Diagnostic Accuracy:** Ensuring accurate and timely diagnoses -- appropriateness of tests ordered, the accuracy of diagnoses, communication of results to the clinician.
- **Compliance to Regulations/ Standards & SOPs:** compliance to legal and ethical practices, process adequacy and accuracy in terms of reliability & validation
- **Efficiency of Diagnostic Processes:** optimize workflow & processes -- scheduling, patient flow, TATs, use of resources, and overall operational efficiency
- **Continuity of Care :** evaluates how well healthcare providers coordinate and communicate during transitions of care, such as patient transfers between departments for diagnostic-guided interventions
- **Resource Utilisation:** efficient use of resources, staff time, equipment, & facilities.

Levels of Clinical Audits to Enhance Diagnostic Safety

- **Clinical Care optimization**—cost benefit ratio, decreasing turnaround time by improving various processes involved in the testing process, such as sample registration time, test result validation and result delivery time
- **QA Program at Lab/ Imaging Dept**: reduce inter technician variability—a recent study described an audit of the use of internal quality control procedures in 54 laboratories and highlighted significant variability in internal quality control practice.
- **Test Utilization**: another study noted that repeat requests for tumor markers and autoantibodies made up 16.8% of the workload leading to waste of resources
- **QA Program at governance level--monitoring for successful CA**: audit committee in the organisation in charge of all clinical audits and a support group meet regularly to monitor the progress

Possible Clinical Audit Questions in Lab

- **Pre-analytical**
  - % of ease of use of Request forms?
  - % of requisition forms complete in terms of relevant details provision by the user to facilitate decision on the tests might be required?
  - % of times adequate and appropriate specimen received at the right time?
  - % of diagnostic waste—clinician advice vs diagnostic department's variance
  - TAT for Phlebotomy services and transport of samples to & fro the lab
- **Analytical**
  - Is the range of investigations available appropriate? The number of requests for a specific test and the positivity rate should be audited.
  - Are the test methods being carried out according to SOP?--% of variance
  - % of clarity in Laboratory reports (precision and clarity)
  - Storage of reagents and specimens--% of loss/expiry of samples and reagents
  - % of variance between Internal and external quality assessment
- **Post-analytical**
  - TAT for each request.
  - % Accuracy to Reference ranges
  - % of Phoning out of range critical results

% of Error around the tests done on each sample collected, & potential remedy

Possible Clinical Audit Questions in Radiology

- % of requisition forms complete in terms of relevant details provision by the user to facilitate decision on the tests might be required?
- % of diagnostic waste—clinician advice vs diagnostic department's variance
- % of accurate NG Tube placement (confirmation via x-ray)
- % of Percutaneous CT lung biopsy
- % of Accuracy of Assessing image quality—visual analytics
- % CT scans adhering to algorithms of various disease conditions
- % MRI scans adhering to protocol for various disease conditions
- % of scans where the sequence was omitted
- % of scans where angles were not satisfactory
- % of scans with homogeneous fat suppression, motion or artefact

Use Radiology Information System (RIS) & Picture Archiving communication system (PACS) to review reports and clinical information.

Example : Clinical Audit to Enhance Diagnostic Safety

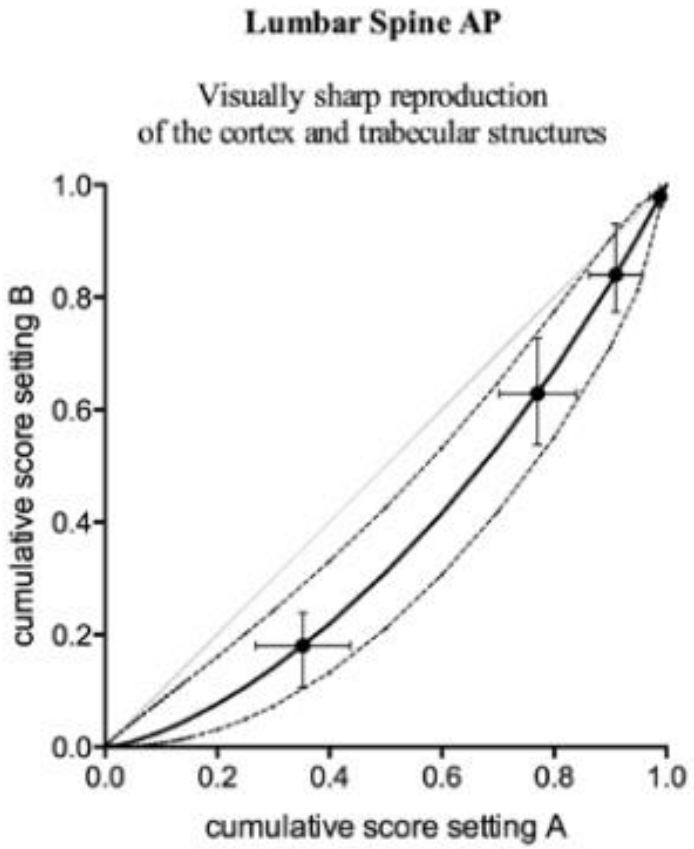
TAT for cerebrospinal fluid (CSF)

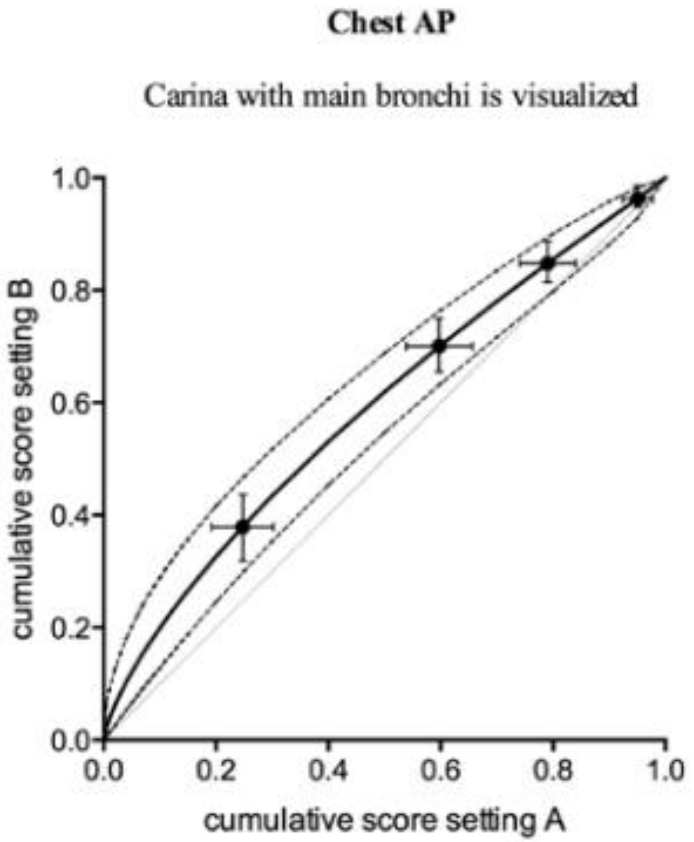
A total of 1505 CSF chemistry requests were analysed.

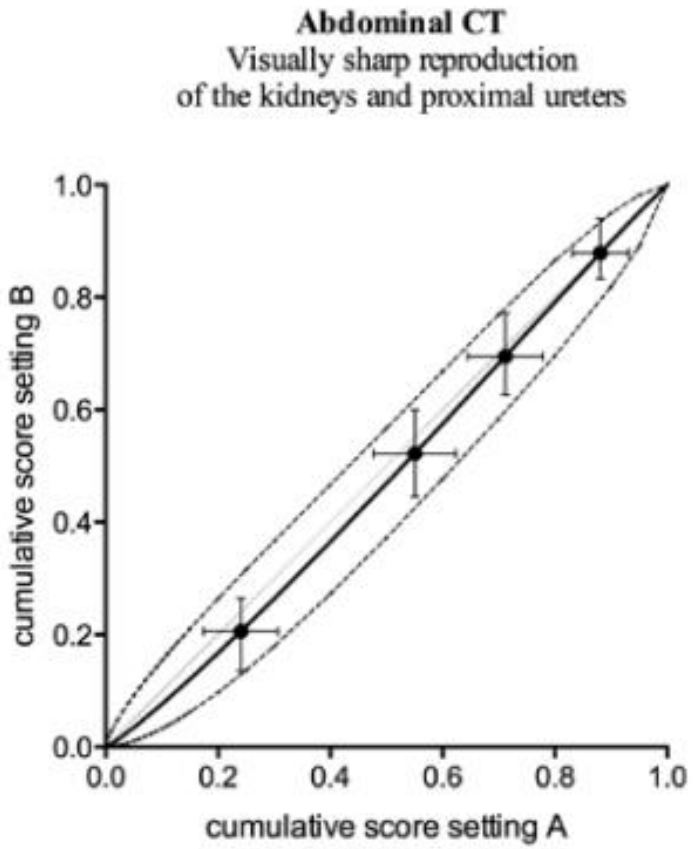
- Transport of samples to the laboratory was primarily responsible for the high average TAT (median TAT = 170 minutes).
- Labelling accounted for most delays within the laboratory (median TAT = 71 minutes) with most delays occurring after regular work hours ($P < 0.05$).
- CSF chemistry requests without the appropriate number of CSF sample tubes were significantly associated with delays in movement of samples from the labelling area to the technologist's workstation (caused by a preference for microbiological testing prior to CSF chemistry).

Clinical Audits to Enhance Diagnostic Safety are critical

Diagnostic data are 70% responsible for influencing clinical decision







Diagnostic Safety Event

Delayed, Wrong or Missed Diagnosis

There were one or more missed opportunities to pursue or identify an accurate and timely diagnosis (or other explanation) of the patient's health problems based on the information that existed at the time.

Diagnosis Not Communicated to Patient

An accurate diagnosis (or other explanation) of the patient's health problems was available, but it was not communicated to the patient (includes patient's representative or family as applicable).

8


Create or Sustain Initiative to Learn
Gather Data on Safety Events and Good Catches
Analyze Data for Learning Opportunities
Take Actions to Change Practice
Diagnostic Safety
11

Twelve Tips for Successful Clinical Audit

1. **Keep audits simple**
2. **Get everyone involved**
3. **Determine the topic**
4. **Have a plan**
5. **Do not confuse clinical audit with research**

6. **Do not collect needless data**
7. **Take care with statistics – errors can lead to inaccurate conclusions**
8. **Close all clinical audit loops**
9. **Keep data only for as long as it is needed**
10. **Share learning - tell everyone about your audit**
11. **Tell 'The Organisation' about your audit**
12. **Re-audit to ensure improvement in clinical care**

In the end…..

Make sure your ……

clinical audit does not become cynical audit

….focus….facts….forward….fast….to patient safety

THANK YOU…