Clinical Audit

Dr. Shahram Yazdani
Terminology

► Measurement
► Assessment
► Evaluation
► Audit
► Accreditation
What is clinical audit?

Clinical audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change.
What is clinical audit?

Aspects of the structure, processes, and outcomes of care are selected and systematically evaluated against explicit criteria.
What is clinical audit?

► Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in healthcare delivery.
The clinical audit cycle

Clinical audit can be described as a cycle or systematic process of establishing best practice, measuring care against criteria, taking action to improve care, and monitoring to sustain improvement.
The stages of clinical audit

1. STAGE ONE
   Preparing for audit

2. STAGE TWO
   Selecting criteria

3. STAGE THREE
   Measuring performance

4. STAGE FOUR
   Making improvements

5. STAGE FIVE
   Sustaining improvement

Using the methods → Creating the environment
I - Preparing for Audit

Using the methods

STAGE ONE
Preparing for audit

STAGE TWO
Selecting criteria

STAGE THREE
Measuring performance

STAGE FOUR
Making improvements

STAGE FIVE
Sustaining improvement

Creating the environment
Preparation for Audit

Preparing for audit can be broken down into five elements:

- Involving users in the process
- Topic selection
- Defining the purpose of the audit
- Providing the necessary structures
- Identifying the skills and people needed to carry out the audit, and training staff and encouraging them to participate.
Sources of user information

The concerns of users can be identified from various sources, including:

- Letters containing comments or complaints
- Critical incident reports
- Individual patients’ stories or feedback from focus groups
- Direct observation of care
- Direct conversations.

The most common method of involving users in clinical audit is the satisfaction survey. Involvement of users in the planning and negotiation of topics for audit is much less common.
Selecting a Topic: Audit Priorities

► Is the topic concerned of high cost, volume, or risk to staff or users?
► Is there evidence of a serious quality problem, for example patient complaints or high complication rates?
► Is good evidence available to inform standards, for example systematic reviews or national clinical guidelines?
► Is the problem concerned amenable to change?
► Is there potential for involvement in a national audit project?
► Is the topic pertinent to national policy initiatives?
► Is the topic a priority for the organization?
Dr. Shahram Yazdani

Defining the purpose

► A project without clear objectives cannot achieve anything: a clear sense of purpose must be established before appropriate methods for audit can be considered.

► The following series of verbs may be useful in defining the aims of an audit:
  - To improve
  - To enhance
  - To ensure
  - To change
Defining the purpose

► Examples of using these are:

- To improve the blood transfusion processes within the organization
- To increase the proportion of patients with hypertension whose blood pressure is controlled
- To ensure that every infant has access to immunization against diphtheria, tetanus, pertussis, polio, influenza B, and meningitis C before 6 months of age.
Providing a structure

To enhance the benefits of audit, an organization needs:

- A structured audit program (committee structure, feedback mechanisms, regular audit meetings)
- A team of well-qualified audit staff
Role of clinical audit staff in audit projects

► Information/ knowledge support:
► Data management: clinical audit staff have expertise in data collection, entry, analysis, and presentation.
► Facilitation: some clinical audit staff have particular training and skills in group dynamics.
► Project management: project management and leadership is an important factor in quality improvement projects.
► Training: Audit staff are involved in training and support on a wide range of quality improvements skills.
Identifying and developing skills for audit projects

► Certain skills are needed for all audit projects, and these include:

- Project leadership, project organization, project management
- Clinical, managerial, and other service input and leadership
- Audit method expertise
- Change management skills
- Data collection and data analysis skills
- Facilitation skills.
II – Selecting Criteria

STAGE ONE
Preparation for audit

STAGE TWO
Selecting criteria

STAGE THREE
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Using the methods

Creating the environment
Criteria

- Criteria for assessing specific aspects of health services are those attributes that are usually considered essential for high quality medical care.

- The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has developed an internationally used list of such criteria.
The JCAHO Criteria

► **Accessibility of care:** the ease with which patients can obtain the care that they need when they need it

► ** Appropriateness of care:** the degree to which the correct care is provided, given the current state of the art

► **Continuity of care:** the degree to which the care needed by patients is co-ordinated among practitioners and across organizations and time)

► **Effectiveness of care:** the degree to which care (for example, a procedure) is provided in the correct manner (that is, without error) given the current state of the art

► **Efficacy of care:** the degree to which a service has the potential to meet the need for which it is used
The JCAHO Criteria

► Efficiency of care: the degree to which the care received has the desired effect with a minimum of effort, expense or waste

► Patient perspective issues: the degree to which patients (and their families) are involved in the decision-making processes in matters pertaining to their health, and the degree to which they are satisfied with their care

► Safety of the care environment: the degree to which the environment is free from hazard or danger

► Timeliness of care: the degree to which care is provided to patients when it is needed.

► Example of a specific criterion: “Timeliness of the diagnosis in patients with suspected stroke”.

Different Criteria

Criteria can be classified into those concerned with:

- Structure (what you need)
- Process (what you do)
- Outcome of care (what you expect).
Quality Indicators

Quality indicators are measures that allow distinguishing between high and low quality of structures, processes, or outcomes of medical care.
The proportion of patients with suspected stroke (in a hospital, in a region) who have been diagnosed 2 to 6 hours after the first signs of a stroke out of all suspected patients of this hospital/region.
Performance Thresholds (Standards)

- Performance thresholds include those intervals (upper and lower limit) in which the actual parameter values of specific quality indicators are considered good or insignificant.
- Different performance thresholds are conceivable for a quality indicator.
More than 80% of patients with suspected stroke in a hospital should be diagnosed between 2 to 6 hours after the first signs of a stroke out of all suspected patients of this hospital.
Using guidelines

► Recommendations from clinical practice guidelines can be used to develop criteria and standards without substantial additional work. Guidelines now often include suggestions for criteria, a policy that will be followed in guidelines published by NICE.

► As the development of good-quality guidelines depends on careful review of the relevant research evidence, the criteria suggested in such guidelines are likely to be valid.
III – Measuring Performance

- **STAGE ONE**
  Preparing for audit

- **STAGE TWO**
  Selecting criteria

- **STAGE THREE**
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- **STAGE FOUR**
  Making improvements

- **STAGE FIVE**
  Sustaining improvement

Using the methods → STAGE THREE → Creating the environment
Planning data collection

To make sure that the data collected are precise, and that only essential data are collected, certain details about what is to be audited must be established from the outset. These are:

- the user group to be included, with any exceptions noted
- the healthcare professionals involved in the users’ care
- the time period over which the criteria apply.
Planning data collection

Examples of statements (or ‘inclusion criteria’) that define specific populations for the purposes of particular audits

- All children under 16 years diagnosed with asthma and registered with the primary healthcare team
- All people with multiple sclerosis in a hospital
- All women receiving treatment for breast cancer in Iran
Collect Only Necessary Data

► It is always tempting to collect more data than necessary, but only the minimum amount required by the objectives of the audit should be collected.

► It is better to improve a single aspect of care than to collect data on 20 items and change nothing.

► There is an inevitable trade-off between data quality and the costs and practicality of collecting data.
Once the group or population of users has been precisely defined by specifying the ‘inclusion criteria’, it is time to decide on the records from which data will be collected.

It may not always be practical or feasible to include each and every user, and in this case, a representative sample is usually chosen from which inferences about the total population can be made.

The number needed in the sample is determined by two factors:

- The degree of confidence wanted in the findings
- Resource constraints (time, access to data, costs).
Handling data: Data sources

► Existing record and information systems may already be adequate for clinical audit purposes, for example, management information systems may already collect the data required for audit.

► If the required data are not collected routinely, a specific paper or electronic encounter sheet can be devised for healthcare professionals to record needed information during each consultation.
Audit of the management of urinary incontinence: data collection form for an individual user.

### Individual user

**AUDIT PERIOD:** 12 MONTHS PRIOR TO DATE OF DATA COLLECTION

<table>
<thead>
<tr>
<th>CRITERION 1</th>
<th>History and examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Record of:</td>
<td>Leakage on exertion, Volume of loss, Nocturia, Frequency, Urgency, Dysuria, Dribbling</td>
</tr>
<tr>
<td>(b) Bladder chart</td>
<td>y n dk</td>
</tr>
<tr>
<td>(c) Record of examination:</td>
<td>Abdominal, Pelvic, Rectal if appropriate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERION 2</th>
<th>Urinalysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urine dipstick performed or MSUS sent (symptoms, ± abnormal dipstick)</td>
<td>y n dk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERION 3</th>
<th>PVR volume measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>y n dk</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERION 4</th>
<th>Presumed type identified If yes: Stress, Mixed, Overflow</th>
</tr>
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<tbody>
<tr>
<td>y n dk</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERION 5</th>
<th>Risk factors assessed and documented Medication review Atrophic vaginitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>y n dk</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CRITERION 6</th>
<th>Risk factors assessed/documented BMI Constipation Smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>y n dk</td>
<td></td>
</tr>
</tbody>
</table>

| Age |
| Id No. |
Data abstraction tools

- Data collection forms must specify precisely the information to be abstracted from the record, and they should be clear and easy to use.
- It is good practice to pilot the data collection form to enable any inherent problems to be detected and corrected.
- It is essential that data collectors undergo training on the use of the data collection form, so any confusing items are identified and a clear policy is established on how data items should be recorded.
Data analysis

- The type of analysis to be used should be identified at an early stage, as it influence both the type and amount of data collected.
- The analysis can range from a simple calculation of percentages, through to relatively sophisticated statistical techniques.
- On most occasions, however, simple methods are preferable, and indeed, if the results are to stimulate change, the analysis must be simple enough for everyone in the care process to understand.
Concurrent data collection for the administration of thrombolytic therapy (‘door-to-needle time’)

Median = 38 mins
An example of a bar chart used in a clinical audit

Methadone prescribing
Comparisons between first and second audit

- Patient in contact with community drug team or street agency
- Named pharmacist in the notes
- Positive urine test before scripting
- Hepatitis C status discussed
- Hepatitis B status discussed
- HIV status discussed
- Notification to the Home Office

First audit
Second audit

Percentage
Example of a statistical control chart used in a clinical audit

Control chart of patient falls per month

Falls per patient day

Month

Upper control limit

Lower control limit

Patient falls
IV – Making Improvements

STAGE ONE
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Using the methods

Creating the environment
Changing Behaviors

- Change can occur at organizational, group, or individual levels.
Organizational Change

Organizations can be thought of as existing in a state of quasi-equilibrium, in which driving forces are opposed by restraining forces, with the net effect that changes in the organization are minimized.
Organizational change

► Driving forces
  ▪ Patient pressure
  ▪ National policy
  ▪ Demands from referring general practitioners for improved access

► Restraining forces
  ▪ Individuals
    ► Fear of increased workload
    ► Concern about staffing and mix
    ► Loss of control over work patterns
  ▪ Organizations
    ► Resistant culture
    ► Lack of resources
    ► Rigid structure
Organizational Change

► The status quo must be ‘unfrozen’ to allow change to occur, followed by ‘refreezing’ to consolidate the new equilibrium.

► In order to create the imbalance between the driving and restraining forces that is needed for unfreezing, the restraining forces should be selectively removed or reduced.

► Merely increasing the driving forces will stimulate an increase in the number or strength of the restraining forces.
Individual change

The trans-theoretical model, which was developed for management of people with addictive behaviors, such as smoking (Robertson, 1999), explains individual behavior change as a transition through a series of five stages:

- **precontemplation** – the individual has no intention of changing
- **contemplation** – change is regarded as a possibility in the near future
- **preparation** – explicit plans are made
- **action** – the change occurs
- **maintenance** – the changed behavior is consolidated.

Progression through each stage is necessary if a change is to occur. No single strategy can encourage someone to progress from precontemplation to maintenance, and different strategies are required at each stage to help a person move on to the next.
Identifying barriers to change

- Interviews of key staff and/or users
- Discussion at a team meeting
- Observation of patterns of work
- Identification of the care pathway
- Facilitated team meetings with the use of brainstorming or fishbone diagrams
Some methods of identifying barriers to change

► The required change is clearly defined, based on evidence, and is presented in a way that staff can easily understand.

► The barriers to change are identified, including those relating to professionals and to the healthcare organization.

► Implementation methods are chosen that are appropriate to the particular circumstances, the change itself, and the obstacles to be overcome. An understanding of selected theories of behavior change may be used to inform the choice of methods.

► An integrated plan is developed for coordinated delivery and monitoring of the interventions. The plan should describe the sequence in which interventions will be made, the staff and resources required to make them, and the target groups.

► The plan is carried out, and progress is evaluated, with modifications to the plan or additional interventions being used as required.
In a recent review of 93 studies concerned with a wide variety of clinical audits involving different professional groups, the barriers to successful audit included:

- lack of resources
- lack of expertise in project design and analysis
- lack of an overall plan for audit
- poor relationships between professional groups or agencies and within teams
- organizational problems, such as lack of a supportive relationship between clinician and managers
Promoting successful audit

- Hierarchical relationships, lack of commitment from senior doctors and managers, poor organizational links between departments, and lack of time and practical support can also be obstacles to those taking part in clinical audit and changing practice
Factors that promote the success of clinical audit include:

- sound leadership
- a conducive/supportive organizational environment
- structures and systems to support audit, including mechanisms to make data collection easier
- a well-managed audit program
- addressing a range of issues important to the trust and individual clinicians
- giving adequate attention to all stages of audit
Structural aspects of environment that promote clinical audit

► Individuals
  - Time
  - Personal development plans
  - Access to advice about change management
  - Access to a system for reporting concerns
  - Occupational health service available

► Teams
  - Leadership
  - Clear and shared objectives
  - Effective communication
  - Training in improvement methods
  - Opportunities for the team to meet to share ideas and develop plans

► Organizations
  - Explicit commitment to clinical audit within the organization
  - Clear system for managing a clinical governance program
  - Staff with responsibility for audit are fully trained and encouraged to develop new solutions to old problems
  - Good systems for understanding the views of users
  - Good communication with other health and social care agencies
Cultural aspects of environment that promote clinical audit

► Individuals
- Positive attitude to audit and improvement
- Lack of fear – of change and of confronting less than desired or even poor performance

► Teams
- Open to new ideas
- Focus on the user’s experience
- Inter-professional respect and cooperation

► Organizations
- Users’ perspectives genuinely regarded as the focus of quality improvement
- Open to interest from external agencies in quality of performance, and not afraid of inspection
- ‘No blame’ approach to errors
- Audit given a high priority
Thank You!
Any Question?