

# Surgical Audit

## Objectives

- Describe the principle of process and outcome audit.
- Use audit to the benefit of your patients.
- Develop soundly based audit projects.
- Introduction to the basics of surgical research.

# Introduction

- We are continuously being scrutinized.
- Living in the era of evidence based medicine and accountability.
- Must show that our standard of practice is satisfactory.
- Research and audit are processes by which evidence is developed.
- Audit generates information related to performance- both individual and collective.

## Case 1

- You have discovered that over the last year there has been a 2 fold increase in the mortality of patients operated in your unit.
- **Key issues**
  - Patient scoring systems.
  - Case mix alterations process and outcome audit
  - Structure.

## Case 2

- A hospital is 2500 bedded hospital
- Average hospital admission is 2500/day
- Cost of one i/v fluid is Rs 200
- Cost of one inappropriate i/v fluid is  $200 \times 2500 = 500,000/\text{day}$
- Cost of one inappropriate i/v fluid in a month is  $200 \times 2500 \times 30 = 15,00,000/\text{day!!!}$

## Types

### ❖ Medical audit :

An audit undertaken by doctors and consists of a review of clinical events.

### ❖ Clinical audit :

A review of all potential medical events surrounding the treatment of a patient. This will include nursing, physiotherapy, social aspects, etc.

# Surgical Audit – What is it?

- To examine whether what you think is happening really , and whether current performance meets existing standards
- Quality improvement process
- Aspects of the structure, process and outcome of care are selected and systematically evaluated against explicit criteria.
- Changes are implemented at an individual, team, or service level
- Monitoring is used to confirm improvement in health care

# Surgical Audit – Why do it?

- As a result of local clinical interests
- As a result of clinical incident reporting
- To comply with regional or national initiatives
- To inform patients about surgical results
- To drive continuous quality improvement
- For health care regulation

# Components

- **Structure :**  
The physical environment in which healthcare is provided.
- **Process :**  
The activity of providing care.
- **Output :**  
The outcome of that care for both the individual and for the community as a whole.

## 3 Elements

- **Measurement**-Measuring a specific element of clinical practice
- **Comparison**-Comparing results with the recognised standard
- **Evaluation** -Reflecting the outcome of audit and where indicated, changing practice accordingly.

# The aims of audit are:

- To identify ways of improving and maintaining the quality of care for patients;
- To assist in the continuing education of surgeons;
- To help make the most of resources available for the provision of surgical services.

## Advantages

- Identifies bad practice
- Reduces unnecessary investigations, treatments and procedures
- Decreases hospital stay
- Allows continuous refinement of patient care
- Allows objective assessment of quality of care
- Improves efficiency
- Improves education, training and feedback

# Forms of Audit

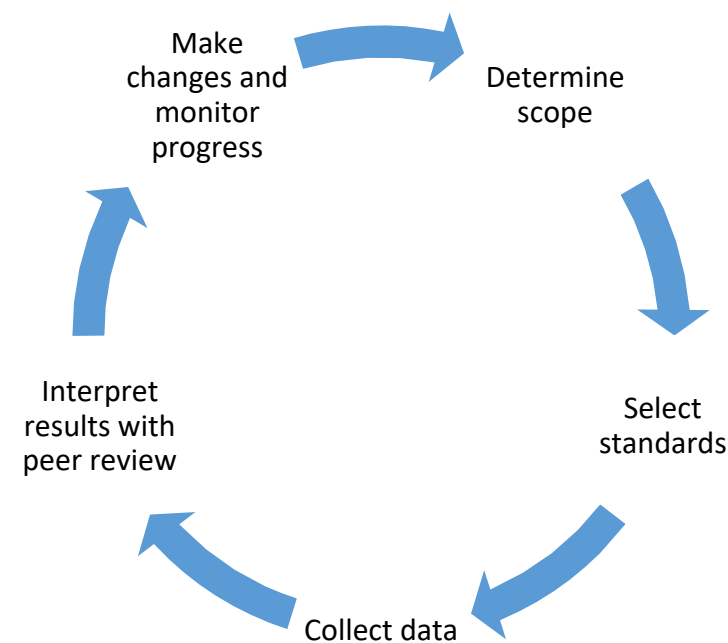
- **Total Practice or Workload Audit:** covers all the surgical operations performed.
- **Selected Audit from Surgical Practice:** covers all patients who undergo a selected procedure.
- **A Clinical Unit Audit:** conducted by a clinical unit in which individual surgeons may participate.
- **Group or Specialty Audit:** an audit conducted by or under the auspices of a group or Specialty Society.
- **A Focused Audit:** : e.g. what is the wound infection rate after large bowel surgery.

## Audit parameters

- Time utilisation
- Cost effectiveness
- Mortality/morbidity assessment
- Quality of diagnostic services
- Monitoring of performance
- Assessment of newer technology
- Surgical outcome
- Patient satisfaction

# The Surgical Audit Cycle

- Surgical audit activities are based on a five-step cycle:



- **Step 1 Determine scope:**
  - A thoughtful decision about which area(s) of surgical practice to review.
- **Step 2 Select standards:**
  - A clear description of what is good practice in this area against which the results of the audit will be compared.
- **Step 3 Collect data:**
  - The collection of relevant data.
- **Step 4 Present and interpret results with peer review:**
  - Comparison of results to standards , discussion with peers, decision about what changes may lead to improvement e.g. learning new skills, changes in practice, systems etc.
- **Step 5 Make changes and monitor progress:**
  - Alteration of practice in accord with the results and then checking that improvement has occurred.



# Common topics for audit?

**ANY GUESSES**

## Common topics for audit:

- 30 day mortality and significant morbidity;
- length of hospital stay;
- unplanned readmission or re-operation rates;
- positive and negative outcomes;
- operation-specific complications;
- process of care, such as pre-operative care;
- time on waiting list;
- numbers waiting for outpatient appointment;
- use of investigations;
- justification of management; and
- patient satisfaction.

# How to select standards?

- evidence-based research and guidelines;
- existing local guidelines;
- look to your specialty group to define standards.

## Collect Data

- what data you will collect, and how you will collect it.
- The most important principle here is to ensure that you collect quality data.
- Consider the following questions to help decide on the best quality assessment method:
- What information is necessary to answer the audit question(s)?
- From whom will it be collected?
- Should it be collected prospectively or retrospectively?
- How will it be collected?
- During or after the operation, on a PDA, on a computer, on a form, or by questionnaire, and by whom?
- How will follow up data be collected?
- By record review, by patient follow-up questionnaire, through the GP, by phone call, or by review of routine data, and by whom?

- How will the cases for review in a prospective audit be identified or selected?
- All patients, random selection, consecutive operations, all patients on the same day each week, or checklist to determine eligibility?
- How will the cases in a retrospective audit be identified or selected?
- From a register, medical records data, review of referrals, or from previous appointment schedules?

## Present and Interpret Results with Peer Review

- The results of your audit should be presented at a clinical meeting.
- Peer review is a learning exercise. It is not an opportunity to blame or brag.
- Involves an evaluation of one's work by one's peers.
- Peers are other surgeons with comparable training and experience.

# Make Changes and Monitor Progress

- The next step is to implement any changes that are recommended.
- Implementation involves not just making changes but ensuring that everyone involved is educated/ informed as to what changes are being made and why.
- The impact/ effects of the changes made then needs follow up action.

## What Makes for Effective Audit?

- Promotion of a culture of audit
- Allocate time and resources
- Oversee and verify data collection
- Productive peer review

# What Opportunities Arise from Surgical Audit?

- Educational opportunities
- Systemic improvement opportunities

# What Resources are Required for Surgical Audit?

- Manual systems
- Computer systems
- Logbooks



## Key points

- Clinical audit can be prospective and/or retrospective.
- Audit information can be obtained from national, hospital, and surgeon-specific data.
- Clinical department benefits from a clear audit plan.
- Clinical audit improves patient outcome.

# Surgical research

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