

MEDICAL AUDIT: CONCEPTS, APPLICATIONS AND WAY AHEAD

Donald S. Christian ¹, Mansi Patel²

Corresponding Author: Donald S. Christian, Department of Community Medicine, GCS Medical College & Hospital, Nr. Chamunda Bridge, Opp. DRM Office, Naroda Road, Ahmedabad- 380025. Gujarat. Contact No (M): 09825888630 Email: donald_christian2002@yahoo.com

ABSTRACT

Medical or Clinical Audit is a tool that evaluates quality of care and patient satisfaction in clinical practice. It deals with many things like data, documents, resources, performance, standards etc. It is a cyclical process. The paper describes medical audit in relation to its contribution to health care services and the improvement of care. The research from various sources across the globe was evaluated. The barriers and facilitators of clinical audit were identified. Despite of the fact that it has some pros and cons, medical audit should become an integral part of the medical management. The process and the types of medical audit were also analyzed in the article. The differences between audit and feedback were also determined.

Keywords: Audit, Medical Audit, Clinical Audit, Feedback, Audit process

What is Audit?

Audit, in broad terms means, official examination and verification of accounts or financial transactions. Medical or clinical audit is examination and verification of dealings of medical care. It also includes evaluation of data, documents, and resources to check performance of systems meets specified standards. Audit in the wider sense is simply a tool to find out what you do now; this often to be compared with what you have done in the past, or what you think you may wish to do in the future.

Medical Audit- Definition

Medical audit is defined as the evaluations of medical care in retrospect through analysis of medical records.¹ “A

quality improvement process that seeks to improve patient care and outcomes through systematic review of care against explicit criteria and the implementation of change². Sometimes , audit and feedback can be seen as a single approach and defined as “Any summary of clinical performance of health care over a specified period of time aimed at providing information to health professionals to allow them to assess and adjust their performance” ³. An audit is a cyclical process, which consists of- defining standards, collecting data, identifying areas of improvement, making necessary changes and again back round to defining new standards.

History

One of first ever clinical audit was conducted by Florence Nightingale during the Crimean War 1853-1855. She and her

team of 38 nurses corrected the unsanitary conditions of the hospitals for the soldiers injured the war.⁴ She also kept records of the mortality rates of the soldiers of the hospital. This brought tremendous change to the mortality rates among the soldiers, which changed from 40% to 2%. However, Ernest Codman was the first medical auditor following his work in 1912 on monitoring surgical outcomes in Massachusetts. His audit was about finding surgeon specific errors on every post surgical patients by the tool called "end result idea". This was considered as a good example of quality monitoring and resource management. The widespread introduction of audit' was based upon frequently quoted examples of good practice, support within the professions, and faith in the potential of audit to be widely effective when introduced routinely. There have been several attempts to improve patient care and quality of services all around the globe since these concepts have come up, but the extent to which the audit processes become routine, is a matter of concern.⁵ It is central to improving quality standards within healthcare and is an important part of maintaining high standards and patient safety. Clinical audit should form an intrinsic part of clinical activity- it should not be a one-off random process and should be conducted regularly to monitor for improvements (or failures) in clinical practice.

Integration of medical audit into health care:¹

- As with development, medical audit acquired more multi-disciplinary approach for modern healthcare.
- It also reflected the change of focus from professionally

centered view of health care to patient-centered view.

- In 1989, the white paper, "working for patients", integrated medical audit as a part of professional health care of the UK.
- Medical audit then evolved as clinical audit by the National Health Services (NHS) in the UK.

The NHS Executive then defined clinical audit as follows: "Clinical audit is the systematic analysis of the quality of healthcare, including the procedures used for diagnosis, treatment, and care, the use of resources and the resulting outcome and quality of life for the patient." Further recently, the National Institute for Health and Clinical Excellence (NICE) defined clinical audit as, "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." Aspects of structure, processes, and outcomes of care are selected and systemically evaluated against explicit criteria. Where indicated, changes are implemented at an individual, team, or service level and further monitoring is used to confirm improvement in health care delivery.

Types of Medical Audit⁴:

- **Standards-based audit:** A cycle which involves defining standards, collecting data to measure current practice against those standards, and implementing any changes deemed necessary.
- **Adverse occurrence screening and critical incident monitoring:** Here the multidisciplinary team discusses

individual anonymous cases to reflect upon the way the team functioned and to learn for the future. In primary care setting, this is described as a 'significant event audit'.

- **Peer Review:** Here the individual cases are discussed by peers to determine whether the best care was given. This might also include 'interesting' or 'unusual' cases rather than problematic ones. Due to lack of systematic approach, recommendations drawn from these reviews are often not pursued.
- **Patient Surveys and Focus Groups:** These methods are designed to obtain users' views about the quality of care they have received. The methods can be extremely productive for quality improvements because they give simple and direct evidences.

The place of Medical Audit in health care:

Clinical audit is an integral part of clinical governance and is looked as a system for improving clinical practice. Thus clinical audit has been a part of six pillars⁴ of clinical governance designed by the NHS since 1997, which are-Clinical effectiveness, Research & Development, Openness, Risk, Management, Education & Training, Clinical Audit etc.



Managing medical audit:

Clinical governance within the health care makes sure that the clinical audit program is done within local trusts, and that this reflects national priorities. Clinical governance may choose to delegate this role to another local body. In any case, a clinical audit program would be managed by breaking down certain tasks, which are- Creating a clinical audit strategy; Setting audit priorities; agreeing the audit program; implementing strategy as well as Implementing audit program. The clinical audit lead should have the followings-

- It should have a high profile within the organization.
- It should be actively involved in linkages to the other aspects of clinical governance to allow for the dissemination of clinical audit information and setting of local clinical audit priorities.

Pre Requisites for Medical Audit⁶: 1. Hospital operational statistics: (a) *Hospital resources:* Bed compliment, diagnostic and treatment facilities, staff available. (b) *Hospital utilization Rates:* Days of care, operations, deliveries, deaths, OPO investigations, laboratory investigations etc. (c) *Admission Data:* information, on patients i.e. hospital morbidity statistics, average length of stay (ALS), operation

morbidity, outcome of operation etc.2. The procedure of collection and tabulation of hospital statistics should be standardised.3. Primary source of this data is medical records, hence accurate and complete medical record should be ensured. 4. A well trained Medical Record librarian should be present for carrying out quantitative analysis. 5. Hospital planning and research cell should be established at state level to tabulate and analyze data, with recommendations for improvement.

The process of audit:

Clinical audit process can be described as a cycle or a spiral. Within the cycle, the stages follow the process of- Establishing best practice; Measuring against criteria; Taking action to improve care and Monitoring to sustain improvement. As the process continues, each cycle aspires to a higher level of quality. There are five stages: 1 – Identifying problem or issue; 2 – Define criteria and standards; 3 – Data collection; 4 – Compare performance with criteria and standards; 5 – Implementing change.⁷

- **Stage 1: Identify the problem or issue:** it involves the selection of a topic or issue to be audited. It is likely to involve measuring adherence to healthcare processes to produce best outcomes for patients. It is influenced by factors such as, national standards, areas of encountering the problems related to that, patient or public recommendations, clear potential for improving service, areas of high volume, high risk or high cost etc.
- **Stage 2: Define criteria and standards:** It includes decisions

regarding the overall purpose of the audit. The **audit criteria** are explicit statements that define what is being measured (measurable outcomes). The **audit standards** define the aspect of care to be measured and should always be based on the best available evidence (the threshold of the expected compliance for each criterion).

- **Stage 3: Data collection:** This includes identification of sources from which details of the audit are taken, which are, the user group; the health care professionals and the time period. Sample size of data collection is often a compromise between the statistical validity of the results and pragmatic issues around data collection. Ethical issues must be considered.
- **Stage 4: Compare performance with criteria and standards:** It is the stage of analysis. Results are compared with standards and criteria. It also includes identifying reasons why standards weren't met. Practically, results further away from 100% standards are better indications for action, rather than closer to 100%. Only in some 'life or death' situations, it will be important to achieve 100% standards
- **Stage 5: Implementing change:** Once results are published, there should be an agreement made out of it for the recommendations for change. Each point should be well

defined with an agreed timescale for its completion. Too often audit results in criticism by other organizations without their knowledge or involvement. To prevent this, joint audit should be encouraged.

Re-audit:

It is the repetition of audit methods after an agreed period, to demonstrate that the change has been implemented and the improvements have been made. It verifies whether the changes implemented have had an effect and to see if further improvements are required. Results of good audit should be disseminated both locally as well as nationally where possible.

Medical Audit and Social Research:

Medical audit can be compared to social research, which is done for analytical purposes. But the main difference of medical audit from social research is that, it does not generate new knowledge or hypothesis.

Audit and Feedback:

Audit and Feedback have got certain similarities, these are-Both can be effective for changing healthcare practices; there is still little evidence about how to use both of these tools most efficiently and without adopting best practices, they would continue to be an unreliable approach for healthcare improvement.⁸ In one high-quality study, audit and feedback plus assistance with the development of an office system designed to increase breast cancer screening rates was compared with feedback alone⁹. The intervention increased the proportion of women who were recommended to undergo mammographic screening and clinical breast examination

(adjusted risk ratio, 1.28) but had very much less effect on the numbers actually doing so.

Barriers and Facilitators to effective audit:

There are certain factors that could become barriers to a good audit, like-Lack of resources; Lack of expertise; Organizational impediments; the heterogeneities of the studies in the overall review; the problems of interpreting sub-groups of studies within the larger review; the lack of head-to-head comparisons to answer key questions.¹⁰ the facilitators could include modern medical record systems; effective training; dedicated staff; protected time; structured programs and shared dialogues.

Advantages and Drawbacks of Medical Audit:

Certainly, medical audit is for improvement of the quality of care and satisfaction of the patient. The other major advantages are improved communication among colleagues as well as other professional groups and better administration. Again, as with many entities in the health care, clinical or medical audit also has got some disadvantages. The major ones among them are diminished clinical ownership and fear of litigation. It may also end up in hierarchical and territorial suspicions and professional isolation among sub-ordinates. The cost of audit and feedback is highly variable and is determined by local conditions, including the availability of reliable routinely collected data and personnel costs.¹¹

Conclusion:

Medical audit could prove to be a great boon as a tool for improving health

care quality, provided it is understood and used in the best possible manner by the health care professionals of every level. Clinical audit should be an intrinsic part of quality management within a health care organization and participation in audit

should be encouraged amongst all staff groups. The audit should also be based on objective criteria to minimize observer bias and to achieve a sustained, quality based development within the organization.

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