

Chapter 6

Audits in Infection Prevention and Control

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Key Points

- Audit means checking practice against a standard. It examines the actual situation and compares it to written policies or another benchmark.
- Audit can help to improve health care service by providing a blame-free mechanism for changes in practice. It can also be used for risk assessment, strategic planning, and root cause analysis.
- An audit team is essential to carry out a proper audit through good planning, performance, and feedback of results.
- Audit results may be provided to others through various types of reporting.
- A Gap or SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis can be used as a baseline review of practices.

Introduction

Healthcare-associated infections are generally related to multiple factors; prevention of these infections depends on daily vigilance and implementation of evidence-based infection prevention and control (IPC) practices. These practices are outlined in written guidelines, policies, and procedures.

Audit means checking actual practice against a standard; it should permit reporting of noncompliance or issues of concern by either healthcare workers (HCW) or the Infection Control Team (ICT). Providing results of the audit to staff enables them to identify where improvement is needed.¹ Audit is a quality improvement process that seeks to improve patient care and outcomes through systematic review of care compared with explicit criteria and the subsequent implementation of change.²

Internal auditing standards require the development of a plan based on an annually updated risk assessment using the concept: Plan, Do, Study, Act (PDSA). The PDSA cycle is shorthand for developing a plan to test a change (Plan), carrying out the plan (Do), observing and learning from the consequences (Study), and determining what modifications should be made (Act). (See Figure 6.1) Changes in processes often generate audit projects in addition to reviews of documents such as strategic plans.³

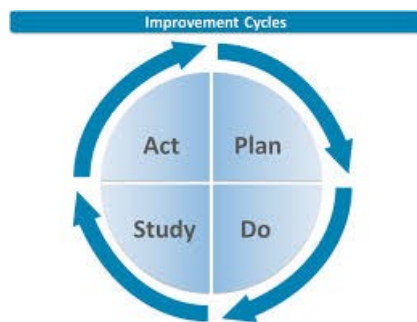


Figure 6.1. The PDSA cycle

There is enormous scope for an audit in IPC. The audit can lead to improvement of services because it provides a blame-free mechanism for changes in practice. The results of an audit, when provided back to staff, can turn defects into improvements after appropriate changes are completed.⁴ (See Figure 6.2)

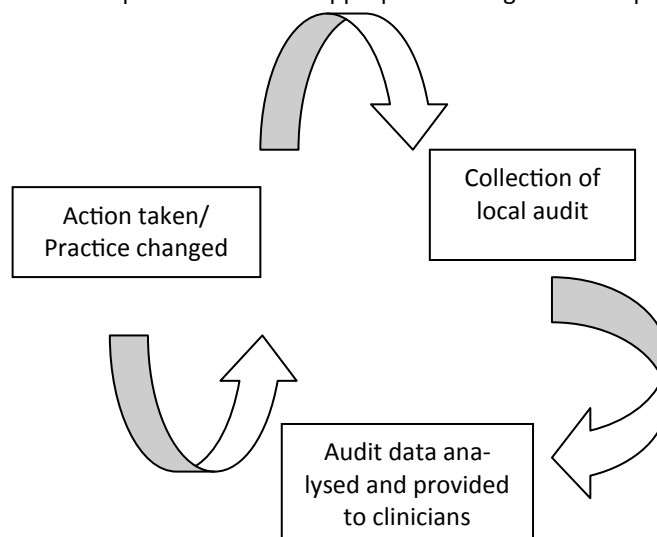


Figure 6.2. Audit cycle

Audit tools are commonly referred to as “quality improvement tools”.⁴ They are templates for ICTs to evaluate implementation of standard procedures, such as hand hygiene, isolation precautions, environmental cleaning, disinfection or sterilisation of equipment, handling linen/waste/sharps/supplies, etc., in their facility. In addition, specific practices may be monitored, e.g., use of personal protective equipment, insertion and care of intravascular, respiratory, or urinary devices, and wound care. Operating room observations for practices such as patient preparation, hair removal, surgical team scrub, and prophylactic antibiotic use, may also be included. The audit can be performed by the ICT or other designated staff. The audit tool must match the recommended practices and resources of the health care setting.¹

Audit Method

Initially it is probably worth selecting a few areas to audit, preferably those that are most important to the organisation. These may include high-risk areas highlighted through surveillance results or occurrence of outbreaks. An effective audit should include:

1. a description of the physical layout;
2. review of traffic flow, protocols and policies, supplies and equipment; and
3. observation of appropriate IPC practice.

The audit should take place over a defined time.¹ A rapid audit cycle plan can be completed in a few days and the results provided very quickly.⁴ (See Table 6.1) In addition to the rapid cycle plan, an overall annual plan may be useful.⁴ Link personnel and ward staff may assist with the process.¹

Table 6.1. Rapid Cycle Audit Plan

Day	1	2	3	4	5	6	7	8
Environment								
Hand hygiene								
Indwelling lines								
Urinary catheters								

Preparation of Audit Team

The audit team consists of the ICT, the link nurses, and may extend to include volunteers from HCWs or other support staff. They need to understand that the purpose of the audit is to improve IPC practice. It is in no way meant to be punitive or a search for weaknesses. Pre-audit meetings are essential to explain and discuss the goals and objectives of the audit, how it will be conducted, and how the results will be reported.

Staff should understand that an objective approach will be maintained, that the audit will be performed consistently across the facility, and anonymity will be protected. The audit team must identify the leaders in the area being audited and continue communication with them. Management and other key decision makers (e.g., educators) need to support the audit team in any changes required post-audit.

Knowledge Assessment

A questionnaire on employees' knowledge of safe IPC practice should be developed and distributed prior to any audit.⁵ The questionnaire can assist in determining what areas of practice should be audited. Respondents should be identified only by job title (e.g., nurse, physician, radiographer, cleaner, etc.). The questionnaire can be modified to suit the department or area being audited. A deadline must be provided so that questionnaires are returned on time. One person in each survey area should be asked to ensure that questionnaires are completed and kept securely for collection and tabulation by the audit team. The results will allow the ICT to determine where additional education is needed. Dissemination of results and discussion of the correct an-

swers can be used as an educational tool.

Audit tools

These tools are referred to as quality improvement tools.⁴ They could be in the form of checklists, bundles or pack of toolkits. Toolkits to carry out different types of audits in health care settings are available from various organisations.

- The Community and Hospital Infection Control Association-Canada audit toolkit⁶
- World Health Organization audit toolkits⁷

Basic Principles

Bundles

A bundle is a multi-model structured method of improving processes of care and patient outcomes. A bundle is a collection of processes needed to effectively and safely care for patients undergoing particular treatments with inherent risks. Several interventions are "bundled" together and, when combined, significantly improve patient care outcomes. Bundles are helpful and have been developed for ventilator-associated pneumonia, catheter-associated urinary tract infection, and central line-associated bloodstream infection prevention.⁸ A bundle pack includes:

1. A statement of commitment for the clinical team to sign.
2. A cause-effect chart describing the evidence for optimal practice⁹ (See Figure 6.3) and used also for root cause analysis of non-conformities, in reference to the standards.
3. Standard operating procedures for the bundle including specific criteria.
4. A data collection sheet.
5. Explanation of the bundle to the clinical staff (e.g., group discussion, slide presentation)

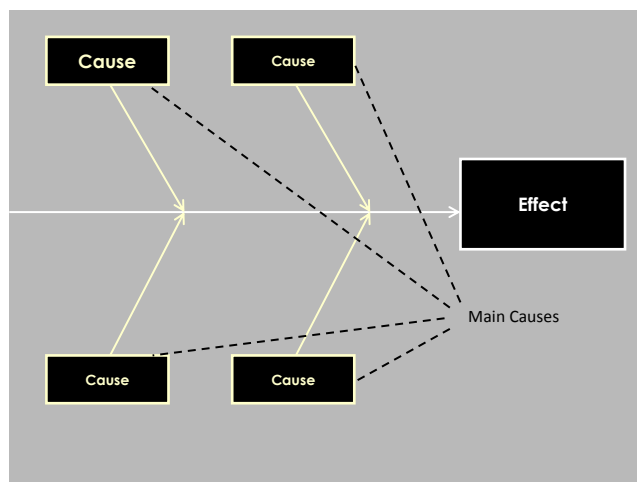


Figure 6.3. Fish-bone type of Cause and Effect diagram

The bundle typically consists of a small number, usually three to five, of procedures, all determined by robust evidence, which when taken together create improved outcomes. Successfully completing each step is a straightforward process and can be audited.¹⁰

Types of audits

They include, but are not limited to:

- Hand hygiene (readiness and practice; supplies such as soap, paper towel, alcohol-based products)
- Use of standard precautions and/or routine practices
- Use of isolation/precautions
- Use of personal protective equipment
- Monitoring of sterilisation equipment
- Cleaning, disinfection, and sterilisation of reusable equipment and devices, such as bronchoscopes, surgical instruments, bed pans, and urinals.
- Health care environment cleaning
- Haemodialysis practices, equipment, facility
- Operating room practices: asepsis and preoperative antisepsis, traffic control, patient skin preparation, hair removal, surgeon scrub, and prophylactic antibiotics
- Practice and medical device reprocessing in clinics and physician offices
- Occupational health issues, such as sharps injuries/needle sticks, vaccination rates
- Outbreak management
- Self-audit tool for ICT

The data derived from audits can be used to direct the IPC program's annual goals and objectives. They may also assist in meeting the needs of the health care setting in relation to IPC standards and safer health care practices.

Reports

Once the audit is completed, a draft, detailed report must be written and reviewed with management and key staff in the audit area before it is finalised and distributed. The report should include information on why the audit was performed, method used, findings, and recommendations. Compliance data should be included as appropriate.¹ Reporting of audits may be in the form of:

Weekly reports: Providing rapid feedback on incidental issues while they are still fresh (e.g., during outbreaks or after occupational sharp injuries).

Monthly reports: A monthly report should include sections about surveillance, audit results, education, training, and consultations.

Quarterly reports: These are formal reports including recommendations and management of issues.

Annual reports: A summary of audits carried out during the year and the resulting improvement or changes during the rapid and annual audit plans, illustrated as appropriate with graphs.

Staff must learn to appreciate that the intent of audits is to promote good practice, improve patient care, and ensure safety. A key person must be identified in each area to help facilitate implementation of any recommendations within a specified time.⁴

Guidelines

An IPC audit can evaluate that written guidelines are in place for each procedure. These guidelines must be current, acceptable and practical and may be used in developing the IPC program’s policies and procedures.

An audit determines whether these guidelines are being followed in actual practice. This can be accomplished through “Staff Interviews” or “Observational Tours”. This latter form of auditing is relatively simple, albeit time-consuming. Developing an audit calendar for planning the audit cycle may be useful from a time management perspective.⁹ (See Tables 6.1 and 6.2)

Table 6.2. An Annual Audit Plan

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
MRSA admission screening	■							■				
Hand hygiene		■										
Antimicrobial policy				■								
Disposal of sharps			■				■					
Disinfection policy					■							
Central processing policy						■						
Aseptic techniques in operating room									■			
Surveillance										■	■	■

Gap and SWOT analysis

A key point for implementation of an effective system to prevent and control healthcare-associated infections is undertaking a gap analysis of the current governance systems, processes, and practices. This would be strategic to assist the organisation in identifying areas that do not require any additional interventions and those areas that may need to be improved or changed.¹¹

The gap analysis or baseline review is a good starting point to assist with the development of an action plan and prioritisation to best utilise resources. Undertaking a risk assessment can strengthen the gap analysis. The results of both will determine priorities for improvement and action required.¹¹

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. It is sometimes referred as SLOT

analysis with liabilities used in place of weaknesses.¹²

Strengths – Advantages the organisation/area has over others

Weaknesses – Areas that needs improvement

Opportunities – Trends and gaps to take advantage of

Threats – External factors that can threaten the outcome

Identifying these factors and considering them all make it easier to plan future activities. Adding all these factors within a diagram makes it easy to visualise and assists in making even better decisions. SWOT and GAP analyses are used in different contexts; they might provide a different meaning in those contexts.¹² See Table 6.3.

Table 6.3. Gap vs. SWOT

Gap Analysis	SWOT analysis
Internal evaluation to identify performance deficiencies	Evaluates an organisation against its peers
Performed to reach short term goals	Performed for long term planning
Can be very targeted towards fine tuning one process	A comprehensive study evaluating many aspects of work

Summary

Health care requires an increased emphasis on the use of audits to measure the implementation of policies and procedures relating to IPC practices. Development of audit plans based on a risk assessment strategy, preparation of the audit team, tailoring of the audit method, and assessment of knowledge are pillars of internal audits in health care organisations.

The data from audits can be used to direct the IPC program to target more successful interventions. Audit reporting includes recommendations and guidelines to create a safer environment and to minimise the risk of healthcare-associated infections.

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