Chapter 2
Organizational Structure

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Key points

- Risk prevention for patients and staff is a concern of everyone in the facility and must be supported at the level of senior administration.
- Infection Prevention and Control Programs require an appropriate, clear, and firm organisational structure.
- The Infection Prevention and Control Programs in most countries is delivered through an Infection Control Team.
- A healthcare-associated infection manual compiling recommended instructions and practices for patient care is an important tool.

Introduction

Infection prevention and control (IPC) is a quality standard, essential for the well-being and safety of patients, staff, and visitors. Provision of an effective IPC program is a key to quality and a reflection of the overall standard of care provided by a health care institution. Each institution is unique and its specific needs must be considered when developing or reorganizing an IPC program. Because of these differing needs, various groups, individuals, and functions within the organisation may be responsible for the IPC program.

National Program

The responsible National Health Authority should develop a national program to support health care facilities in reducing the risk of healthcare-associated infections (HAI). Such programs must:

- Set relevant objectives consistent with other national health care objectives.
- Develop and continually update guidelines for health care surveillance, prevention, and practice.
- Develop a national system to monitor selected infections and assess the effectiveness of interventions.
- Harmonise initial and continuing training programs for health care professionals.
- Facilitate access to products essential for hygiene and safety.
- Encourage health care establishments to monitor HAIs, with feedback to the professionals concerned.

The Health Authority should designate an agency to oversee the program (a ministerial department, institution, or other body) and plan national activities with the help of an expert committee. Professionals and academic organisations must be involved.[1]

Health Care Programs

The major preventive effort related to HAIs should be focused on hospitals and other health care facilities.[2-4] Risk prevention for patients and staff is a concern of everyone in the facility and must be supported by the senior administration. A yearly work plan to assess and promote good health care, appropriate isolation precautions, sterilisation and other practices,

staff training, and epidemiological surveillance should be developed.

The manager or medical director is ultimately responsible for safety and quality. He or she must ensure that appropriate arrangements are in place for effective IPC practices and that there is an Infection Control Committee (ICC) and an Infection Control Team (ICT). If the health care setting is too small for such an organisation, experts in IPC should be available for consultation at regular intervals and in an acute situation. Providers of home care should also ensure that expertise in IPC is available for their staff.

Infection Control Committee

An ICC provides a forum for multidisciplinary input, cooperation, and information sharing. The ICC is responsible for the planning, implementation, prioritisation, and resource allocation of all matters relating to IPC. The ICC must report directly to either administration or the medical staff to promote program visibility and effectiveness. The committee should act as a liaison between departments responsible for patient care and support services (e.g., pharmacy, maintenance).
The ICC membership should reflect the spectrum of clinical services and administrative arrangements. It should include:

- Chief Executive/Administrator or his/her nominated representative.
- Infection Control Doctor/Microbiologist who may act as a chairperson.
- Infection Control Nurse (ICN).
- Infectious Disease Physician (if available).
- Director of Nursing or his/her representative.
- Occupational Health Physician (if available).
- Representatives from the major clinical specialties.
- Representatives of other departments (pharmacy, central supply, maintenance, housekeeping, training services, etc.) may be invited as necessary.

The committee should hold regular meetings with minutes. Minutes should be sent to the Medical Director and the facility's Management Board as well as to departments directly involved in the subjects discussed during the meeting. It should produce an annual report and an annual business plan for IPC. The ICC has the following tasks:

- To review and approve the annual plan for IPC.
- To review and approve IPC policies.
- To support the ICT and direct resources to address problems as identified.
- To ensure availability of appropriate supplies needed for IPC.
- To review epidemiological surveillance data and identify areas for intervention.
- To assess and promote improved practice at all levels of the facility.
- To ensure staff training in IPC and safety.
- To review infectious risks associated with new technologies and monitor risks of new devices and products, prior to their approval for use.
- To review and provide input into an outbreak investigation.
- To review and approve construction/renovation projects regarding infection prevention.
- To communicate and cooperate with other committees with common interests, such as the Antibiotic Committee, Occupational Health Committee, etc.

Infection Control Team

The ICT should have a range of expertise covering IPC, medical microbiology, infectious diseases, and nursing procedures. The team should have a close liaison with the microbiology laboratory and ideally a microbiologist should be a member. The team should consist of at least one physician, the Infection Control Officer (ICO), and at least one nurse, the ICN.

The ICT is responsible for the day-to-day running of IPC programs. All health care organisations should have an ICT. If this is not practical, arrangements for IPC services should be made with a nearby hospital. The optimal structure will vary with the type, needs, and resources of the facility. The ICT must have appropriate authority; in large facilities, this usually means a direct reporting relationship with senior administration.

The ICT must ensure that an effective IPC program has been planned, coordinate its implementation, and evaluate its impact. Twenty-four hour access to the ICT for advice (both medical and nursing) on IPC is essential.

The team should meet regularly (several times a week or, preferably, daily) to discuss relevant issues. A standing agenda may include updates on surveillance, observations of IPC practice, policy review, revision of education and training, and follow-up of identified problems. Minutes should be prepared for all meetings. Any regulations, rules, or recommendations should be widely distributed throughout the facility. Feedback from the ward staff should be encouraged.

The role of the ICT can be summarised as follows:

- To develop an annual IPC plan with clearly defined objectives.
- To develop written policies and procedures, including regular evaluation and updates.
- To prepare an action plan for implementation of the IPC program with approval from the ICC.
- To monitor and evaluate daily practices of patient care designed to prevent infection.
- To identify problems in the implementation of IPC activities which need to be solved or addressed by the ICC.
- To organise epidemiological surveillance for HAIs (particularly in high risk areas to detect outbreaks early).
- To investigate outbreaks and provide data (and expert advice) that should be evaluated to allow for any change in practice or allocation of resources.
- To educate all grades of staff in IPC policy, practice, and procedures relevant to their own areas.
- To provide advice to all grades of staff on all aspects of IPC on a day-to-day basis.
- To develop an annual training plan for healthcare workers and implement IPC training activities.
- To ensure availability of supplies and equipment needed for IPC.
- To have a scientific and technical support role in purchasing and monitoring of equipment and supplies, and in evaluation and checking the efficacy of sterilisation and disinfection measures.
- To collaborate with the pharmacy and antibiotic committees in developing a program for supervising antibiotic use.
- To support and participate in research and assessment programs.
- To participate in audit activities.
- To obtain program approval from the ICC.
- To submit monthly reports on activities to the ICC.

Infection Control Officer: Duties and Responsibilities

The ICO should be a medically qualified senior staff member who is interested in and who spends most of his/her time involved in IPC. The ICO could be a medical microbiologist, an epidemiologist, or an infectious diseases physician. If none of these are available, then a surgeon, a paediatrician, or another appropriate physician with a special interest in the field should be appointed. Irrespective of professional background, the ICO should have interest, knowledge, and experience in different aspects of IPC.

The role and responsibilities of the ICO are summarised as follows:

- Serves as a specialist advisor and takes a leading role in the effective functioning of the ICT.
- Should be an active member of the ICC and may act as its Chair.
- Assists the ICC in reviewing annual plans, policies, and long-term programs for the prevention and control of infection.
- Advises the Chief Executive/Administrator directly on all aspects of IPC and on the implementation of policies and procedures.
- Participates in the preparation of tender documents for support services and advises on IPC aspects.
- Must be involved in setting quality standards, surveillance, and audit with regard to infection prevention.

Infection Control Nurse: Duties and Responsibilities

An ICN or Practitioner is a registered nurse with an academic education (perhaps with a qualification, such as specialised training) and practical training which enables him or her to act as a specialist advisor in all aspects relating to IPC. The ICN is usually the only full-time practitioner on the ICT and therefore takes the key role in day-to-day IPC activities, with the ICO providing the leading role.

One ICN for 250 acute beds on a full-time basis was recommended in the United States during the 1980s. However, since then, the expansion in job responsibilities necessitates that staffing requirements reflect the scope of the program, rather than bed number.[5]

The role and responsibilities of the ICN are summarised as follows:

- Contributes to the development and implementation of policies and procedures, participates in audits, and monitors tools related to IPC and infectious diseases.

- Provides specialist-nursing input in the identification, prevention, monitoring, and control of infection.
- Participates in surveillance and outbreak investigation activities.
- Identifies, investigates and monitors infections, hazardous practices and procedures.
- Participates in preparing documents relating to service specifications and quality standards.
- Participates in training and educational programs and in membership on relevant committees where IPC input is required.

Infection Control Link Nurse

An effective way to develop IPC education and operational support can be through a link system. In a large facility the ICN can train link nurses. These individuals have special responsibility for maintaining good IPC practices and education within their departments. The Infection Control Link Nurse (ICLN) is the "link" between the ICN and the ward and helps identify problems, implements solutions, and maintains communications. A competent ICLN can motivate ward staff by enabling more effective practice. Sustained, consistent senior management backing and interest are effective in supporting such link programs and essential in ensuring their success.

The ICLN is responsible for:

- Monitoring hygiene, consistent with policies and good nursing practices.
- Monitoring aseptic techniques, including hand hygiene and use of isolation precautions.
- Reporting promptly to the attending physician any evidence of infection in patients.
- Initiating patient isolation/precautions and ordering culture specimens from any patient.
- Identifying signs of a communicable disease when the physician is not available.
- Limiting patient exposure to infections from visitors, staff, other patients, or equipment used for diagnosis or treatment.
- Maintaining a safe and adequate supply of ward equipment, drugs, and patient care supplies.

Infection Control Manual

An HAI manual, containing recommended instructions and practices for patient care, is an important tool. The manual should be developed and updated by the ICT, with review and approval by the committee. It must be made readily available for patient care staff and updated regularly. Topics of importance for a procedure manual include:

Patient care
- Hand hygiene
- Isolation precautions practices
- Invasive procedures (intravascular and urinary catheterisation, mechanical ventilation, tracheostomy care, and wound management)
- Oral alimentation

Area specific procedures
- Isolation precautions procedures for infectious patients
- Surgical and operating theatre techniques
- Obstetrical, neonatal, and intensive care techniques

Processing of items of critical importance
- Cleaning, sterilisation, and disinfection
- Medication and preparation of infusions (including blood products)

Staff health
- Immunisation
- Post-exposure management for employees, patients, and others exposed to infectious diseases within the facility

Investigation and management of patients with specific infections
- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Diarrhoea
- Human immunodeficiency virus
- Tuberculosis
- Multi-resistant Gram-negative bacteria

Minimal Requirements

The IPC program must include:

- A physician and a nurse with responsibilities for IPC.
- A manual of critical IPC policies.
- An educational program for staff.
- A clear line of responsibility to senior management.

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