

# Chapter 1

# Infection Prevention and Control Program 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.
- An Infection Control Programme (ICP) has to develop an appropriate, clear and firm organizational structure.
- ICP 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 (IC) is a quality standard and is essential for the well-being and safety of patients, staff and visitors. Provision of an effective infection control program (ICP) is a key to the quality and a reflection of the overall standard of care provided by the health care institution. Each institution is unique and its specific needs must be considered when developing or reorganizing an ICP. Because of these differing needs, various groups, individuals, and functions within the organization may be responsible for the IC program.

## **National Program**

The responsible National Health Authority should develop a national program to support hospitals in reducing the risk of healthcare-associated infections. 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.
- Harmonize initial and continuing training programs for health care professionals.
- Facilitate access to products essential for hygiene and safety.
- Encourage health care establishments to monitor healthcare-associated infections, 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 organizations must be involved.<sup>1</sup>

## **Hospital Programs**

The major preventive effort should be focused in hospitals and other health care facilities.<sup>2</sup> 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, sterilisation, and other practices, staff training, and epidemiological surveillance should be developed. The hospital manager or medical director is ultimately responsible for safety and quality. He or she must ensure that appropriate arrangements are in place for effective infection prevention and control (IC) 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 organization, experts in IC should be available for consultation at regular intervals and in an acute situation. Providers of home care should ensure that expertise in infection prevention and control is available for their staff.<sup>3</sup>

## **Infection Control Committee**

An Infection Control Committee (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 IC. 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 departments (e.g., pharmacy, maintenance).

The ICC membership should reflect the spectrum of clinical services and administrative arrangements of the hospital. It should include:

- Chief Executive/Hospital Administrator or his or her nominated representative.
- Infection Control Doctor/Hospital Microbiologist who may act as a chairperson.
- Infection Control Nurse.
- 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 Hospital 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 infection prevention and control.

The ICC has the following tasks:

- To review and approve the annual plan for IC for the facility.
- To review and approve the IC policies.
- To support the ICT and direct resources to address problems as identified.
- To ensure availability of appropriate supplies needed for IC.
- To review epidemiological surveillance data and identify areas for intervention.
- To assess and promote improved practice at all levels of the health facility.
- To ensure staff training in IC 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 infection prevention and control aspects of construction/renovation projects.
- To communicate and cooperate with other committees of the hospital with common interests, such as Antibiotic Committee, Occupational Health Committee, etc.

### **Infection Control Team (ICT)**

The ICT should have a range of expertise covering IC, 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 Infection Control Nurse (ICN). One ICN for 250 acute beds on a full-time basis was recommended in the US during the 1980s. However, the optimal number of ICNs cannot be calculated simply on the basis of the number of acute care beds but depends on the case mix and workload.<sup>3</sup>

The ICT is responsible for the day-to-day running of ICPs. All hospitals should have an ICT. If this is not practical, arrangements for IC 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 to manage an effective ICP. In large facilities, this usually means a direct reporting relationship with senior administration.

The ICT must ensure that an effective ICP has been planned, coordinate its implementation, and evaluate its impact. Twenty-four hour access to the ICT for advice (both medical and nursing) on IC 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 IC practice, policy review, revision of education and training, and follow-up on any identified problem. Important decisions should be recorded in written minutes. 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 summarized as follows:

- To develop an annual IC 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 ICP and to get approval from the ICC.
- To supervise and monitor daily practices of patient care designed to prevent infection.
- To identify problems in the implementation of IC activities which need to be solved or addressed by the hospital ICC.
- To organize epidemiological surveillance for healthcare-associated infections (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 IC policy, practice and

procedures relevant to their own areas.

- To provide advice to all grades of staff on all aspects of infection prevention and control on a day-to-day basis.
- To develop an annual training plan for health care workers and to get program approval from the ICC.
- To implement IC training activities within the health care facility.
- To ensure availability of supplies and equipment needed for IC.
- To have a scientific and technical support role in purchasing and monitoring of equipment and supplies, and in evaluation and checking the efficacy of sterilization 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 submit monthly reports on activities to the ICC.

## **Infection Control Officer: Duties and Responsibilities**

The infection control officer (ICO) should be a medically qualified senior staff member of the facility who spends most of his/her time involved in hospital IC. The ICO could be a medical microbiologist, an epidemiologist, or an infectious disease 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 IC.

The role and responsibilities of the ICO are summarized 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 hospital ICC and may act as its Chair.
- Assists the ICC in drawing up annual plans, policies and long-term programs for the prevention and control of infection.
- Advises the Chief Executive/Hospital Administrator directly on all

aspects of IC in the hospital and on the implementation of agreed policies and procedures.

- Participates in the preparation of tender documents for support services and advises on IC aspects.
- Must be involved in setting quality standards, surveillance and audit with regard to infection prevention.

## **Infection Control Nurse: Duties and Responsibilities**

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

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

- Contributes to the development and implementation of policies and procedures, participates in audits, and monitors tools related to IC and infectious diseases.
- Provides specialist-nursing input in the identification, prevention, monitoring, and control of infection within the hospital.
- Participates in surveillance, outbreak investigation, and control of infection.
- Identifies, investigates and monitors infections, hazardous practice 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 IC input is required.

## **Infection Control Link Nurse (ICLN)**

An effective way to develop IC education and operational support can be through a link system. In a large hospital the ICN can train link nurses. These have special responsibility for maintaining good IC practices and education within their own departments. The ICLN is the “link” between the ICN and the ward and helps identify problems, implement solutions and maintain

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:

- Maintaining hygiene, consistent with hospital policies and good nursing practice on the ward.
- Monitoring aseptic techniques, including hand washing and use of isolation.
- Reporting promptly to the attending physician any evidence of infection in patients.
- Initiating patient isolation 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, hospital staff, other patients, or equipment used for diagnosis or treatment.
- Maintaining a safe and adequate supply of relevant ward equipment, drugs and patient care supplies.

## **Infection Control Manual**

A healthcare-associated infection manual, containing recommended instructions and practices for patient care, is an important tool. The manual should be developed by the ICT, with review and approval by the ICC. It must be made readily available for patient care staff, and updated regularly.

## **Topics of importance for a procedure manual**

### **Patient care**

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

### **Ward specific procedures**

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

### **Production of items of critical importance**

- Cleaning, sterilisation and disinfection
- Medication and infusion preparation (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 specific infections**

- Methicillin resistant *Staphylococcus aureus* (MRSA)
- Diarrhoea
- HIV
- Tuberculosis
- Multiresistant Gram-negative bacteria

### **Minimal Requirements**

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

### **References and Further Reading**

1. Ducl G, Fabry J, Nicolle L. Prevention of hospital-acquired infections; A practical guide. 2nd ed. Geneva, Switzerland: World Health Organization; 2002.
2. Scheckler WE, Brimhall D, Buck AS, **et al.** Requirements for infrastructure and essential activities of infection control and epidemiology in hospitals: a consensus panel report. Infect Control Hospital Epidemiol 1998;19: 114-24.

3. Friedman C. Infection Control Program: Structure, Administrative Reporting In: APIC Text of Infection Control and Applied Epidemiology: Principles and Practice (CD-ROM version). Washington, D.C.: Association for Professionals in Infection Control and Epidemiology, Inc.; 2002. p. 1-1—1-9.