

Core components of infection prevention and control programmes in health care

Background

Healthcare-associated infections (HAIs) occur worldwide in all countries, irrespective of their level of development, and can affect patients, health-care workers and visitors. HAIs can originate within the population of a health-care facility (HCF), can be associated with the use of medical devices or procedures or can result from the transmission of community-acquired infections to patients in the HCF. In some circumstances, an HCF can act as an amplifier, leading to the spread of infections within the health-care facility and beyond to the wider community. HAIs can result in serious illness, prolong hospital stay, drain health-care resources and may result in loss of life.

An established culture of safe health-care practices, together with preparedness for outbreak situations, can prevent and control dissemination of infectious agents, and is critical for containing the spread of antimicrobial resistance (AMR). Furthermore, the International Health Regulations (2005) now require that countries put in place measures that can facilitate early detection and containment of events with the potential to develop into a public health emergency of international concern. Health-care facilities are at the forefront of disease detection and control activities. Hospital-based surveillance, linked to public health surveillance systems, is essential in enabling an early public health response to infectious threats.

An Infection Prevention and Control (IPC) programme, implemented within a health-care facility, is critical not only to prevent HAIs but also to prepare for and respond to communicable diseases crises. A set of essential core components has been defined to help plan, organize and implement an IPC programme. These core components, together with their constituent elements, should be implemented in line with the priorities of the IPC programme and the resources available and adapted to both national and health-care facility level.

Key messages

- Safe health-care practices in a safe environment are key in preventing transmission of HAIs and AMR.
- Many HAIs are preventable through sustainable cost-effective interventions.
- An IPC programme in a health-care facility is essential in minimizing transmission of infectious diseases and in preparing for and preventing outbreaks.
- All core components are required for an effective IPC programme.
- Each core component should be implemented in line with local priorities and available resources and should be adapted for implementation at both national and health-care facility levels.

Core components

✓ Checklist

- Organization of IPC programmes
- Technical guidelines
- Human resources (training, staffing, occupational health)
- Surveillance of diseases and of compliance with IPC practices
- Microbiology laboratory support
- Clean and safe environment
- Monitoring and evaluation of IPC programmes
- Links with public health and other services



Core components: actions to be implemented by national authorities and health-care facilities, at a glance¹

CORE COMPONENT	ACTION	
	National health authority	Local health-care facility
Organization of IPC programmes	<ul style="list-style-type: none"> ■ Establish a nationwide authority with qualified staff, scope, functions and budget. ■ Ensure preparedness and coordination of IPC elements for communicable diseases. 	<ul style="list-style-type: none"> ■ Designate leadership and authority for the IPC programme with dedicated qualified staff, scope, functions and adequate budget. ■ Establish preparedness and response procedures within the HCF for communicable diseases emergencies.
Technical guidelines ²	<ul style="list-style-type: none"> ■ Develop and disseminate evidence-based guidelines for prevention and management of infections. 	<ul style="list-style-type: none"> ■ Adapt and implement guidelines at the local level.
Human resources	<ul style="list-style-type: none"> ■ Develop content for training programme for health-care workers and IPC professionals. ■ Define standards for adequate staffing levels. ■ Address preventive measures to protect staff against biological risks. 	<ul style="list-style-type: none"> ■ Provide basic training for all health-care workers. ■ Provide specialized training for IPC professionals. ■ Ensure adequate staffing levels (numbers, skills and training). ■ Implement measures to protect staff against biological risks.
Surveillance and assessment of compliance with IPC practices	<ul style="list-style-type: none"> ■ Coordinate, gather and document available data on HAIs at the national level and report to interested parties. ■ Standardize case definitions and surveillance methods. ■ Promote assessment of IPC practices and other relevant processes in a blame-free institutional culture. 	<ul style="list-style-type: none"> ■ Assess local context and define local objectives, priorities and surveillance methods. ■ Conduct appropriate surveillance, in line with local needs and national objectives, and report to appropriate authorities. ■ Monitor compliance with IPC practices in a blame-free culture.
Microbiology laboratory	<ul style="list-style-type: none"> ■ Standardize laboratory techniques. ■ Promote interactions between IPC activities and laboratories. ■ Define biosafety standards. 	<ul style="list-style-type: none"> ■ Ensure good quality microbiology laboratory services. ■ Establish liaison and communication between laboratory and IPC activities. ■ Implement biosafety standards.
Environment	<ul style="list-style-type: none"> ■ Define "minimum requirements" for IPC purposes. 	<ul style="list-style-type: none"> ■ Identify infectious risks in the environment and implement appropriate interventions.
Monitoring and evaluation of programmes	<ul style="list-style-type: none"> ■ Set up regular monitoring and reporting mechanisms of IPC programmes in health-care facilities. ■ Promote evaluation in a non-punitive culture. 	<ul style="list-style-type: none"> ■ Conduct regular monitoring. ■ Submit regular reports on processes, outcome and status of the local IPC programme. ■ Promote evaluation of performance in a non-punitive culture.
Link with public health and other services	<ul style="list-style-type: none"> ■ Define procedures for building links and channels of communications with public health services. 	<ul style="list-style-type: none"> ■ Establish links with public health activities and represent IPC to other HCF services.

IPC, infection prevention and control; HAIs, health care-associated infections; HCF, health-care facility.

¹ For more details refer to *Core components for infection prevention and control programmes: Report of the Second Meeting, Informal Network on Infection Prevention and Control in Health Care, Geneva, Switzerland, 26–27 June 2008*. http://www.who.int/csr/resources/publications/WHO_HSE_EPR_2009_1/en/index.html

² Basic set of technical guidelines: Standard Precautions (including hand hygiene, safe handling of sharps and injections, sterilization and disinfection, environmental cleaning and waste management) additional precautions, placement of patients, antimicrobial use and aseptic practices.