

# Public Health and Infections Prevention and Control

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## Public Health

Public health is a discipline dedicated to improve the health of the populations by preventing injuries, and diseases by promotion, education, and research of healthy lifestyles.

Both public health and infection control are focused on preventing the spread of disease. Prevention strategies and interventions from both fields are aimed at human behaviour, environment, or medical care practices. Both public health and infection control participate in collaborative relationships with partners on local, state, national, and global levels.

Infection control is a new area for public health surveillance, education, and research efforts. In 1968, the CDC (Centre for Disease Control and Prevention) began national-level surveillance for healthcare-associated infections (HAIs). The involvement of state health department in infection control was expanded with the American Recovery & Reinvestment Act (ARRA) of 2009.

In recent years, public health has also been involved with the initiatives to reduce the antibiotic resistance and promote antibiotic stewardship efforts, as evidenced by creation of both a national strategy and a national action plan for combating antibiotic-resistant bacteria.

WHO (World Health Organization) has an infection prevention campaign entitled "Clean Care is Safer Care" that aims to ensure infection control is recognized as a critical element of patient safety. One of the key components of this project is the "Save Lives: Clean Your Hands" campaign that emphasizes the healthcare worker role, hand hygiene in preventing the spread of infections in healthcare facilities.

Elements which are necessary for infection prevention and control of public health

- Surveillance
- Data validation
- Public reporting
- Setting goal

- Reporting communicable disease
- Investigation on outbreak
- Providing education to general public and healthcare providers
- Developing health guidelines and policies
- Serve as licensing/regulatory authority
- Conducting infection prevention and control research
- Provide governmental incentives to report HAIs data and to improve performance on process and outcome measures of HAIs
- Ensure safety and medical devices, vaccines, and drug's effectiveness.
- Liaise during disasters, major events, and bioterrorism attacks to conduct active surveillance and provide situational awareness

Ignoring key concepts related to public health and infection control and their consequences

Outbreaks of disease and on-going infection transmission

- HAIs Higher incidence
- Increased healthcare costs due to the treatment of HAIs
- Difficult to treat infections due to the spread of antibiotic-resistant organisms, resulting in more costly
- Citations and/or fines from licensing or accrediting bodies
- Healthcare reimbursements are decreasing
- Public distrust

Several public health agencies/organizations are involved in prevention and control of infections and their initiatives.

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