# **Guidelines on Core Components of Infection Prevention and Control Programmes** at the National and Acute Health Care Facility Level

World Health Organization

Guidelines on core components of infection prevention and control programmes at the national and acute health care facility level.

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### Overall coordination and writing of the guidelines

Benedetta Allegranzi and Julie Storr (Department of Service Delivery and Safety, WHO) coordinated and led the development and writing of the guidelines and contributed to the systematic reviews. Anthony Twyman (Department of Service Delivery and Safety, WHO) provided significant input for the development and drafting of the guidelines, including contributing to the systematic reviews. Rosemary Sudan provided professional editing assistance. Thomas Allen (Library and Information Networks for Knowledge, WHO) provided assistance with the searches for systematic reviews.

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# Acronyms

| | |
|---|---|
| **AMR** | antimicrobial resistance |
| **CINAHL** | Cumulative Index to Nursing and Allied Health Literature |
| **EMBASE** | Excerpta Medica Database |
| **EPOC** | Effective practice and organisation of care |
| **GDG** | Guidelines Development Group |
| **GRADE** | Grading of Recommendations Assessment, Development and Evaluation |
| **HAI** | health care-associated infection |
| **ICROMS** | Integrated quality criteria for review of multiple study designs |
| **ICU** | intensive care unit |
| **IHR** | International Health Regulations |
| **IPC** | infection prevention and control |
| **LMICs** | low- and middle-income countries |
| **MRSA** | methicillin-resistant *Staphylococcus aureus* |
| **PICO** | Population (P), intervention (I), comparator (C) and outcome(s) (O) |
| **PRISMA** | Preferred reporting items for systematic reviews and meta-analyses |
| **RCT** | randomized controlled trial |
| **SDG** | Sustainable Development Goals |
| **SIGHT** | Systematic review and evidence-based guidance on organization of hospital infection control programmes |
| **SSI** | surgical site infections |
| **UK** | United Kingdom |
| **USA** | United States of America |
| **WASH** | Water sanitation and hygiene |
| **WHO** | World Health Organization |

# Glossary of terms

**Acute health care facility:** A setting used to treat sudden, often unexpected, urgent or emergent episodes of injury and illness that can lead to death or disability without rapid intervention. The term *acute care* encompasses a range of clinical health care functions, including emergency medicine, trauma care, pre-hospital emergency care, acute care surgery, critical care, urgent care and short-term inpatient stabilization.

**Alcohol-based handrub:** An alcohol-based preparation designed for application to the hands to inactivate microorganisms and/or temporarily suppress their growth. Such preparations may contain one or more types of alcohol and other active ingredients with excipients and humectants.

**Bundle:** An implementation tool aiming to improve the care process and patient outcomes in a structured manner. It comprises a small, straightforward set of evidence-based practices (generally 3 to 5) that have been proven to improve patient outcomes when performed collectively and reliably.

**Good practice statement:** A code of conduct that aims to provide a clear and simple overview of the principles, policies and practices required to implement effective measures for infection prevention and control.

**Grading of Recommendations Assessment, Development and Evaluation (GRADE):** an approach used to assess the quality of a body of evidence and to develop and report recommendations.

**Health care-associated infection (also referred to as "nosocomial" or "hospital infection"):** An infection occurring in a patient during the process of care in a hospital or other health care facility, which was not present or incubating at the time of admission. Health care-associated infections can also appear after discharge. They represent the most frequent adverse event associated with patient care.

**Health care-associated infection point prevalence:** The proportion of patients with one or more active health care-associated infections at a given time point.

**Health care-associated infection incidence:** The number of new cases of health care-associated infections occurring during a certain period in a population at risk.

**Improved water source:** Defined by the WHO/UNICEF Joint Monitoring Programme as a water source that by its nature of construction adequately protects the source from outside contamination, particularly faecal matter. Examples include: public taps or standpipes, protected dug wells, tube wells or boreholes.
Source: WHO/UNICEF. Progress on sanitation and drinking water: 2015 update and MDG assessment, 2015 (*http://files.unicef.org/publications/files/Progress_on_Sanitation_and_Drinking_Water_2015_Update_.pdf*).

**Improved sanitation facilities:** Toilet facilities that hygienically separate human excreta from human contact. Examples include flush/pour flush to a piped sewer system, septic tank or pit latrine, ventilated pit latrine, pit latrine with slab or composting toilet.

**Low- and middle-income countries:** WHO Member States are grouped into income groups (low, lower-middle, upper-middle, and high) based on the World Bank list of analytical income classification of economies for fiscal year 2014, calculated using the *World Bank Atlas method.* For the current 2016 fiscal year, low-income economies are defined as those with a gross national income per capita of US$ 1045 or less in 2014; middle-income economies are those with a gross national income per capita of more than US$ 1045, but less than US$ 12 736; high-income economies are those with a gross national income per capita of US$ 12 736 or more. (Lower-middle-income and upper-middle-income economies are separated at a gross national income per capita of US$ 4125.)

**Multimodal strategy:** A multimodal strategy comprises several elements or components (three or more; usually five, *http://www.ihi.org/topics/bundles/Pages/default.aspx*) implemented in an integrated way with the aim of improving an outcome and changing behaviour. It includes tools, such as bundles and checklists, developed by multidisciplinary teams that take into account local conditions. The five most common components include: (i) system change (availability of the appropriate infrastructure and supplies to enable infection prevention and control good practices); (ii) education and training of health care workers and key players (for example, managers); (iii) monitoring infrastructures, practices, processes, outcomes and providing data feedback; (iv) reminders in the workplace/communications; and (v) culture change within the establishment or the strengthening of a safety climate.

# Declarations of interest

**In accordance with WHO policy, all members of the Guidelines Development Group (GDG) were required to complete and submit a WHO Declaration of Interest form before each meeting. External reviewers and experts who conducted the systematic reviews were also required to submit a Declaration of Interest form. The secretariat then reviewed and assessed each declaration. In the case of a potential conflict of interest, the reason was presented to the GDG.**

According to the policy of the WHO Office of Compliance, Risk Management and Ethics, the biographies of potential GDG members were posted on the internet for a minimum of 14 days before formal invitations were issued. Further guidance of this office, also adhered to, included undertaking a web search of all potential members to ensure identification of any possibly significant conflicts of interest.

The procedures for the management of declared conflicts of interests were undertaken in accordance with the WHO Guidelines for declaration of interests (WHO experts). When a conflict of interest was considered significant enough to pose a risk to the guideline development process or reduce its credibility, the experts were required to openly declare such a conflict at the beginning of the Technical Consultation. However, the declared conflicts were considered irrelevant on

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Alison Holmes declared to be a member of several scientific committees and advisory boards and to be the principal investigator for a number of projects for which her unit receives funds (see Annex V).