

# Hand Hygiene Technical Reference Manual

To be used by health-care workers, trainers and observers of hand hygiene practices







A World Alliance for Safer Health Care

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## DEFINITION OF TERMS

#### Alcohol-based (hand) rub.

An alcohol-containing preparation (liquid, gel or foam) 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, other active ingredients with excipients, and humectants.

#### Clean/aseptic procedure

Any care activity that implies a direct or indirect contact with a mucous membrane, non-intact skin or an invasive medial device. During such a procedure no germ should be transmitted.

#### **Body fluids**

- Any substance/fluid from the body:
- blood
- excreted: urine, stools, vomit, meconium, lochia
- secreted: saliva, mucous, sperm, milk and colostrum, tears, wax, caseosa (until first bath)
- trans-/ex-sudate: pleural fluid, cerebrospinal fluid, ascites fluid, synovial fluid, amniotic fluid, pus, with the exception of sweat
- by extension, any biological samples taken from the body (including tissue sample, placenta, cytological sample, organ, bone marrow)

#### **Critical site**

Critical sites are associated with the risk of infection. They either correspond to body sites or to medical devices that have to be protected against harmful germs (called critical sites with infectious risk for the patient), or body sites or medical devices that potentially lead to hand exposure to body fluids and blood borne pathogens (called critical sites with body fluid exposure risk). Both pre-cited risks can occur simultaneously.

#### Medical gloves

Gloves used for medical procedures:

- sterile and non-sterile examination gloves
- surgical gloves
- chemotherapy gloves

#### Hand care

Actions to reduce the risk of skin damage or irritation.

#### Hand hygiene

A general term referring to any action of hand cleansing. Handrubbing with an alcohol-based handrub or handwashing with soap and water aimed at reducing or inhibiting the growth of micro-organisms on hands.

#### Hand hygiene indication

Reason for a hand hygiene action.

#### Hand hygiene opportunity

Moment during health-care activities when hand hygiene is necessary to interrupt germ transmission by hands. It constitutes the denominator for calculating hand hygiene compliance, i.e. the proportion of times that HCWs perform hand hygiene of all observed moments when this was required.

#### Handrubbing

Applying an antiseptic handrub to reduce or inhibit the growth of microorganisms without the need for an exogenous source of water and requiring no rinsing or drying with towels or other devices.

#### Invasive medical device

A medical device inserted either through the skin or a mucous membrane or through a natural orifice.

#### Colonization

The presence and multiplication of microorganisms without tissue invasion or damage.

#### Infection

Invasion by and multiplication of pathogenic microorganisms in a bodily part or tissue, which may produce subsequent tissue injury and progress to overt disease through a variety of cellular or toxic mechanisms.

### **OVERVIEW**

Health care-associated infection (HCAI) places a serious disease burden and has a significant economic impact on patients and healthcare systems throughout the world. Yet good hand hygiene, the simple task of cleaning hands at the right time and in the right way, can save lives.

The World Health Organization (WHO) has developed evidence-based WHO Guidelines on Hand Hygiene in Health Care to support healthcare facilities to improve hand hygiene and thus reduce HCAI.

The Hand Hygiene Technical Reference Manual has been developed to assist health-care workers to implement improvements in their facility as part of a multi-modal strategy and in accordance with the WHO Guidelines on Hand Hygiene in Health Care.

This Technical Reference Manual is designed for use in any healthcare facility. It describes detailed hand hygiene information and is aimed at health-care workers, trainers and observers. It focuses on understanding, practising and teaching hand hygiene concepts, with the aim of helping others to understand its importance and application in the prevention of micro-organism cross-transmission. It is particularly important as it provides comprehensive information on the application of WHO's "My 5 Moments for Hand Hygiene" approach and the practice of hand hygiene observation, as well as providing practical examples and visuals. Thus, it facilitates increased knowledge on both when and how health-care workers should perform, as well as observe, hand hygiene. It can be used to facilitate formal and informal training and education sessions and helps to support the process of evaluation and feedback in relation to hand hygiene observations. The ultimate goal is to support the reduction in acquisition of HCAI by improving hand hygiene practices and thus prevent the wasting of resources, and, save lives.

## PART I HEALTH CARE-ASSOCIATED INFECTION AND HAND HYGIENE

### I.1 WHAT IS A HEALTH CARE-ASSOCIATED INFECTION AND WHAT IS ITS IMPACT ON PATIENT SAFETY?

Health care-associated infection (HCAI) – also referred to as nosocomial infection – is defined as "an infection occurring in a patient during the process of care in a hospital or other health-care facility that was not present or incubating at the time of admission. This also includes infections acquired in the hospital but appearing after discharge, and occupational infections among staff of the facility". From the definition it is clearly understandable that the occurrence of this infection is linked to health-care delivery and that it may result, although not always, as a consequence of the failure of health-care systems and processes as well as of human behaviour. Therefore, it represents a significant patient safety problem.

HCAI occurs worldwide and affects hundreds of millions of patients both in developed and developing countries. In developed countries it complicates between 5-10% of admissions in acute care hospitals. In developing countries the risk is two-to-20 times higher and the proportion of infected patients can exceed 25%. Beyond causing physical and moral suffering to patients and their relatives, HCAIs represent a high cost to the health system and consume resources that could be spent on preventive measures or other priorities.

#### I 2 WHAT IS THE DOI E OF HANDS IN

The risk of transmission and potential harm applies at any time during health-care delivery, especially to immuno-compromised or vulnerable patients and/or in the presence of indwelling invasive devices (such as urinary catheter, intra-venous catheter, endotracheal tube, drains).

### I.3 WHAT ROLE DOES HAND HYGIENE PLAY IN THE PREVENTION OF HCAI?

Several studies have clearly demonstrated that the implementation of well-structured infection control programmes is a cost-effective way to reduce HCAI. Some have shown that these results are also achievable in countries and health-care facilities with limited resources.

The foundations of infection control are built on a number of simple, well-established precautions proven to be effective and widely appreciated. "Standard Precautions" encompass the basic principles of infection control that are mandatory in all health-care facilities. Their application extends to every patient receiving care, regardless of their diagnosis, risk factors and presumed infectious status, reducing the risk to patient and staff of acquiring an infection.

Hand hygiene is very much at the core of Standard Precautions and is the undisputed single most effective infection control measure. This also includes circumstances where specific, targeted "isolation precautions" (namely contact, droplet and airborne precautions)

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