References


16 Clinical Epidemiology & Health Service Evaluation Unit 2005, A Literature and Guidelines Review on Standards for Isolation and Negative Pressure Room Facilities for Hospitals.
Glossary

This glossary contains many terms used in the guidelines, as well as others encountered frequently by persons who implement infection control programs. The definitions here are not dictionary definitions, but rather those most applicable to usage when communicating with health professionals.

**ACHR**: Air changes per hour.

**Aerosol**: The droplet nuclei that are expelled by an infectious person (for example by coughing or sneezing). These droplet nuclei can remain suspended in the air and can transmit an infection to other persons.

**Air changes**: The ratio of the volume of air flowing through a space in a certain period of time (that is, the airflow rate) to the volume of that space (that is, the room volume). This ratio is usually expressed as the number of air changes per hour (ACHR).

**Air conditioning**: Artificial altering of the environment to provide comfortable conditions within an enclosed space.

**Air diffuser**: An air outlet discharging supply air in various directions and planes.

**Air mixing**: The degree to which air supplied to a room mixes with the air already in the room, usually expressed as a mixing factor. This factor varies from 1 (for perfect mixing) to 10 (for poor mixing), and it is used as a multiplier to determine the actual airflow required (the recommended ACHR multiplied by the mixing factor equals the actual ACHR).

**Anteroom**: A small room leading from a corridor into an isolation room. This room can act as an anteroom and prevent the escape of contaminants from the isolation room into the corridor.

**ASHRAE**: The American Society of Heating, Refrigerating and Air-Conditioning Engineers Inc. A professional body that develops standards for building ventilation.

**Bronchoscopy**: A procedure for examining the respiratory tract that requires inserting an instrument (a bronchoscope) through the mouth or nose and into the trachea. The procedure can be used to obtain diagnostic specimens.

**Computational fluid dynamics**: Computer-aided fluid flow modelling. Airflow analysis of flow patterns and air streams are calculated by solving fundamental fluid mechanics equations of laminar and turbulent flow, such as the flow pattern and distribution of wind blowing over a building.

**Differential pressure gauge**: A pressure gauge that will display the difference in pressure between one port on the gauge and the other. Normally placed to measure the difference in pressure between two rooms.

**Dilution by ventilation**: An engineering control technique to dilute and remove airborne contaminants by the flow of air into and out of an area. Air that contains droplet nuclei is removed and replaced by contaminant-free air. If the flow is sufficient, droplet nuclei become dispersed and their concentration in the air is diminished.

**Displacement diffusion**: A directional airflow pattern that provides a single pass air stream. The air should flow from the source over the designed target area and then to exhaust with the least mixing, and therefore creating as little turbulence as possible.

**Displacement diffuser**: Air outlet grill that creates displacement diffusion.
Droplet nuclei: Microscopic particles (1–5 μm in diameter) produced when a person coughs, sneezes, shouts, or sings. The droplets produced by an infectious TB patient can carry tubercle bacilli and can remain suspended in the air for prolonged periods of time and carried on normal air currents in the room.

Ensuite: A patient bathroom with shower, toilet and hand washbasin.

Fomites: Linen, books, dishes or other objects that are used or touched by a patient.

HCW: Health care worker.

High efficiency particulate air (HEPA) filter: A filter that is capable of removing 99.97 per cent of particles 0.3 μm in diameter. Filters may be used in ventilation systems to remove particles from the air, or in personal respirators to filter air before it is inhaled by the person wearing the respirator. The use of HEPA filters in ventilation systems requires expertise in installation and maintenance.

Immuno-suppressed, immuno-compromised: A state in which the immune system is not functioning normally (for example, severe cellular immunosuppression resulting from HIV infection or immunosuppressive therapy).

Infection: The condition in which organisms capable of causing disease (for example, M. tuberculosis) enter the body and elicit a response from the host’s immune defences. TB infection may or may not lead to clinical disease.

Infectious: Capable of transmitting infection.

Negative pressure: The relative air pressure difference between two areas in a health care facility. A room that is at negative pressure has a lower pressure than adjacent areas, which keeps air from flowing out of the room and into adjacent rooms or areas.

Nosocomial infection: A hospital-acquired infection.

Recirculation: Ventilation in which all or most of the air that is exhausted from an area is returned to the same area or other areas of the facility.

RSV: Respiratory syncytial virus.

Self-closing door: A door with a self-closer.

Sputum induction: A method used to obtain sputum from a patient who is unable to cough up a specimen spontaneously. The patient inhales a saline mist that stimulates a cough from deep within the lungs.

Transmission: The spread of an infectious agent from one person to another. The likelihood of transmission is directly related to the duration and intensity of exposure to the pathogen.

Virulence: The capacity of a micro-organism to cause disease.

VRE: Vancomycin-resistant enterococci. Enterococci that are resistant to the antibiotic vancomycin.
Appendix A

DGHDP Standard Components

Room Layout Sheet

Room Name: 1 Bed Room - Isolation - Negative Pressure (Type 1)

Rev. | Revision Description | Date  | Rev. | Revision Description | Date
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1 | DRAFT E1 | 6.25.E3 | 2 | ISSUED | 9.30.E3
3 | REVISION | 11.10.E4

DHEC HEALTH PROJECTS INTERNATIONAL

Sheet: 1 BR-JS-N1
Guidelines for the classification and design of isolation rooms in health care facilities
Guidelines for the classification and design of isolation rooms in health care facilities

Room Name: 1 Bed Room - Isolation - Negative Pressure (Type 3)

ELEVATION 3

ELEVATION 4