

# Risk factors for nosocomial infections

'Nosocomial infection' is an infection caused during or causally related to a hospital stay. <sup>[1]</sup>

 For more information see *Nosocomial Infections*.

Nosocomial infections occur and spread only under certain conditions. The presence of the pathogen, the transmission pathway and the susceptible individual is required.

## Originator

'The causative agent may be the patient's own microflora - 'endogenous nosocomial infections - or the healthcare professional's visit - *exogenous*' 'nosocomial infections.

## Exogenous nosocomial infections

The causative agent of the nosocomial infection was 'introduced into the patient's internal environment from the outside. The source can be hospital staff or visitors.

Transmission occurs most often by *hands* or *contaminated tools*, especially if barrier nursing care is not followed. By this barrier care is meant in particular the "observance of hand hygiene", the use of "protective equipment" (gloves, mouthpieces ...) and the individualization of these equipment.

Another risk may be the underestimation of otherwise banal diseases (pharyngitis ...) both by staff and visits and the transmission of these diseases to the susceptible individual.

## Endogenous nosocomial infections

Endogenous nosocomial infections are infections caused by one of the components of the afflicted *common microflora*, introduced from its natural occurrence to another susceptible individual, usually during surgery or an invasive diagnostic or therapeutic procedure.

The source can also be the microflora, which remains in its natural place but under certain circumstances activates the infectious process.

## Transmission path

It is the transfer of microorganisms from the causative agent to the susceptible individual.

The transmission can be direct or indirect. In '*live transmission*', the receptive individual encounters the originator directly. In '*indirect transmission*', the pathogen does not encounter the susceptible individual directly, it is the transmission by the hands of staff, air or tools or aids.

## Perceptive individual

A susceptible individual is a person with reduced immunity. The underlying disease itself is a risk factor for nosocomial infection. These are especially patients with a "reduced immune response", such as HIV-infected patients or cancer patients. Another risk factor is damage to '*skin or mucous membrane integrity*' (skin injuries or mucous membrane disorders, pressure ulcers ...). *Invasive inputs* - peripheral or central venous catheters, peripheral urinary catheters or invasive airway entries - play a significant role in the development of nosocomial infections. All invasive diagnostic and treatment procedures are a risk factor. Also, *length of hospitalization* 'or' *age* 'predisposes to nosocomial infection.

## Epidemiological aspect

From an epidemiological point of view, we divide nosocomial infections into specific and non-specific.

'*Non-specific*' not only take place in hospitals, but can also spread to other groups in the locality (eg foodborne infections, especially salmonella). br /> "Specific infections" arise only as a result of diagnostic or therapeutic interventions (often inoculation or implantation of agents directly into the tissue, wound, urinary tract, etc .; less often, the infection is spread by droplets or alimentary). These diseases do not produce permanent immunity. They are usually not even portable (with a few exceptions) to people around the patient.

## Links

### Related Articles

- Nosocomial infections

### Used literature

- COOPER, Marek – SOUČEK, Andrej – FRANKOVÁ, Faith, et al. *Medical Microbiology : Bacteriology, virology,*

*parasitology*. 1. edition. Prague : Marvil, 1996. 558 pp. ISBN 8023802976.

- LOBOVSKÁ, Alena. *Infectious diseases*. 1. edition. Prague : Karolinum, 2001. 263 pp. ISBN 80-246-0116-8.
- ONDROVČÍK, Peter – VOTAVA, Miroslav. *Selected chapters from clinical microbiology*. 1. edition. Brno : Masaryk University in Brno, 1998. 90 pp. ISBN 80-210-1805-4.
- BURDA, Patrick – ŠOLCOVÁ, Lenka. *Nursing care : &nbsp; for the field of nursing. &nbsp; 2. part*. 1. edition. -. ISBN 978-80-247-5334-8.

## Reference

1. VOKURKA, Martin – HUGO, Jan., et al. *Great Medical Dictionary*. 10. edition. 2015. 1124 pp. ISBN 978-80-7345-456-2. .