

# Risk factors of nosocomial infections

**Nosocomial infection** is an infection caused during a hospital stay or in a causal connection with this stay. <sup>[1]</sup>

 For more information see *Nosocomial Infections*.

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

## Agent

**The causative agent** may be the patient's own microflora - *endogenous* nosocomial infections - or a healthcare professional or 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 staff hands** or **contaminated instruments**, 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 aids* (gloves, mouthpieces ...) and the individualization of these aids.

Another risk may be the underestimation of otherwise trivial 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 affected person's **normal microflora**, introduced from their 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 **direct transmission**, the susceptible individual directly encounters the originator. 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.

## Susceptible individual

A susceptible individual is a person with reduced immunity. The underlying disease itself is a risk factor for nosocomial infection. These are mainly patients with a **reduced immune response**, such as patients infected with HIV or patients with cancer. 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, the **length of hospitalization itself 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 infections** take place not only in hospitals but can also spread to other groups in the locality (for example alimentary infections, especially salmonella).

**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

## References

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