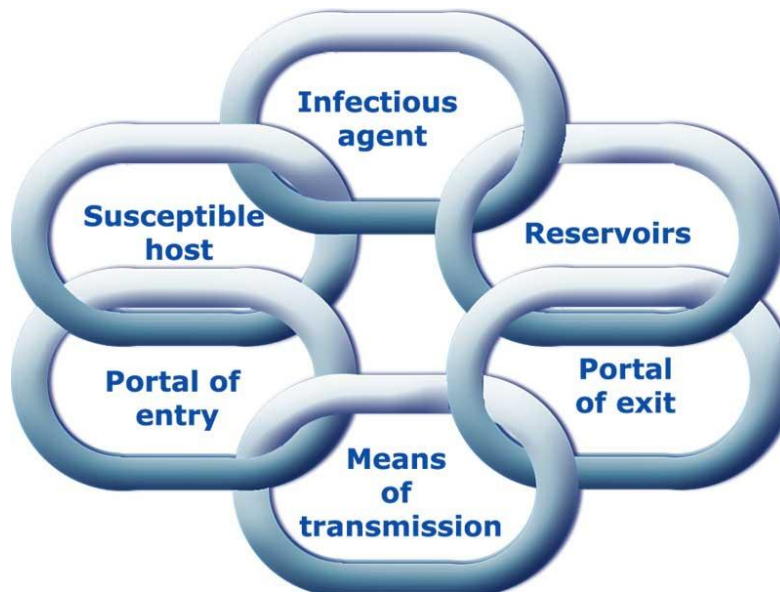


Chain of Transmission



Links in the Chain of Transmission

1. **Infectious agent:** Microorganisms capable of colonizing (living in or on) individuals or causing disease. They include bacteria, viruses, fungi, moulds and parasites.
2. **Reservoir:** The place where the infectious agent lives and reproduces and from which it can be transmitted. These places include people, animals, soil, water, insects, or a combination of these.
3. **Portal of Exit:** The way the agent leaves the reservoir. These include blood, saliva, sputum, nasal secretions, urine, feces, vomit, skin, mucous membrane secretions and excretions, wound drainage and across the placenta from mother to fetus.
4. **Means (Modes) of Transmission:** The way an agent moves from its reservoir to a susceptible host. These include direct and in-direct contact, droplet, airborne, common vehicle, parenteral and vector.
5. **Portal of Entry:** The path by which the agent enters the host. These are the same as the portals of exit. For example, by eating, inhaling, through a cut or contact with a mucous membrane.
6. **Susceptible Host:** A person who lacks effective resistance to the agent. These include the very young, the elderly, unimmunized persons, persons on certain medications and those with underlying illnesses (e.g. cancer) that affect their immune system.

Breaking the Chain of Transmission

When there is an interruption at any of the links, the chain of transmission is broken, preventing the spread of infection. Breaking the chain of transmission may be accomplished through the use of routine practices and additional precautions.

Examples of Breaking Links in the Chain of Transmission

Agent

- Routine cleaning to decrease the number of infectious organisms in the work environment, thus reducing the risk of transmission to others

Reservoir

- An ESW who excludes him/herself from work when experiencing signs or symptoms of a communicable disease

Portal of Exit

- Ensuring draining wounds and non-intact skin of the patient are covered

Mode of Transmission

- Most likely place to interrupt chain of transmission
- Use of routine practices like hand hygiene and use of personal protective equipment (PPE)

Portal of Entry

- Use of PPE to cover portals of entry (e.g. nose, mouth, eyes)
- Ensure any non-intact skin of ESW is covered

Susceptible Host

- Many patients have compromised immune systems, making them very susceptible to infections.
- Diligent use of routine practices and vaccination of ESWs help reduce risk to susceptible hosts/patients

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