Infection prevention in Health Care Logistics

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FINNISH NATIONAL AGENCY FOR EDUCATION

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Definition of infection

- The invasion and multiplication of micro-organisms such as bacteria, viruses, and parasites that are not normally present within the body
- An infection may cause no symptoms and be subclinical, or it may cause symptoms and be clinically apparent
- An infection may remain localized, or it may spread through the blood or lymphatic vessels to become systemic (bodywide)

https://www.youtube.com/watch?v=Rpj0emEGShQ

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What causes infection:

- Infection occurs when infection-causing organisms enter the body, attack tissues, and release toxins
- Organisms can enter through mouth, nose or wounds on the skin, for example
- Infections can also result from health care procedures

Getting an infection

- Direct contact: some, but not all, infections can spread when you come directly into contact with a person who has an infection, whether through touching, kissing, or having sex
- Indirect contact (via surfaces such as doorknobs, taps)
- Through contaminated food or water
- From an infected animal
- From a bug bite

https://ukhealthcare.healthclips.com/Asset/View/WN01804

Symptoms of an infection

- Fever; runny nose; chills; fatigue; loss of appetite; body aches; diarrhea; rashes etc.
- Symptoms of bacterial infections are often present around a wound or break of the skin: inflammation; redness; swelling; warmth and localized pain
- Infection has to be diagnosed and treatment depends of the type of an infection

Hygiene and Asepsis in infection preventio

- Hygienie: all actions that maintain health and purity
- Asepsis: all procedures and actions in order to prevent infections
- Antiseptics: reducing harmful microbes by using antiseptic liquids
- Sterile, sterility: a material free from living germs or micro-organisms
- Aseptic technique: a standardized health care practice that helps prevent the transfer of germs – to protect the patient from infection and to prevent the spread of pathogens
- https://www.youtube.com/watch?v=tHxQAwQAMfY

Hygiene

- Hygiene: every action that promotes and maintains purity and health
- Personal hygiene in health care: taking care of normal daily hygiene, clean hair, avoiding touching nose and mouth, avoiding jewellery, taking care of the skin in hands, not coming to work when feeling sick
- HAND HYGIENE: washing hands and using disinfectant
- https://www.youtube.com/watch?v=G4rQEE8U9zY
- https://www.youtube.com/watch?v=ZG8McwmeUoI

Asepsis and aseptic technique

- Aseptic technique:

- washing hands and using disinfectant
- wearing proper barriers such as gloves, masks, gowns. Barriers are used during medical procedures to protect the patient from contamination that can come from a health care worker, the environment, or both
- acting in a standardized and planned way: if there are patients having an infection, they will be treated latest

Infections caused by given care and treatment

- Meaning infections caused during given care or treatment in Health care
- Such infections increase Health care costs significantly per year nationally
- Example: infections on surgical wounds
- Infections may cause light or severe damage for the patient, even death
- Appeared infections are followed constantly and registered immediately for further actions

Antibiotic resistant microbes

- Bacteria that are not controlled or killed by antibiotics. They are able to survive and even multiply in the presence of an antibiotic. Most infection-causing bacteria can become resistant to at least some antibiotics
- Antibiotic resistance is a serious public health problem.
- Some bacteria that are capable of causing serious disease are becoming resistant to most commonly available antibiotics.
- Antibiotic resistant bacteria can spread from person to person in the community or from patient to patient in hospital.
- Careful infection control procedures can minimize spread of these bacteria in hospitals.
- Good personal hygiene can minimize spread of these bacteria in the community.
- Careful prescribing of antibiotics will minimize the development of more antibiotic resistantant

- The most serious concern with antibiotic resistance is that some bacteria have become resistant to almost all of the easily available antibiotics. These bacteria are able to cause serious disease and this is a major public health problem. Important examples are:

- methicillin-resistant Staphylococcus aureus (MRSA)
- vancomycin-resistant Enterococcus (VRE)
- multi-drug-resistant Mycobacterium tuberculosis (MDR-TB)

Ways to prevent antibiotic resistance

- The most important ways to prevent antibiotic resistance are:

- Minimize unnecessary prescribing and overprescribing of antibiotics. This occurs when people expect doctors to prescribe antibiotics for a viral illness (antibiotics do not work against viruses) or when antibiotics are prescribed for conditions that do not require them
- Complete the entire course of any prescribed antibiotic so that it can be fully effective and not breed resistance
- Practice good hygiene such as hand-washing and use appropriate infection control procedures

Transmission of antibiotic resistance bacteria in hospitals

- The common ways in which bacteria can be passed from person to person include:

- contact with contaminated hands of hospital staff
- contact with contaminated surfaces such as door handles, over-bed tables and call bells
- contact with contaminated equipment, such as stethoscopes and blood pressure cuffs.

Infection control in hospitals

- Standard precautions in hospitals are work practices that provide a basic level of infection control for the care of all people, regardless of their diagnosis or presumed infection status
- These precautions include:
- good personal hygiene, such as hand washing before and after patient contact and the appropriate use of alcohol-based hand rub solutions
- the use of barrier equipment such as gloves, gowns, masks and goggles
- appropriate handling and disposal of sharps (for example, needles) and clinical waste (waste generated during patient care)
- aseptic (sterile) technique.
- implementing standard precautions minimizes the risk of transmission of infection from person to person, even in high-risk situations

References

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