This lecture is created and adapted by the AO Trauma ORP Educational Taskforce. It is to be used as outline for the discussion «Infection control» in the blended learning program for ORP.

*S Althani and Pauline Johnston - Reviewed during ETF meeting July 2019*
The outline of this discussion can only be used for the blended learning course for ORP!
Learning outcomes

• At the end of this discussion you will be able to:
  • Discuss why infection control in OR is important
  • Define SSI
  • Discuss how infection control planning is essential

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1. Infections in orthopedic trauma

Why is this so important in orthopedic trauma?

Discuss with audience. The audience should come up with answers!
Definitions and examples of

• An infection
• A surgical site infection

In the next slides you will discuss together with the audience the definitions of:
• an infection
• a hospital-acquired infection (HAI) also known as a healthcare-associated infection or in medical literature described as a nosocomial infection.
• a surgical site infection.
The participants also come up with examples.
Infection

• What is an infection?
• Give examples.

Discuss with audience. The audience should come up with the answers! The next slide can be used to complete the discussion.
An infection is an invasion by and multiplication of pathogenic microorganisms in body tissues or a part of the body which produces injury and disease through a variety of cellular or toxic mechanisms. Examples are flu, a cold, or wound infections.
Surgical site infection (SSI)

- What is a surgical site infection?
- Give examples.

Discuss with audience. The audience should come up with the answers! The next slide can be used to complete the discussion.
A surgical site infection is a hospital-acquired infection where the microorganisms enter the skin incision made in order to carry out the operation. These infections can be developed at any time starting from two to three days after surgery until the wound has completely healed (usually two to three weeks after the operation).
Facts

- 1/3rd of hospital-acquired infections in surgical patients are SSI.
- 40–60% of SSI are preventable
- 2–5% of operated patients will develop SSI
- SSI increases length of stay in hospital by ~ 7 days

Information for faculty:
- Adapt the figures to your country if possible.
- Show this slide only if you wish.

These are US statistics.
Sources

- Exogenous:
  - Contamination of wound through bacteria from environment:
    - Surgical team
    - Operating room environment
    - Instruments, material

- Endogenous:
  - Contamination of wound through the patient’s own bacterial skin flora

There are two types of sources:
Exogenous sources (the first source) are less common in comparison to endogenous sources (the second source).
Sources

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    - Surgical team
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    - Instruments, material

- Endogenous:
  - Contamination of wound through the patient’s own bacterial skin flora

During this discussion we will focus on the exogenous source, more specific care and maintenance of instruments and implants.

*Discuss with audience care and maintenance of instruments and material and how their actions can influence the infection rate (positive/negative).*
Consequences

Discuss with audience. The audience should come up with the answers! The next slide can be used to complete the discussion.
Consequences

• Discomfort and pain
• Increased antibiotic usage
• Prolonged hospitalization and readmission
• Increased costs (Pt., government, Insurance…)
• Increased mortality

The consequences are:
• Discomfort and pain
• Increased antibiotic usage
• Prolonged hospitalization and readmission
• Increased costs
• Increased mortality
Planning for infection control

1. Identify ORP person responsible for IC in each OR room.
2. Pt preparation including hair removal, skin disinfection, prophylactic Antibiotic, etc.
3. Apply best practice for scrubbing, gowning, gloving and prepping and draping…
4. Proper handling and opening of instruments in OR
5. Maintain the surgical environment in the OR
Summary

• Infection control in OR is important
• SSI is preventable
• Planning is essential in IC

Ask participants to make their own summary as individual or in plenum.