AO In-Hospital for ORP modules

Descriptions and learning objectives

The **AO In-Hospital for ORP** modules are designed to support AO Faculty in organizing **in-house educational sessions** specifically for **operating room personnel (ORP).**

This document gives you, per module,

- A short description
- The learning outcomes
- The available languages
- And some good-to-know information

AO Foundation ORP
Clavadelerstrasse 8 | 7270 Davos | Switzerland
E-mail: orp@aofoundation.org | www.aofoundation.org

Trauma Modules

Trauma Module 1; Introduction

Description

Module one is aimed at giving participants the core knowledge they need about bones, how fractures heal, and the tools and techniques for reducing and fixing fractures. This foundation enables them to understand the surgeon's approach during procedures, ultimately helping them anticipate the surgeon's needs more effectively.

Learning objectives

At the end of the module, the learners will be able to

- Explain basic bone anatomy and healing
- Sum up the four principles of fracture management
- Discuss reduction techniques
- Use the reduction tools available in your hospital correctly and for their purpose

Languages

This module is available in

- English, German, French, Spanish, Dutch, Russian, Greek

Did you know

Each module can be structured independently or grouped with other modules. Module 1, however, aligns particularly well with Module 2, where osteosynthesis using plates and screws is explored.

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Trauma Module 2; Osteosynthesis with plate and screws

Description

Design, formats and functions of screws and plates are explained in this second module. The procedural steps of screw- and plate fixation are described in detail and further discussed in small groups allowing learners to integrate the acquired knowledge into their practice.

Learning objectives

At the end of the module, the learners will be able to

- Discuss the design of different screw- and plate types
- Describe functions which screws perform
- List different functions of plates
- Outline the osteosynthesis with plate and screw step-by-step
- Describe correct use and maintenance of instruments used for osteosynthesis with plate and screws

Languages

This module is available in

- English, German, French, Spanish, Dutch, Greek

Did you know

As screw and plate types and sizes continue to evolve and expand, junior operating room staff may find it challenging to keep up. Combined with the functional changes determined by the surgeon, this makes it even more challenging but therefore a highly engaging and rewarding topic for OR staff when thoroughly understood.

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Trauma Module 3; Osteosynthesis with intra medullary nail

Description

This module focuses on the principles of intramedullary nailing, with a specific emphasis on the procedural aspects of reamed tibial nailing. The technique is demonstrated through a detailed video, followed by small group discussions that enhance understanding. These discussions provide a platform for sharing experiences, addressing challenges, and exploring solutions related to this surgical approach.

Learning objectives

At the end of the module, the learners will be able to

- Describe the use of an intramedullary nail
- Discuss the reduction techniques used for intramedullary nailing and its bone healing
- Outline the step-by-step surgical technique
- Discuss the challenges related to the intramedullary nailing procedures

Languages

This module is available in

- English, German, Dutch

Did you know

A deep understanding of the intramedullary nailing technique is crucial to anticipate to potential changes and pitfalls. This module anticipates this deep understanding of the technique and specific implants used within each hospital while also addressing surgeons' and teams' preferences in line with institutional policies and guidelines. It encourages participants to explore the key factors that contribute to a successful surgery in their own hospital setting. Where is the necessary material located? What are the surgeon's preferences? How does the team work most effectively? This reflective approach fosters a proactive and well-prepared surgical environment.

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Trauma Module 4; Osteosynthesis with cerclage wiring and external fixation

Description

This module covers two key principles and techniques in fracture fixation.
In the first part, the focus is on compression wiring, with an explanation of the principle followed by a discussion on its application techniques—specifically for the olecranon and the patella.

The second section of the module addresses external fixation, concentrating on the use of a modular frame for long bone fractures.

Learning objectives

At the end of the module, the learners will be able to

- Describe the indications for cerclage wiring and external fixation
- Discuss the reduction techniques used for cerclage wiring and external fixation
- Outline the bone healing for cerclage wiring and external fixation
- Outline the step-by-step surgical technique for cerclage wiring and external fixation
- Discuss the challenges related to cerclage wiring and the external fixation procedures

Languages

This module is available in

- English, German, Dutch

Did you know

The module is designed with flexibility in mind and can be easily adapted to include other techniques, such as the application of an external fixator to the foot. The tension band principle is also briefly discussed and its connection to the use of cerclage wires.

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Trauma Module 5; Osteosynthesis of the proximal femur

Description

Fractures of the proximal femur are commonly encountered in fracture care. A variety of surgical techniques and implant options are available. This module presents these options in a way that allows the content to be easily adapted to the specific needs of your audience.

Learning objectives

At the end of the module, the learners will be able to

- Describe the importance of blood supply for hip fractures
- Discuss choice of implant and procedure
- Explain the importance of positioning, reduction and perioperative sterility
- Outline the surgical procedure step-by-step
- Discuss challenges and how these can be avoided

Languages

This module is available in

- English

Did you know

This module includes a range of fixation techniques and can be easily expanded into a session lasting several hours or even a half-day event. It complements the third module, which covers the principles of intramedullary nailing. Together, these modules form a comprehensive one-day program designed to enhance the audience's knowledge and understanding of fracture fixation techniques.

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Trauma Module 6; Implant removal

Description

Implant removal can range from a straightforward procedure to a more complex surgical challenge. This module explores not only the reasons ("why") and techniques ("how") behind implant removal but also highlights the potential intraoperative difficulties that may arise. Possible solutions are presented, and the module encourages open discussion to share experiences and strategies.

Learning objectives

At the end of the module, the learners will be able to

- Outline the role of ORP in planning for implant removal
- Discuss what is required to remove broken and damaged implants
- Bring solutions for difficult implant removal

Languages

This module is available in

- English

Did you know

Effective anticipation by operating room personnel during challenging implant removals is crucial in supporting the surgeon. This level of preparedness is only possible when scrub nurses and runners are given the opportunity to optimally prepare. It begins with a clear understanding of who the patient is, why the implant is being removed, which implant is used and what the procedure involves. With this knowledge, the operating room team can proactively plan for potential complications, ultimately contributing to a more efficient surgery and reduced operating time.

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Trauma Module 7; Infection control

Description

Maintaining low infection rates is essential in all types of surgery, but it is especially critical in orthopaedic trauma surgery. This topic is of paramount importance to every surgical team. Through this module, participants are encouraged to engage in open discussions aimed at identifying current challenges within the operating room and collaboratively exploring effective solutions.

Learning objectives

At the end of the module, the learners will be able to

- Explain the difference between surgical site infections (SSI) and fracture related infections (FRI)
- Describe potential consequences of FRI
- Discuss how to implement best practice to avoid SSI
- Critically review personal behaviour

Languages

This module is available in

- English

Did you know

Ideally, this module is organized as an interdisciplinary session, involving professionals such as an infection control nurse from the department or hospital. Inviting other members of the surgical team encourages broader discussion and deeper insight. Alternatively, the module can be tailored for a more focused session with operating room staff only, concentrating on topics specifically relevant to their roles and daily practice.

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Vet Modules

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Description

Module one is aimed at giving participants the core knowledge they need about bones, how fractures heal, and the tools and techniques for reducing and fixing fractures. This foundation enables them to understand the surgeon's approach during procedures, ultimately helping them anticipate the surgeon's needs more effectively.

Learning objectives

At the end of the module, the learners will be able to

- Explain basic bone anatomy and healing
- Sum up the four principles of fracture management
- Discuss reduction techniques
- Use the reduction tools available in your hospital correctly and for their purpose

Languages

This module is available in

- English, German

Did you know

Each module can be structured independently or grouped with other modules. Module 1, however, aligns particularly well with Module 2, where osteosynthesis using plates and screws is explored.

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Vet Module 2; Osteosynthesis with plate and screws

Description

Design, formats and functions of screws and plates are explained in this second module. The procedural steps of screw- and plate fixation are described in detail and further discussed in small groups allowing learners to integrate the acquired knowledge into their practice.
This module discusses the same principles as the Vet Module 1, but lays focus on animal cases and specifications.

Learning objectives

At the end of the module, the learners will be able to

- Discuss the design of different screw- and plate types
- Describe functions which screws perform
- List different functions of plates
- Outline the osteosynthesis with plate and screw step-by-step
- Describe correct use and maintenance of instruments used for osteosynthesis with plate and screws

Languages

This module is available in

- English

Did you know

As screw and plate types and sizes continue to evolve and expand, junior operating room staff may find it challenging to keep up. Combined with the functional changes determined by the surgeon, this makes it even more challenging but therefore a highly engaging and rewarding topic for OR staff when thoroughly understood.

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