

## SISTRESSREA training

### TRAINING OBJECTIVES:

Enable the participants:

- to improve healthcare and safety
- to update theory necessary for clinical reasoning /decision-making and for patient care in adult ICUs
- to acquire and develop defined skills (see ICU nurse competency dictionary).
- to develop a reflective approach.

### TEACHING PROGRAM:

Training duration: 5 days.

**Day 1 (7h): a patient with circulatory failure.**

#### ***Teaching objectives:***

- Recognize clinical and non-clinical signs of circulatory failure.
- Assess the severity.
- Take precautionary measures while waiting for the physician to arrive.

#### ***Contents:***

- Welcome: presentation of training instructors and trainees, note expectations, presentation of the course.
- Arterial blood pressure and its components.
- Recognition of heart rhythm disorders.
- Different types of shock.
- Parameters for hemodynamic monitoring.
- Different types of IV catheters.

#### ***Teaching method and tools used:***

- Test on prerequisites (multi-choice)
- Interactive teaching.
- Scientific, theoretic and methodological information.
- Audiovisual and paper support documents.
- Practical workshops.

## Day 2

### ▪ Morning (4h): a patient with respiratory failure (1)

This step must enable each participant to care for a patient with respiratory failure.

#### **Teaching objectives:**

- Recognize clinical and paraclinical signs of respiratory failure.
- Assess the severity and take precautionary measures while waiting for the physician to arrive.
- Anticipate medical treatment.

#### **Contents:**

- Anatomical & physiological recap on respiratory function.
- Principles and interests of monitoring respiratory functions: pulse oximetry and capnography.
- Intubation and difficult intubation procedures according to scientific societies' recommendations.

#### **Teaching method and tools used:**

- Interactive teaching.
- Scientific, theoretic and methodological information.
- Audiovisual and paper support documents.
- Practical workshops.

### ▪ Afternoon (3h): 1 Role-play using an adult high-fidelity simulator

#### **Teaching objectives:**

- Emergency care of a patient suffering from severe hemodynamic failure.
- Improve clinical reasoning and root acquired knowledge.

#### **Teaching method and tools used:**

- Briefing – duration 30min: presentation of the simulation lab, of the high-fidelity manikin and the clinical case.
- Simulation – duration of scenario 20 min - Theme: hemorrhagic shock.
- Debriefing for 2h:
  - ▶ descriptive phase : simulation experience, sensations (emotions, feelings),
  - ▶ analysis phase adapted to teaching objectives: reflective process constructed using the SCAR (Situation, Context, Analysis/actions, Recommendations) communication technique,
  - ▶ watching the video recording to analyze people's behavior and the relational aspect (human factors)
  - ▶ summary phase on axes for improvement

### Day 3

#### ▪ Morning (4h): a patient with neurological failure

This step must enable each participant to care for a patient with neurological failure.

#### **Teaching objectives:**

- Understand the pathophysiology of head injuries.
- Identify aggravating factors of neurological failure and take precautionary measures.
- Recognize the clinical signs of intracranial hypertension and know the different monitoring techniques.
- Explain the objectives and risks of sedation.
- Define requirements for monitoring a sedated patient.
- Detail the main types of invasive mechanical ventilation.
- Know the procedure for ventilator alarms according to the type of ventilator and ventilation mode.

#### **Contents:**

- Monitoring a patient with neurological failure.
- Sedation in critical care.
- Mechanical ventilation: practices and risks.

#### **Teaching method and tools used:**

- Interactive teaching.
- Scientific, theoretic and methodological information.
- Audiovisual and paper support documents.
- Practical workshops.

#### ▪ Afternoon (3h): 2 Role-play using an adult high-fidelity simulator

#### **Teaching objectives:**

- Care for respiratory distress.
- Emergency care of a patient with neurological failure.
- Improve clinical reasoning and root acquired knowledge.

#### **Teaching method and tools used:**

- Briefing – duration 5min: presentation of the clinical case.
- Simulation no.1 - theme: acute severe asthma.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.
- Simulation no.2 - theme: convulsive seizure.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.

## Day 4

- **Morning (4h): a patient under cardiac arrest and a patient with respiratory failure (2)**

This step must enable each participant to care for a patient under vascular arrest and a patient with respiratory failure.

### **Teaching objectives:**

- Name the main etiologies, mechanisms and recognize clinical signs of cardiac arrest.
- Start basic cardio-pulmonary resuscitation (C.P.R.) in compliance with scientific societies' recommendations.
- Anticipate automated C.P.R. in compliance with scientific societies' recommendations.
- Practice of chest compression and artificial ventilation. Use of a defibrillator.
- Detail the main ventilation modes of invasive mechanical ventilation.
- Know the procedure for ventilation alarms according to the type of ventilation.

### **Contents:**

- Care for cardiac arrest according to the latest recommendations.
- End-of-life issues

### **Teaching method and tools used:**

- Interactive teaching.
  - Scientific, theoretic and methodological information.
  - Audiovisual and paper support documents.
  - Practical workshops.
- **Afternoon (3h): 2 Role-play using an adult high-fidelity simulator**

### **Teaching objectives:**

- Care for severe hemodynamic failure.
- Improve clinical reasoning and root acquired knowledge.

### **Teaching method and tools used:**

- Briefing – duration 5min : presentation of the clinical case.
- Simulation no.1 - theme: pancreatitis and hypokalemia.
  - Duration of scenario 15 min.
  - Debriefing for 1h – see procedure Day 2.
- Simulation no.2 - theme: anaphylactic shock (grade 3).
  - Duration of scenario 15 min.
  - Debriefing for 1h – see procedure Day 2.

## Day 5 (7h): Role-play using a high-fidelity simulator

### **Teaching objectives :**

- Care for circulatory failure.
- Care for respiratory failure.
- Care for neurological failure.
- Care for a cardiac arrest.
- Improve clinical reasoning and root knowledge acquired throughout the training course.

### **Teaching method and tools used:**

- Simulation no.1 - theme: tension pneumothorax.
  - o Briefing for 5min : presentation of the clinical case.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.
- Simulation no.2 - theme: ventilation disorders in a patient suffering from ARDS.
  - o Briefing for 5min : presentation of the clinical case.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.
- Simulation no.3 - theme: cardiac arrest (Ventricular fibrillation).
  - o Briefing for 5min : presentation of the clinical case.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.
- Simulation no.4 - theme: drug poisoning.
  - o Briefing for 5min : presentation of the clinical case.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.
- Simulation no.5 - theme: cardiac arrest (including end-of-life issue).
  - o Briefing for 5min : presentation of the clinical case.
  - o Duration of scenario 15 min.
  - o Debriefing for 1h – see procedure Day 2.

### **Training course assessment:**

Acquired knowledge will be tested (same multi-choice test as for prerequisites) and corrected with the group.

The level of teaching and training objectives reached as well as the quality of the work done during the simulation sessions will be measured using an individual questionnaire, proposed at the end of the day.