



Refresher Course XI

Resuscitation in the Emergency Department

Title	Refresher Course XI - Italy 2019 <i>Resuscitation in the Emergency Department</i>
Organisers	<ul style="list-style-type: none">- Young Emergency Medicine Doctors (YEMD – EuSEM Section);- Coordinamento degli Specializzandi in Medicina d’Emergenza-Urgenza (CoSMEU);
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Background	Critical care in the emergency department is a complex and evolving area of emergency medicine often overlooked within our national training systems. The lack of set competences and learning targets within EM national curriculums jeopardizes the training across Europe and EM residents face major difficulties in developing an effective awareness on their competence progression.
Goals	To provide the Emergency Medicine trainees attending the course with theoretical and practical elements regarding the management of the critically ill patient in the ED.



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Course organisation overview	<p>Workshops: a breakdown of the key aspects of the care of the critically ill patient in the emergency setting. The workshops will focus on specific theoretical, practical and behavioural competencies that entail numerous aspects of emergency critical care. Participants will be divided in small groups (5 people) and rotate through 10 stations lasting approximately 60 min each.</p> <p>Simulation: a whole day high fidelity simulation that will be focusing on the practical application of the competences explored during the first 2 days of training. In this setting, a specific attention will be dedicated to Human Factors and Group Dynamics that concur to the achievement of successful resuscitation introducing the key concepts of Crisis Resource Management.</p> <p>Keynote lecture: A keynote lecture will be hosted on the morning of the last day.</p>
Number of participants	45
Faculty	2 per workshop station (20 in total)
Ideal Trainee: Tutor ration (Workshop sessions)	5:1 (5 trainees per workshop at time)
Target	Emergency medicine trainees member of YEMD or eligible for YEMD membership.
Location	Università Degli Studi di Firenze, Largo Brambilla 3 Florence, Italy
Course dates	24 - 25 - 26 - 27 May 2019
Course Duration	4 days



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Workshops topics	<ol style="list-style-type: none">1. Airway management in the critically ill patient <i>J Van Schoor; S Sartini</i>2. Beyond ALS, Post-ROSC management of the patient in cardiac arrest <i>B Harris; A Coppa</i>3. Human Factors and Group Dynamics <i>M Bonsano; s Ingrassia</i>4. Major Trauma management, Massive haemorrhage and Damage Control Resuscitation <i>M Nelson; S Sawh</i>5. Integrated ultrasound in the critically ill patient <i>A Lamorte; L Bonacchini</i>6. Retrieval and transport of the critically ill patient - a HEMS prospective <i>E Colonetti; G Magagnotti</i>7. Vascular access in the critically ill patient <i>N Bacciottini; M Borselli</i>8. Chest drain insertion and management <i>J Davidson; S Geniere Nigra</i>9. Paediatric emergencies <i>S Salvadei, A Nucci, M Giacalone</i>10. Obstetric and neonatal emergencies <i>A Asrow; S Giovinale</i>
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Draft Agenda	<p>Day 1</p> <p>14:00 – 15:00 Course introduction</p> <p>15:00 – 18:00 Workshop sessions</p> <p>Day 2</p> <p>09:00 – 13:00 Workshop sessions</p> <p>13:00 – 14:00 Lunch</p> <p>14:00 – 17:00 Workshop sessions</p> <p>Day 3 – Simulations h 9:00 - 18:00</p> <p>Group A</p> <p>Group B</p> <p>Group C</p> <p>Day 4 – Clinical Lectures: Focus on Trauma h 09.00-10.40</p> <ul style="list-style-type: none">• Prehospital management of the major trauma patient - the HEMS prospective <i>E. Colonetti</i>• Special Mountains Emergencies <i>A. Lamorte</i>• Major Haemorrhage Management in Trauma - Which fluids, how much and why? <i>S Sawh</i>• Beyond trasfusion: integrated resuscitation strategies in shock room <i>S. Geniere Nigra</i>• Trauma Team Approach <i>M. Nelson</i> <p>h 10.40-11.00 Coffee break</p>
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	<p>h 11.00-12.30 Lectures</p> <ul style="list-style-type: none">● Emergency Medicine Day, what does it mean for us? Rector of the University of Florence EuSEM Authority YEMD Representative ACEP Italian Ambassador <p>h 12.30-13.00</p> <ul style="list-style-type: none">● Conclusions YEMD Authority CoSMEU Authority
Endorsements	European Society of Emergency Medicine (EuSEM) University of Florence



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APPENDIX 1 - Workshop contents and learning objectives

	Workshop	Faculty	Learning objectives
1	Airway management in the critically ill patient		<p>The workshop aim is to focus on the knowledge, skills and attitudes required to safely manage the airway and post-intubation period in an emergency situation outside the operating theatre, such as rapid sequence induction in the ED resuscitation room.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none">- RSI- Difficult and failed airway- Post intubation care- Surgical airway skills- Human factors in airway management

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2	Beyond ALS and Post-ROSC management of the patient in cardiac arrest		<p>ACLS provides us with a framework in treating adult victims of Cardiac Arrest (CA) or other cardiopulmonary emergencies. As ED Physicians, while approaching a patient in CA, we get minimal information at the time of patient arrival while at the same time the disease process that is taking place has not quite defined itself. Our job therefore should be to ensure coronary and cerebral perfusion are at their highest quality, but also simultaneously putting the pieces of the puzzle together to figure out why our patient is in CA.</p> <p>Depending on the cause of the arrest, and the severity of the postcardiac arrest syndrome, many patients will require multiple organ support and the treatment they receive during this postresuscitation period influences significantly the overall outcome and particularly the quality of neurological recovery.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none"> - Review of principal ALS algorithm with regards to arrest and peri-arrest clinical scenarios; - Cognitive offload in resuscitation care; - PEA workup; - ECLS; - Elements of post cardiac arrest syndrome - Effective oxygenation and ventilation in post-ROSC patient - Circulatory support - Neurological disability prevention - Temperature Target Management (TTM) - Prognostication
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3	Human Factors and Group Dynamics		<p>Human error is one of the major threats to successful resuscitation. Managing a critical patient involves a number of challenges, most of which go beyond technical skills. Working up a diagnostic and therapeutic plan while coordinating your team, performing under pressure, being able to take action putting together all the relevant information, allocating tasks according to your team members capabilities. An array of non-technical qualities are required to be an effective team leader as well as a good team member. This workshop will give an insight to all the soft skills required to be a successful resuscitator.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none"> - Overview of the components of CRM - Group debriefing and feedback - Handover - Leadership and Fellowship
4	Major Trauma, Massive haemorrhage and Damage Control Resuscitation		<p>Aim of the workshop is to provide with an overview of the initial management of the major trauma in the resuscitation room. A systematic approach to complex clinical situation aiming to highlight the differences in the diagnosis and management of specific issues relate to the polytraumatized patient. In deaths from trauma, exsanguination accounts for over 50% of those deaths. We know that patients nearly 30% of patients who arrive in the ED with major trauma will already be coagulopathic and this is associated with a poor outcome. There is a clear direct relationship between Injury Severity Score and Coagulopathy and with mortality.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none"> - Airway protection - Respiration and chest trauma - Massive haemorrhage control - Head Injury - Traumatic cardiac arrest - Trauma Induced Coagulopathy and viscoelastic testing (TEG, ROTEM) - Techniques of endovascular resuscitation (i.e. REBOA)



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5	Integrated ultrasound in the critically ill patient		<p>A rapid identification of the causes of hemodynamic instability or cardiac arrest is crucial for correct treatment. In a critical care setting, ultrasound seems to be an ideal tool for a rapid diagnosis. A multiple-goal problem-based approach represents the main peculiarity of emergency ultrasound and may be considered an extension of physical examination. The integration of data that can rapidly be obtained from the heart, lung, inferior vena cava, abdomen and leg vein examination are often essential for the diagnosis and treatment in critically ill patients.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none">- Integrated approach to the hypotensive/ shocked patient (RUSH Protocol)- Acute respiratory failure and dyspnea- ECHO in Cardiac arrest
6	Retrieval and transport of the critically ill patient - a HEMS prospective		<p>Primary retrievals involve treatment of the patient at the scene of an incident, and transport to an appropriate receiving facility. Some services may undertake 'modified primaries' where the patient is retrieved from a (usually rural) healthcare facility where minimal or no intervention has taken place prior to the arrival of the retrieval team. Secondary (Interhospital) transfers are between hospitals. Intrahospital transfers take place within an institution (e.g. from ICU to CT).</p> <p>Areas to be covered:</p> <ul style="list-style-type: none">- Assessing a critically ill patient prior to transfer- Specific transfer physiology- Transfer equipment- Inter hospital and intra-hospital transfer- Preparing and transferring a patient in helicopter and ambulance- Transport troubleshooting



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7	Vascular access in the critically ill patient		<p>Achieving a vascular access can be an extremely difficult and lifesaving procedure in critical care.</p> <p>Peripheral, central and intraosseous accesses are all potential strategies to commence an infusion or the administration of specific drugs.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none">- Overview of infusion strategies- US guided peripheral vascular access- Central line insertion (IJV, Femoral, Subclavian)- Intraosseous access- Troubleshooting and complication management
8	Chest drain insertion and management		<p>Analysis of complex clinical cases involving an array of chest pathology discussing diagnostic methodologies and initial management. In this workshop, trainees will review the indication and insertion techniques of different thoracic drains, postprocedural care and complication management.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none">- Traumatic and non-Traumatic pathology of the chest and role of ultrasound- Chest drain insertion (Seldinger)- Surgical chest drain- Complications management and troubleshooting

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9	Paediatric emergencies	<p>Approach and initial management to the critically ill paediatric patient. An analysis of complex clinical cases discussing diagnostic methodologies and therapeutic strategies.</p> <p>The causes of cardiorespiratory arrest in children differ from those in adults in that most paediatric arrests arise from decompensated respiratory or circulatory failure (i.e. they are predominantly secondary cardiorespiratory arrests). Although in adulthood, primary arrests resulting from arrhythmias are more common, many young adults have similar causes to children (e.g. trauma, drowning and poisoning), meaning that respiratory failure is also common in this population.</p> <p>Areas to be covered:</p> <ul style="list-style-type: none"> - Review of APLS algorithms - Paediatric airway management - Ventilation strategies in paediatric patients - Paediatric trauma
10	Obstetric and Neonatal Emergencies	<p>Adverse events during delivery are still an important cause of neonatal mortality and morbidity.</p> <p>Immediate care provided immediately after birth it's critical to decide the outcome of the newborn and is pivotal that all the interventions are delivered in an effective fashion.</p> <p>Aim of the workshop is to review the skills required to recognise, respond to, and manage, maternal, fetal and neonatal deterioration and emergency situations. Areas to be covered:</p> <ul style="list-style-type: none"> - approach the management of a newborn infant during the first 10-20 minutes in a competent manner - understand the processes underlying apnoea, bradycardia and poor condition at birth - deliver practical airway management and ventilatory support. - Ante/peri/post-partum Haemorrhage - Eclampsia and pre-eclampsia - Maternal collapse