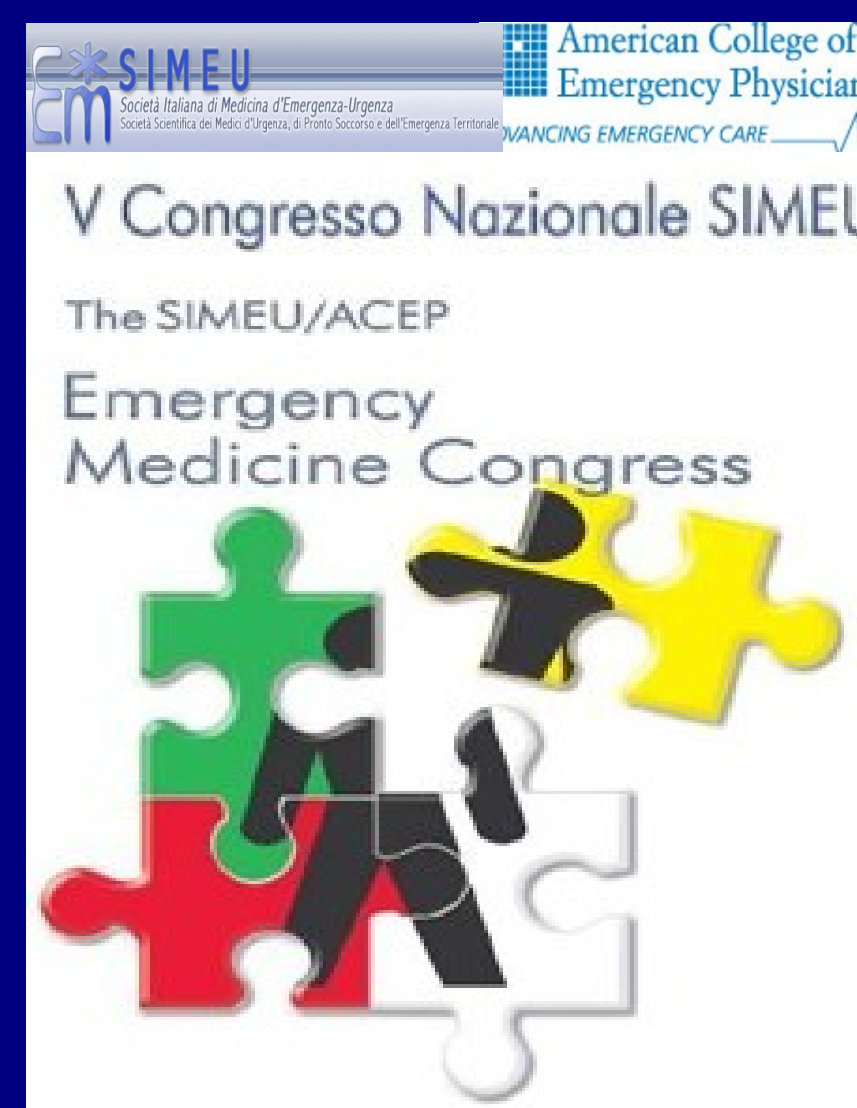


NRP NEWBORN RESUSCITATION PROGRAMME (USA) VERSUS NLS NEWBORN LIFE SUPPORT (EUROPE): TWO METHODS/COURSES OF NEONATAL RESUSCITATION



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Introduction. After the International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science With Treatment Recommendations was published (Circulation 2005;112:III-91-III-99), each Resuscitation Council belonging to ILCOR was charged with developing resuscitation guidelines appropriate for the health care resources existing in its own region of the World, but based on the scientific principles defined by CoSTR. The aim of this study is to compare the Newborn Resuscitation Program (NRP) and the Newborn Life Support (NLS) courses based on the guidelines of AAP/AHA NRP Steering Committee and European Resuscitation Council (ERC), respectively.

Materials and Methods. We compared NRP course based on AAP/AHA NRP Steering Committee neonatal resuscitation guidelines published in Circulation 2005;112:IV-188-IV-195 and NLS course based on European Resuscitation Council Guidelines published in Resuscitation 2005; 67:51,S97-S133. Since each one is referring to the current CoSTR for Neonatal Resuscitation published in Resuscitation 2005;67:293-303, we followed CoSTR format to evaluate both courses. We focused on clearing the airway, supplementary oxygen, peripartum management of meconium, ventilation strategies, exhaled CO2 detectors to confirm tracheal tube position, drugs, temperature control, and withholding or discontinuing resuscitative efforts.

Results. Suction: the NRP initial steps are to provide clearing the airway with a bulbe syringe or suction catheter, while NLS limited suction only if there is particulate matter or blood obstructing the airway and if suction is required, it is best done under direct vision. Supplementary oxygen: NRP and NLS warn about the potential damages caused by hyperoxia; while NRP suggests to use a blender and a pulse oximeter (chiefly in premature infants) NLS does not provide technical aids to solve this issue; NRP allows room air during resuscitation for a maximum of 90 sec before providing supplementary oxygen if there is no appreciable improvement. Peripartum meconium management, drugs, exhaled CO2 detectors, temperature control, devices to achieve effective ventilation(T-piece) and withholding or discontinuing resuscitative efforts: both courses give the similar informations. Ventilation strategies: NLS suggest 5 initial breaths, initial peak inflating pressure of 30 cm H₂O, inflation time 2-3 sec, then re-evaluation of heart rate, followed by regular breaths at a rate of 30-40/minute; NRP suggests of 30-40 cm H₂O, inflation time undefined, rate of 40-60/min, re-evaluation of heart rate after 30 sec; NLS, and not NRP, suggests chin lift or jaw thrust manouvre to open the airway of a neonate with not increasing hear rate and not rising chest wall.

Conclusions. NRP and NLS are based on the same CoSTR, however they show pretty significant differences in airway and ventilation managements of the newborn. Since lung ventilation seems to be pivotal in newborn cardiopulmonary resuscitation, health care providers should be aware of these differences in order to strengthen their resuscitation skills.

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