From HEMS to SAR, from sea to mountains, from urban to combat, a thorough Congress. This is Remote.
SIAARTI HEMS GUIDELINES
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EDITORIAL

The monopolisation of emergency medicine in Europe: the flipside of the medal

Edoardo De Robertis, Bernd W. Böttiger, Eldar Søreide, Jannicke Mellin-Olsen, Lorenz Theiler, Kurt Ruetzler, Jochen Hinkelbein, Luca Brazzi, Karl-Christian Thies, on behalf of the ESA/EBA taskforce on Critical Emergency Medicine
In most countries, CREM is seen as a natural extension of the anaesthesiologist’s role in the operating room and the ICU. At the same time, it is important to understand that anaesthesiologists are only experts in dealing with critical (immediately life-threatening) emergency conditions.

_Eur J Anaesthesiol_ 2017; 34:251–253
Today, anaesthesiologists are the best trained experts available to take responsibility for critical emergencies and coordinating activities of other specialists, as they do on a daily basis in the operating room environment. This should also be reflected in national training programmes as suggested by the European Board of Anaesthesiology in its emergency medicine curriculum proposal\textsuperscript{10} and in training requirements for the speciality of anaesthesiology, pain and intensive care medicine.\textsuperscript{11}
Review

A systematic review of the costs and benefits of helicopter emergency medical services

Colman B. Taylor\textsuperscript{a,*}, Mark Stevenson\textsuperscript{a,b}, Stephen Jan\textsuperscript{a,b}, Paul M. Middleton\textsuperscript{d}, Michael Fitzharris\textsuperscript{e,f}, John A. Myburgh\textsuperscript{a,c}

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\textit{Interpretation:} The cost and effectiveness of HEMS varied considerably between studies. Despite generally being more expensive than ground transport, a number of studies found HEMS to be cost-effective. However, given the variation in the intervention design, context and study methods between studies it was not possible to assess the cost-effectiveness of HEMS in general. Given the variation inherent in the health systems in which HEMS operate, synthesis and extrapolation of study findings across differing health environments is difficult. To address economic and clinical evidence in relation to HEMS, future research that is tailored to account for local system factors is required.
Italian law
Provisions on the safety and treatment of the assisted person and on professional responsibility of health professionals

LEGGE 8 marzo 2017, n. 24
Disposizioni in materia di sicurezza delle cure e della persona assistita, nonché’ in materia di responsabilità professionale degli esercenti le professioni sanitarie.

(17G00041) (GU n.64 del 17-3-2017)
Procedure per la proposta di inserimento di linee guida nel Sistema Nazionale Linee Guida
Manuale metodologico per la produzione di linee guida di pratica clinica

https://snlg.iss.it
**Evidence synthesis (SR, HTA)**

1. **PICO**
   - **Outcome**: Critical
   - **Outcome**: Important
   - **Outcome**: Not important

2. **Outcomes across studies**

3. **Create evidence profile with GDT**

4. **Randomization raises**
   - **initial quality**
   - **RCTs**: high
   - **Observational low**

5. **EID framework with GDT**

6. **Guideline/Decision**

**Recommendation/Decision**

- **Grade recommendations (Evidence to Decision)**
  - For or against (direction)
  - Strong or conditional/weak (strength)

- By considering balance of consequences (evidence to recommendations)
  - Quality of evidence
  - Balance benefits/harms
  - Values and preferences
  - Feasibility, equity, and acceptability
  - Resource use (if applicable)

**Formulate Recommendations/Decision**

- The panel recommends that... should...
- The panel suggests that... should...
- The panel suggests to not...
- The panel recommends to not...

**Transparency, clear, actionable research?**
evidence that there are some data upon which to base determinations as to how to appropriately use HEMS. The argument that “there’s no evidence” can no longer be accepted as a basis for failure to establish guidelines for utilization of the HEMS resource.
- HEMS Model
- Time sensitive pathologies
- Medical team composition
- Training and retraining
- Medical equipment and drugs
- Technical equipment
Mobile Intensive Care Unit

Medical standardization
Time-sensitive pathologies
Time sensitive

Time  
Anticipation = continuity of care  
Timing
Helicopter Emergency Medical Services (HEMS): Impact on On-Scene Times

Akkie N. Ringburg, MD, Willem R. Spanjersberg, MSc, Sander P. G. Frankema, MD, Ewout W. Steyerberg, PhD, Peter Patka, MD, PhD, and Inger B. Schipper, MD, PhD

J Trauma. 2007;63:258–262.

Time - Timing
Continuity of care
Trauma team activation
Direct access to operating room

- **Indications:**
  - Unstable abdominal trauma FAST+
  - Unstable penetrating trunk trauma
  - Neck penetrating trauma and airway obstruction
  - Thoracic trauma with severe hypotension
Quality
Pre-hospital advanced airway management by anaesthetist and nurse anaesthetist critical care teams: a prospective observational study of 2028 pre-hospital tracheal intubations

M. Gellerfors\textsuperscript{1,2,3,4,*}, E. Fevang\textsuperscript{5,6}, A. Bäckman\textsuperscript{7}, A. Krüger\textsuperscript{5,8}, S. Mikkelsen\textsuperscript{9}, J. Nummi\textsuperscript{10,11}, L. Rognås\textsuperscript{12}, E. Sandström\textsuperscript{13}, G. Skallsjö\textsuperscript{14}, C. Svensén\textsuperscript{1,3}, D. Gryth\textsuperscript{15,16} and H. M. Lossius\textsuperscript{5,17}

Conclusions: When performed by experienced physician anaesthetists and nurse anaesthetists, pre-hospital tracheal intubation was completed rapidly with high success rates and a low incidence of complications.
The success of pre-hospital tracheal intubation by different pre-hospital providers: a systematic literature review and meta-analysis

K. Crewdson¹,², D. J. Lockey¹,²,³, J. Røislien⁴, H. M. Lossius³,⁴ and M. Rehn¹,³,⁴

Discussion: The reported overall success rate of pre-hospital intubation has improved, yet there is still a significant difference between non-physician and physician providers. The finding that less-experienced personnel perform less well is not unexpected, but since there is considerable evidence that poorly performed intubation carries a significant risk of morbidity and mortality careful consideration should be given to the training and experience required to deliver this intervention safely.
Function (work as imagined) → Success (no adverse events)

Malfunction (non-compliance, error, violation) → Failure (accidents, incidents)

Acceptable outcomes

Unacceptable outcomes
**Function** (work as imagined)

**Everyday work** (performance variability)

**Malfunction** (non-compliance, error, violation)

**Success** (no adverse events)

**Failure** (accidents, incidents)

Acceptable outcomes

Unacceptable outcomes
Training
• Teamwork
• Taskwork
Expertise vs experience

Non technical skills
Equipment

• Care strategy
• Clinical competence
Technical Equipment
Gaps of knowledge

Need of research
Thank you