

Luftvägshantering vid HLR – något nytt?

P Sundin
Narkosläkare
Akutläkarbil Mitt
Cario Läkarbilar AB

Överläkare
Op- och Intensivvårdskliniken
Länssjukhuset Ryhov, Jönköping

Luftvägshantering vid HLR – något nytt?

INTE MYCKET!

Luftvägshantering vid HLR – något nytt?

TACK!

Kvalitetskrav på luftvägshantering vid HLR – något nytt?

Kvalitetskrav på luftvägshantering vid HLR – något nytt?

JA!

ALS 2021



5 TOP MESSAGES

1. High-quality chest compression with minimal interruption, early defibrillation, and treatment of reversible causes remain the priority
2. Premonitory signs and symptoms often occur before cardiac arrest in- or out-of-hospital - cardiac arrest is preventable in many patients
3. Use a basic or advanced airway technique - only rescuers with a high success rate should use tracheal intubation
4. Use adrenaline early for non-shockable cardiac arrest
5. In select patients, if feasible, consider extracorporeal CPR (eCPR) as a rescue therapy when conventional ALS is failing

New ERC Guide

New

Airway and ventilation

- During CPR, start with basic airway techniques and progress stepwise according to the skills of the rescuer until effective ventilation is achieved.
- If an advanced airway is required, rescuers with a high tracheal intubation success rate should use tracheal intubation. The expert consensus is that a high success rate is over 95% within two attempts at intubation.
- Aim for less than a 5s interruption in chest compression for tracheal intubation.
- Use direct or video laryngoscopy for tracheal intubation according to local protocols and rescuer experience
- Use waveform capnography to confirm tracheal tube position.

New

Airway and ventilation

- During CPR, start with basic airway techniques and progress stepwise according to the skills of the rescuer until effective ventilation is achieved.
- If an advanced airway is required, rescuers with a high tracheal intubation success rate should use tracheal intubation. The expert consensus is that a high success rate is over 95% within two attempts at intubation.
- Aim for less than a 5s interruption in chest compression for tracheal intubation.
- Use direct or video laryngoscopy for tracheal intubation according to local protocols and rescuer experience
- Use waveform capnography to confirm tracheal tube position.

New

Airway and ventilation

- During CPR, start with basic airway techniques and progress stepwise according to the skills of the rescuer until effective ventilation is achieved.
- If an advanced airway is required, rescuers with a high tracheal intubation success rate should use tracheal intubation. The expert consensus is that a high success rate is over 95% within two attempts at intubation.
- Aim for less than a 5s interruption in chest compression for tracheal intubation.
- Use direct or video laryngoscopy for tracheal intubation according to local protocols and rescuer experience
- Use waveform capnography to confirm tracheal tube position.

Anyone can intubate.....

https://www.bing.com/search?q=anyone+can+intubate%27&q&s=n&form=QBRE&sp=-1&ghc=1&pq=anyone+can+intubate%27&sc=2-20&sk=&cvid=D6E23040696640E5A...

anyone can intubate'



English

Pierre

Rewards

ALLA

BILDER

VIDEOKLIPP

KARTOR

NYHETER

SHOPPING

Skaffa Wallpaper-appen

93 100 000 Resultat

Datum ▾

Anyone Can Intubate - Books and Videos on Intubation and ...

<https://anyonecanintubate.com>

Pediatric Airway Management: A Step-by-Step Guide follows in the tradition of *Anyone Can Intubate*: A Step-by-Step Guide to Intubation and Airway Management, by providing easy to understand text and hundreds of detailed illustrations, photos, and on-line videos to teach how to manage the airway and intubate our littlest and most vulnerable patients.

About Dr. Whitten

In addition to *Anyone Can Intubate*, Dr. Whitten's publications include: 10 Common ...

Reviews

"*Anyone Can Intubate* will give a good grounding in intubation to anaesthetists ...

Contact Us

Mooncat Publications. 11875 River Rim Road
San Diego, California, U.S. 92126-1150. Dr. ...

Visa endast resultat från anyonecanintubate.com

Anyone Can Intubate, 5th Ed. - intubation & airway ...

<https://airwayjedi.com/anyone-can-intubate-5th-edition>

"*Anyone Can Intubate* will give a good grounding in intubation to anaesthetists starting training and to junior casualty officers, as well as the two groups mentioned above (nurses, ambulancemen)..." "I recommend the book as an adjunct to the practical training of anaesthetists and for those others who may from time to time be required to perform emergency intubation." -David G. Price, British Medical ...

A Step-by-Step Guide, 5th Edi...

"*Anyone Can Intubate* will give a good grounding in intubation to anaesthetists ...

Pediatric Airway Manageme...

age related differences in how pediatric physiology predisposes the child to a higher ...

Videoklipp av anyone can intubate'

bing.com/videos



Download *Anyone Can Intubate* (5th Ed.): A Step-by-...

68 visningar · apr. 27, 2016
[Dailymotion](#) · [Rubye Darcy](#)



7-41. Intubation of a Child Using Straight (Miller) Blade ...

21 t visningar · okt. 31, 2017
[YouTube](#) · [Mooncat Publicati...](#)



p.253. Glossopharyngeal Nerve Block

7,1 t visningar · nov. 4, 2017
[YouTube](#) · [Mooncat Publicati...](#)



Trailer: Introduction to Intubation

671 visningar · jan. 19, 2016
[YouTube](#) · [Mooncat Publicati...](#)

Acta Anaesthesiol Scand 2012; **56**: 164–171
Printed in Singapore. All rights reserved

© 2011 The Authors

Acta Anaesthesiologica Scandinavica

© 2011 The Acta Anaesthesiologica Scandinavica Foundation

ACTA ANAESTHESIOLOGICA SCANDINAVICA

doi: 10.1111/j.1399-6576.2011.02547.x

Developing the skill of endotracheal intubation: implication for emergency medicine

M. BERNHARD^{1,2}, S. MOHR¹, M. A. WEIGAND^{1,3}, E. MARTIN¹ and A. WALTHER^{1,4}

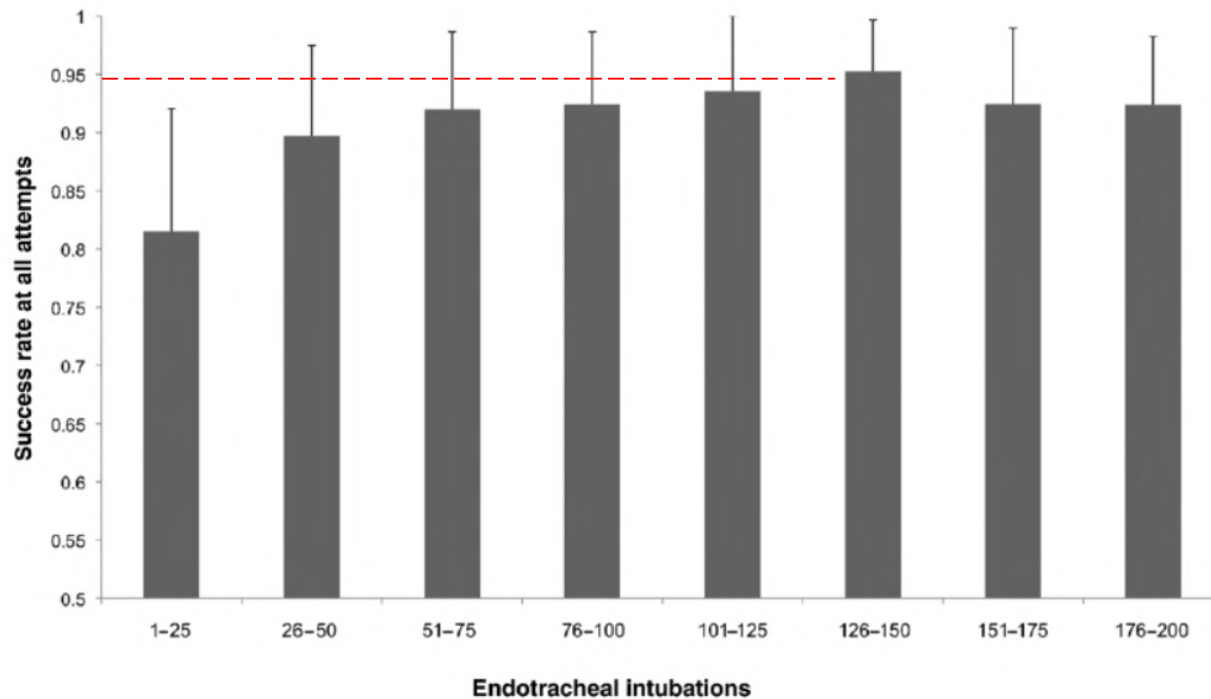
¹Department of Anaesthesiology, University Hospital of Heidelberg, Heidelberg, Germany, ²Emergency Department/Emergency Admission Unit, University Hospital of Leipzig, Leipzig, Germany, ³Department of Anaesthesiology, University Hospital of Giessen and Marburg, Giessen, Germany and ⁴Department of Anaesthesiology, Katharienhospital, Stuttgart, Germany

Bernhard M et al: Acta Anaesthesiol Scand, 56 : 164-171 (2012)

Developing the skill of endotracheal intubation: implication for emergency medicine

M. Bernhard¹, S. Mink², M. A. Wehler³
¹Department of Anaesthesiology, University Hospital
²Chief, Emergency Department, University Hospital
³Chief, Intensive Care Unit, University Hospital

Developing the skill of intubation



After 2017 → JAMA Augusti 2018

Research

JAMA | Original Investigation

Effect of a Strategy of Initial Laryngeal Tube Insertion vs Endotracheal Intubation on 72-Hour Survival in Adults With Out-of-Hospital Cardiac Arrest A Randomized Clinical Trial

Research

JAMA | Original Investigation

Effect of a Strategy of a Supraglottic Airway Device vs Tracheal Intubation During Out-of-Hospital Cardiac Arrest on Functional Outcome The AIRWAYS-2 Randomized Clinical Trial

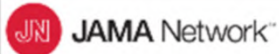
Research

JAMA | Original Investigation

Effect of a Strategy of Initial Laryngeal Tube Insertion vs Endotracheal Intubation on 72-Hour Survival in Adults With Out-of-Hospital Cardiac Arrest

A Randomized Clinical Trial





What is the effect of an initial airway management strategy using laryngeal tube insertion vs endotracheal intubation on survival among adults with out-of-hospital cardiac arrest?

CONCLUSION Initial laryngeal tube insertion, compared with endotracheal intubation, was associated with greater likelihood of 72-hour survival.

POPULATION

1829 Men
1173 Women



Adults with nontraumatic
out-of-hospital cardiac arrest

Median age: 64 years
(IQR, 53-76)

LOCATIONS

27 Emergency
medical service agencies
randomized in 13 clusters



INTERVENTION

3004 Patients enrolled
3000 included in primary analysis

1505

Laryngeal tube



1499

Endotracheal intubation



PRIMARY OUTCOME

Survival to 72 hours after initial cardiac arrest

FINDINGS

72-Hour survival

Laryngeal tube

275 Patients

18.3%

Endotracheal
intubation

230 Patients

15.4%

Adjusted difference between groups:

2.9%

(95% CI, 0.2% to 5.6%)

© AMA

Research

JAMA | Original Investigation

Effect of a Strategy of Initial Laryngeal Tube Insertion
vs Endotracheal Intubation on 72-Hour Survival in Adults
With Out-of-Hospital Cardiac Arrest
A Randomized Clinical Trial

Baseline patient and airway management characteristics are provided in Table 1 and eTable 3 in Supplement 2. LT and ETI protocol compliance (initial attempt with assigned airway or use of BVM only) were 95.5% and 90.7%, respectively. Elapsed time from first EMS arrival to airway start was shorter for LT than ETI (median, 9.8 vs 12.5 minutes). Initial LT and ETI success rates (excluding BVM) were 90.3% and 51.6%. Overall LT and ETI airway success rates (ini-

Research

JAMA | Original Investigation

Effect of a Strategy of Initial Laryngeal Tube Insertion
vs Endotracheal Intubation on 72-Hour Survival in Adults
With Out-of-Hospital Cardiac Arrest
A Randomized Clinical Trial

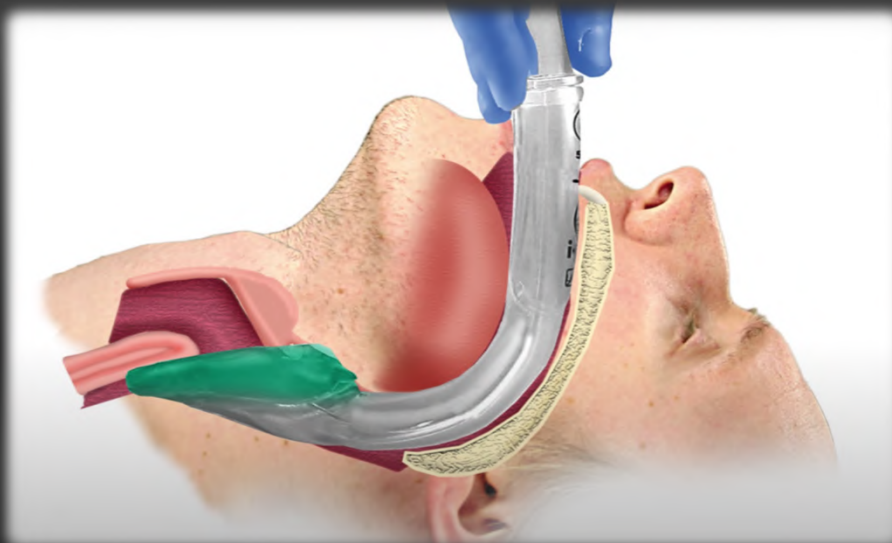
Baseline patient and airway management characteristics are provided in Table 1 and eTable 3 in Supplement 2. LT and ETI protocol compliance (initial attempt with assigned airway or use of BVM only) were 95.5% and 90.7%, respectively. Elapsed time from first EMS arrival to airway start was shorter for LT than ETI (median, 9.8 vs 12.5 minutes). Initial LT and ETI success rates (excluding BVM) were 90.3% and 51.6%. Overall LT and ETI airway success rates (ini-

Research

JAMA | Original Investigation

Effect of a Strategy of a Supraglottic Airway Device vs Tracheal Intubation During Out-of-Hospital Cardiac Arrest on Functional Outcome

The AIRWAYS-2 Randomized Clinical Trial



Research

JAMA | Original Investigation

Effect of a Strategy of a Supraglottic Airway Device vs Tracheal Intubation During Out-of-Hospital Cardiac Arrest on Functional Outcome

The AIRWAYS-2 Randomized Clinical Trial

CONCLUSIONS AND RELEVANCE Among patients with out-of-hospital cardiac arrest, randomization to a strategy of advanced airway management with a supraglottic airway device compared with tracheal intubation did not result in a favorable functional outcome at 30 days.

Research

JAMA | Original Investigation

Effect of a Strategy of a Supraglottic Airway Device
vs Tracheal Intubation During Out-of-Hospital Cardiac Arrest
on Functional Outcome
The AIRWAYS-2 Randomized Clinical Trial

- $\approx$ 1500 paramedics / $\approx$ 9000 OHCA-pat.
- 1:1 LMA eller intubation
- "good neurology" mRs(0-3) vid 30d/utskrivning

LMA: 6.4% vs intubation: 6.8% → ns

(regurg./aspiration lika i bägge grupper)

Research

JAMA | Original Investigation

Effect of a Strategy of a Supraglottic Airway Device
vs Tracheal Intubation During Out-of-Hospital Cardiac Arrest
on Functional Outcome
The AIRWAYS-2 Randomized Clinical Trial

Paramedics received additional training in their allocated advanced airway management intervention immediately after randomization. Training comprised theoretical and simulation-based practice over 1 hour with a brief assessment to confirm competence. For tracheal intubation, a 2-person technique using an intubating bougie was recommended. End-tidal carbon dioxide monitoring was used to confirm correct device placement in all patients.



Capio



Region
Jönköpings län



HLR  rådet
SVENSKA RÅDET FÖR HJÄRT- LUNGMÅRÅDNING



Capio



Region
Jönköpings län



HLR  rådet
SVEDESKA RÅDET FÖR HÄLT LUPHÖRSÖRNING

British Journal of Anaesthesia 113 (2): 220-5 (2014)
doi:10.1093/bja/aeu227

RJA

Observational study of the success rates of intubation and failed intubation airway rescue techniques in 7256 attempted intubations of trauma patients by pre-hospital physicians

D. Lockey^{1,2*}, K. Crewdson², A. Weaver² and G. Davies²

¹ London's Air Ambulance, The Helipad, Royal London Hospital, Whitechapel, London E1 1BB, UK

² School of Clinical Sciences, University of Bristol, Bristol, UK

* Corresponding author. E-mail: dlockey@hotmail.com

Editor's key points

- There are limited recent data on airway management by physicians in an out-of-hospital setting.
- In this large retrospective series of pre-hospital trauma cases, the initial success rate for tracheal intubation was 99.3%.
- Tracheal intubation was more likely to be successful when performed by a physician with primary training in anaesthesia.
- The need for a surgical airway (0.7%) was lower than in most other reported series.

Background. Effective airway management is a priority in early trauma management. Data on physician pre-hospital tracheal intubation are limited; this study was performed to establish the success rate for tracheal intubation in a physician-led system and examine the management of failed intubation and emergency surgical cricothyroidotomy in pre-hospital trauma patients. Failed intubation rates for anaesthetists and non-anaesthetists were compared.

Methods. A retrospective database review was conducted to identify trauma patients undergoing pre-hospital advanced airway management between September 1991 and December 2012. The success rate of tracheal intubation and the use and success of rescue techniques were established. Success rates of tracheal intubation by individuals and by specialty were recorded.

Results. The doctor-paramedic team attended 28939 patients; 7256 (25.1%) required advanced airway management. A surgical airway was performed immediately, without attempted laryngoscopy, in 46 patients (0.6%). Tracheal intubation was successful in 7150 patients (99.3%). Rescue surgical airways were performed in 42 patients, seven had successful insertion of supraglottic devices, and two patients had supraglottic device insertion and a surgical airway. One patient breathed spontaneously with bag-valve-mask support during transfer. All rescue techniques were successful. Non-anaesthetists performed 4394 intubations and failed to intubate in 41 cases (0.9%); anaesthetists performed 2587 intubations and failed in 11 (0.4%) ($P = 0.02$).

Conclusions. This is the largest series of physician pre-hospital tracheal intubation; the success rate of 99.3% is consistent with other reported data. All rescue airways were successful. Non-anaesthetists were twice as likely to have to perform a rescue airway intervention than anaesthetists. Surgical airway rates reported here (0.7%) are lower than most other physician-led series (median 3.1%, range 0.1–7.7%).

Keywords: airway management; complications; intubation; intubation; pre-hospital emergency care

British Journal of Anaesthesia 113 (2): 220-5 (2014)
doi:10.1093/bja/aek227

Observational study of the success rates of intubation failed intubation airway rescue techniques in 7256 at intubations of trauma patients by pre-hospital physicians

D. Lockey^{1,2*}, K. Crewdson², A. Weaver² and G. Davies¹

¹ London's Air Ambulance, The Helipad, Royal London Hospital, Whitechapel, London E1 1BB, UK

² School of Clinical Sciences, University of Bristol, Bristol, UK

* Corresponding author. E-mail: dlockey@hotmail.com

Editor's key points

- There are limited recent data on airway management by physicians in an out-of-hospital setting.
- In this large retrospective series of pre-hospital trauma cases, the initial success rate for tracheal intubation was 99.3%.
- Tracheal intubation was more likely to be successful when performed by a physician with primary training in anaesthesia.
- The need for a surgical airway (0.7%) was lower than in most other reported series.

Background. Effective airway management is a priority in early trauma. On physician pre-hospital tracheal intubation are limited; this study establish the success rate for tracheal intubation in a physician-led system of management of failed intubation and emergency surgical cricothyroidotomy in trauma patients. Failed intubation rates for anaesthetists and non-anaesthetists were compared.

Methods. A retrospective database review was conducted to identify all patients undergoing pre-hospital advanced airway management between 5th December 2012. The success rate of tracheal intubation and the use of rescue techniques were established. Success rates of tracheal intubation by speciality were recorded.

Results. The doctor-paramedic team attended 28939 patients; 7256 advanced airway management. A surgical airway was performed in 42 patients (0.6%). Tracheal intubation was successful in 42 patients (99.3%). Rescue surgical airways were performed in 42 patients (0.6%). Successful insertion of supraglottic devices, and two patients had insertion of a surgical airway. One patient breathed spontaneously without support during transfer. All rescue techniques were successful. Non-anaesthetists performed 4394 intubations and failed to intubate in 41 cases (0.9%); anaesthetists performed 2862 intubations and failed in 11 (0.4%) ($P=0.02$).

Conclusions. This is the largest series of physician pre-hospital tracheal intubation. The success rate of 99.3% is consistent with other reported data. All rescue airway techniques were successful. Non-anaesthetists were twice as likely to have to perform a rescue airway technique. Surgical airway rates reported here (0.7%) are lower than in most other reported series.

Keywords: airway management; complications; intubation; intubation; emergency care

Editor's key points

- There are limited recent data on airway management by physicians in an out-of-hospital setting.
- In this large retrospective series of pre-hospital trauma cases, the initial success rate for tracheal intubation was 99.3%.
- Tracheal intubation was more likely to be successful when performed by a physician with primary training in anaesthesia.
- The need for a surgical airway (0.7%) was lower than in most other reported series.

BJA

British Journal of Anaesthesia, 120 (5): 1103–1109 (2018)

doi: 10.1016/j.bja.2017.12.036

Advance Access Publication Date: 2 February 2018

Respiration and Airway

RESPIRATION AND AIRWAY

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^{1,2,3,4,*}, E. Fevang^{5,6}, A. Bäckman⁷, A. Krüger^{5,8}, S. Mikkelsen⁹, J. Nurmi^{10,11}, L. Rognås¹², E. Sandström¹³, G. Skallsjö¹⁴, C. Svensén^{1,3}, D. Gryth^{15,16} and H. M. Lossius^{5,17}

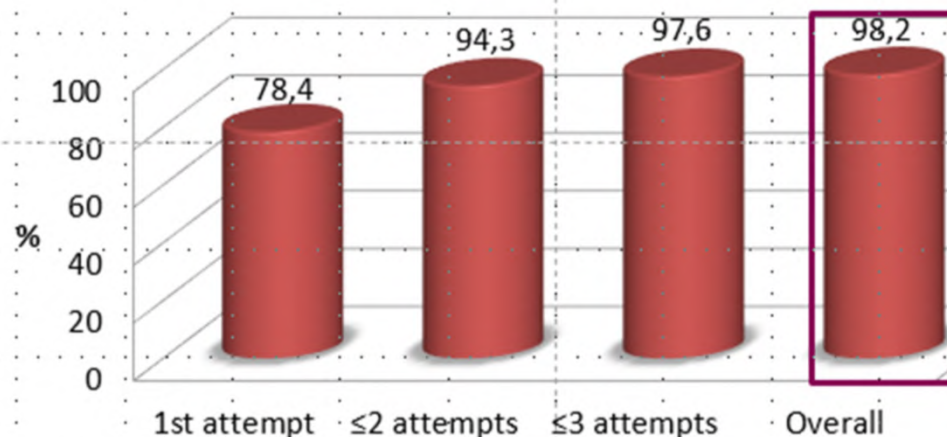
RESPIRATION AND AIRWAY

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^{1,2,3,4,*}, E. Fevang^{5,6}, A. Bäckman⁷, A. Krüger^{5,8}, S. Mikkelsen⁹, J. Nurmi^{10,11}, L. Rognås¹², E. Sandström¹³, G. Skallsjö¹⁴, C. Svensén^{1,3}, D. Gryth^{15,16} and H. M. Lossius^{5,17}

	TI success (n)	%	P-value
Cardiac arrest	1056/1075	98.2	
Non-cardiac arrest	842/950	99.1	0.08
Rapid sequence induction	929/935	99.4	
No rapid sequence induction	1071/1092	98.1	0.02
Easy airway	786/789	99.6	
Difficult airway	1215/1239	98.1	<0.01
Rapid response car	881/899	98	
HEMS	1120/1129	99.2	0.03
Nurse	495/507	97.6	
Physician	1503/1518	99	0.03

Successrate



RESPIRATION AND AIRWAY

Pre-hospital advanced airway management by anaesthetist and nurse anaesthetist critical care teams: a prospective observational study of 2028 pre-hospital

M. Gellerfors¹,
J. Nurmi^{10,11},
D. Gryth^{12,14} and

Editor's key points

- Pre-hospital tracheal intubation is frequently difficult and can be associated with severe adverse events.
- Providers should be competent to perform the procedure and capable of preventing and treating complications.
- When performed by experienced physician anaesthetists and nurse anaesthetists, pre-hospital tracheal intubation can be completed rapidly with high success rates and a low incidence of complications.

Avancerad hjärt-lungräddning vuxen



2020-2021

[illegible]

1. Segmenti unora plănuiri de afaceri

Midwest:

Ge 1 mg oxycodone om efter 30
defibrilleringen och därefter Var
4 timmar

Ge 200 mg amikacin intravenös
5-dobbel dosering om ytterligare
15 min efter de första 4 timmarna

Vide analysis/FEA:

Ge-1 mygskräddan som skräddar
som många och direkt för
företag.

PORTUGAL: 1990-1991
ORDER: 1041
PAGE: 111

[illegible]

DOI: 10.1002/for

For 2007 IER need paid 100000
odt 01/01/2007 18/01/2007
www.vsemplojati.hr [14/07]

WARD (STTD-MARTSTYR)

Manuscript received: 29/12/2010
 Accepted: 18/01/2011
 Editor: J. A. C. G. (J. A. C. G.)
 Copyright © 2011 Sociedade Brasileira de Zootecnia



ÅTGÄRDER UNDER PÅGÅENDE HLR:

- Hårt underlag om möjligt
- Etablera iv infart, i andra hand io infart
- Överväg supraglottisk luftväg eller endotrakeal intubation vid förlängd HLR
- Kontinuerliga bröstkompressioner på patient med supraglottisk luftväg eller endotrakealtub
- Vid etablerad endotrakeal eller supraglottisk luftväg, ventilerar 10 andetag/min och utför kontinuerliga kompressioner, monitorera ETCO₂ med kontinuerlig kurva
- Överväg ultraljud för att identifiera reversibla orsaker
- Mekaniska bröstkompressioner vid transport eller förlängd HLR
- Dokumentera åtgärder och tidpunkter
- Ta hand om närstående

RECEPT

Gäller 1 år från
utfärdandet om inte
kortare tid anges här:

Förskrivningsmyndighetens namn:

EttEttTvåan Tolvansson
112112-1212

Särskilda uppgifter:

1	Larynxmask	Med tid för hjärtstopp
2	Intubation	Med tid för hjärtstopp
3	Anestesipersonal med kontinuerlig träning	Med tid för hjärtstopp
4	Vid "förlängd" HLR, ev. inför transport.	Med tid för hjärtstopp
5	Efter ROSC!	Med tid för hjärtstopp
6	Addera ev. ventilator (tex vid mek. bröstkompression)	Med tid för hjärtstopp
7	Kontinuerliga kompressioner!	Med tid för hjärtstopp

Förskrivningen gäller endast om patienten är i livshotande situation och om patienten har ett hjärtstopp eller är i risk för ett hjärtstopp. Om patienten inte har ett hjärtstopp eller är i risk för ett hjärtstopp, ska patienten inte få denna förskrivning.

HLR rådet
Svenska rådet för HLR
Upprättat 2021





FRÅGOR?



Capio



Region
Jönköpings län



HLR  rådet
SVENSKA RÅDET FÖR HJÄRT LUNGRÄDDNING