Fino all'ultimo respiro:

NIV e palliazione

Rodolfo Ferrari

Medicina d'Urgenza e Pronto Soccorso
Policlinico Sant'Orsola - Malpighi
Bologna

Napoli, 20 novembre 2016

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fino all'ultimo respiro
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Henri-Jacques Huet · Liliane David · Claude Mansard · Van Doude · Daniel Boulanger · Regia: JEAN-LUC GODARD Sceneggiatura: FRANCOIS TRUFFAUT

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NIV

Panel 2: Recommendations for NIV to treat acute respiratory failure

Recommendations

Level 1 evidence
Systematic reviews
Evidence of use (favo
- COPD exacerbat
- Facilitation of w
- Cardiogenic pul
- Immunosuppre

Evidence of use (caut
- None

Level 2
Systematic reviews
(including low qual
Evidence of use (favo
- Do-not-intubat
- End-stage patie
- Extubation failu
- Community-ac
- Postoperative r
- Prevention of a

Evidence of use (caut
- Severe commu
- Extubation failu

Level 3
Systematic reviews
Evidence of use (favo
- Neuromuscular
- Upper airway obstruction (partial)
- Thoracic trauma
- Treatment of acute respiratory failure in asthma

Evidence of use (caution)
- Severe acute respiratory syndrome

Level 4
Case series (and poor quality cohort and case-control studies)
Evidence of use (favourable)
- Very old age, older than age 75 years
- Cystic fibrosis
- Obesity hypoventilation

Evidence of use (caution)
- Idiopathic pulmonary fibrosis

NIV = non-invasive ventilation, RCTs = randomised controlled trials. COPD = chronic obstructive pulmonary disease.

Table 1. Noninvasive ventilation for various types of acute respiratory failure (ARF): Evidence for efficacy and strength of recommendation

Type of ARF	Level of Evidence[a]	Strength of Recommendation[b]
Hypercapnic respiratory failure		
COPD exacerbation	A	Recommended
Asthma	C	Option
Facilitation of extubation (COPD)	A	Guideline
Hypoxemic respiratory failure		
Cardiogenic pulmonary edema	A	Recommended
Pneumonia	C	Option
ALI/ARDS	C	Option
Immunocompromised	A	Recommended
Postoperative respiratory failure	B	Guideline
Extubation failure	C	Guideline
Do not intubate status	C	Guideline
Preintubation oxygenation	B	Option
Facilitation of bronchoscopy	B	Guideline

Table 1. Noninvasive ventilation for various types of acute respiratory failure (ARF): Evidence for

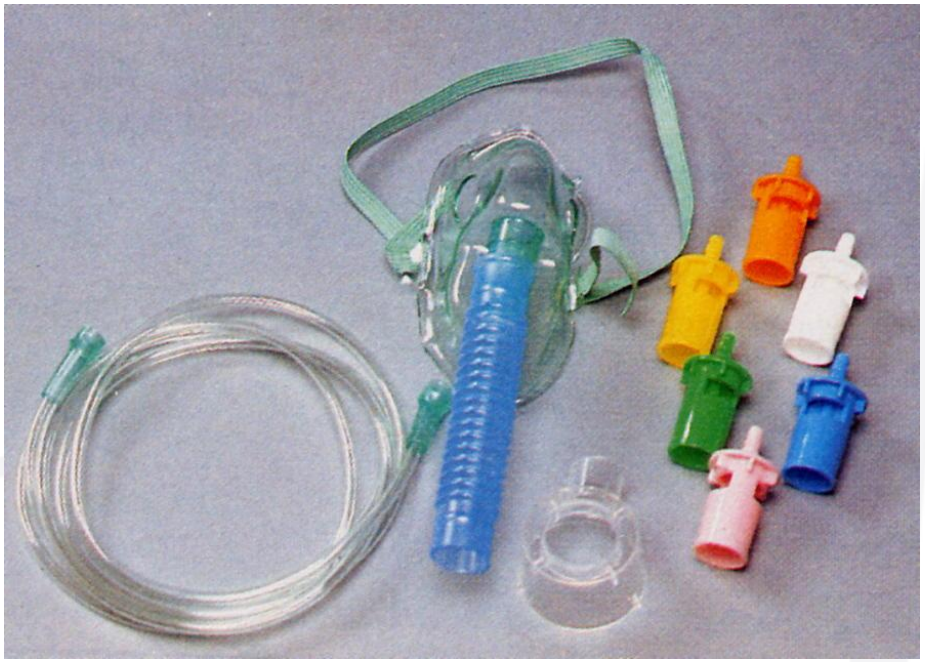
from different causes

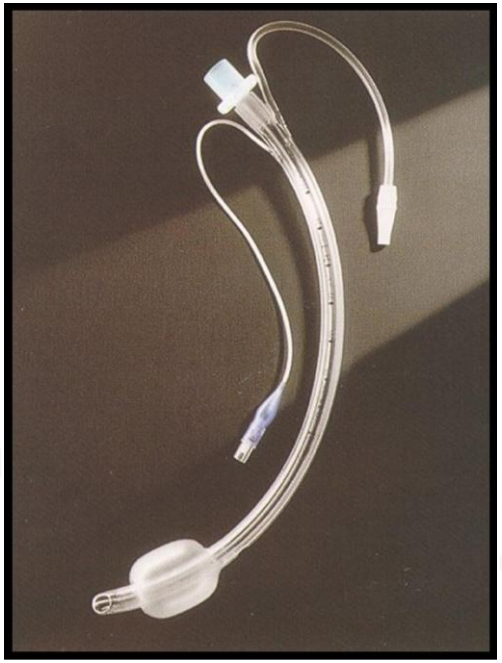
Cause of ARF	Level of evidence*	Location
AECOPD	A	Ward, RIICU, ICU Depending on severity
Weaning (AECOPD)	A	ICU, RIICU
CPO	A	ICU, RIICU
Immunocompromised patient	A	ICU, RIICU
Post-operative respiratory failure	B	ICU
Pre-intubation oxygenation	B	ICU
Endoscopy	B	Depending on severity
Asthma exacerbations	C	ICU, RIICU
ALI/ARDS	C	ICU
Extubation failure	C	ICU
Do-not-intubate status	C	Ward, RIICU
Pneumonia	C	ICU, RIICU

Evidence A: multiple randomised controlled trials and meta-analyses; evidence B: more than one randomised controlled trial, case-control series or cohort studies evidence; C: case series or conflicting data. AECOPD: acute exacerbation of chronic obstructive pulmonary disease; RIICU: respiratory intermediate intensive care unit; ICU: intensive care unit; CPO: cardiogenic pulmonary oedema; ALI: acute lung injury; ARDS: acute respiratory distress syndrome. *: according to [11].

"… there is a "window of opportunity" when initiating NPPV. The window opens when patients become distressed enough to warrant ventilatory assistance but closes if they progress too far and become severely acidemic. …"

Liesching T, et al. Chest 2003

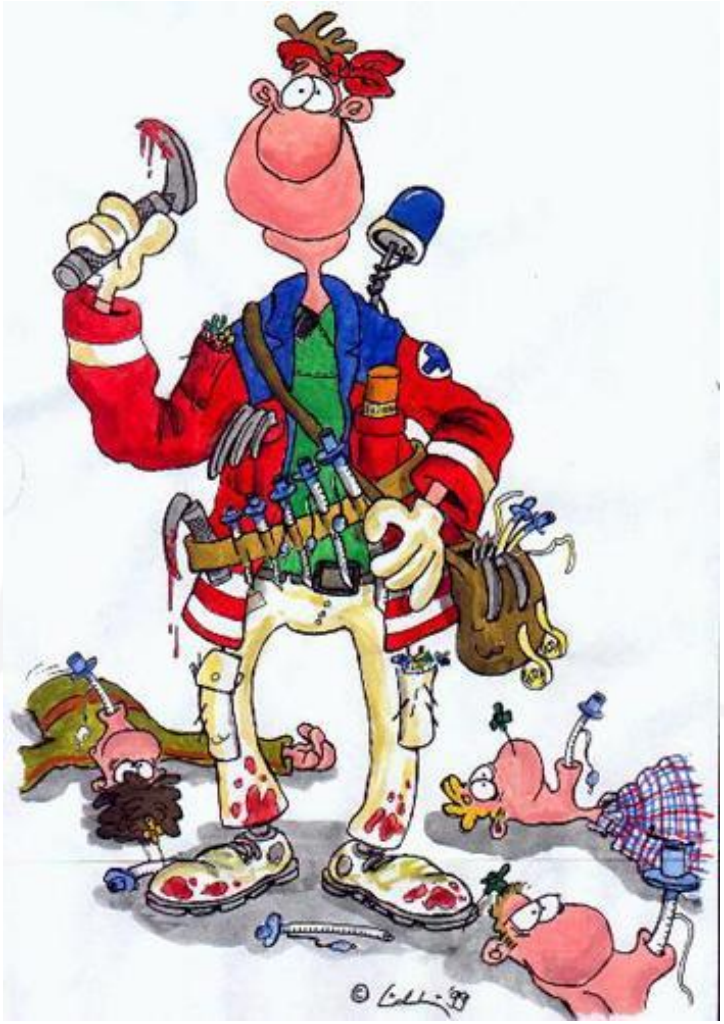




"A decision about tracheal intubation should be made before commencing NIV in every patient."

BTS GUIDELINE.

Thorax 2002;57:192-211




The Trial

Utilizzo della Ventilazione Meccanica Noninvasiva per il trattamento dell'Insufficienza Respiratoria Acuta nel Dipartimento di Emergenza-Accettazione.

Barboni E, et al. Linee guida SIMEU "NIMV nel DEA" 2005

CONCLUSIONI

<<… Anche in "emergenza" la NIMV non può rappresentare un "tentativo", ma parte di un piano terapeutico integrato, che non trascura ipotesi diagnostiche e prognostiche ragionate, l'ottimizzazione della terapia medica, la garanzia della continuità assistenziale attraverso il coinvolgimento di strutture e competenze specialistiche.>>

PALLIAZIONE

Critical care in the emergency department: acute respiratory failure

Patrick A Nee,[1] Mohammad A Al-Jubouri,[1] Alasdair J Gray,[2] Charlie O'Donnell,[3] Dan Strong[4]

ILLUSTRATIVE CASE REPORT

A 68-year-old 90 kg woman is brought to the ED with a 24-h history of severe breathlessness. An ex-smoker, she has ischaemic heart disease and COPD and has had a number of previous admissions with similar complaints. She is usually independent in activities of daily living but does not often get out of her ground floor apartment due to severely limited exercise tolerance, estimated at 100 m. She is known to be on a variety of cardiac medications and inhaled bronchodilators. She does not receive home oxygen therapy.

Arterial blood gases (ABG) on high flow oxygen via reservoir mask are as follows: pH 7.22, partial pressure carbon dioxide (pCO_2) 7.61 kPa, partial pressure oxygen (pO_2) 7.48 kPa, bicarbonate 28 mmol/l, base deficit 12.0 mmol/l, lactate 3.9 mmol/l. The working diagnosis is exacerbation of COPD and the patient is considered for non-invasive ventilation (NIV).

FURTHER CASE PROGRESSION

The patient has been on BL-PAP for an hour and is becoming alternatively drowsy and agitated. She is pulling at the mask and appears to be becoming exhausted. She is tachycardic and hypertensive. Ventilator settings have been increased to EPAP 10 cm water and IPAP 25 cm water. The SpO_2 is 92%. Repeat ABG show the following: pH 6.91, pCO_2 12.67, pO_2 10.94, bicarbonate 21.2, base deficit 11.25.

Questions (3)

i. What are the potential causes of failure to improve on NIV and what treatments are available?
ii. Should this patient be considered for endotracheal ventilation, or for palliative care?

Noninvasive Ventilation in Acute Cardiogenic Pulmonary Edema

N Engl J Med 2008;359:142-51

Alasdair Gray, M.D., Steve Goodacre, Ph.D., David E. Newby, M.D., Moyra Masson, M.Sc., Fiona Sampson, M.Sc., and Jon Nicholl, M.Sc., for the 3CPO Trialists*

Table 1. Baseline Characteristics of the Patients.*

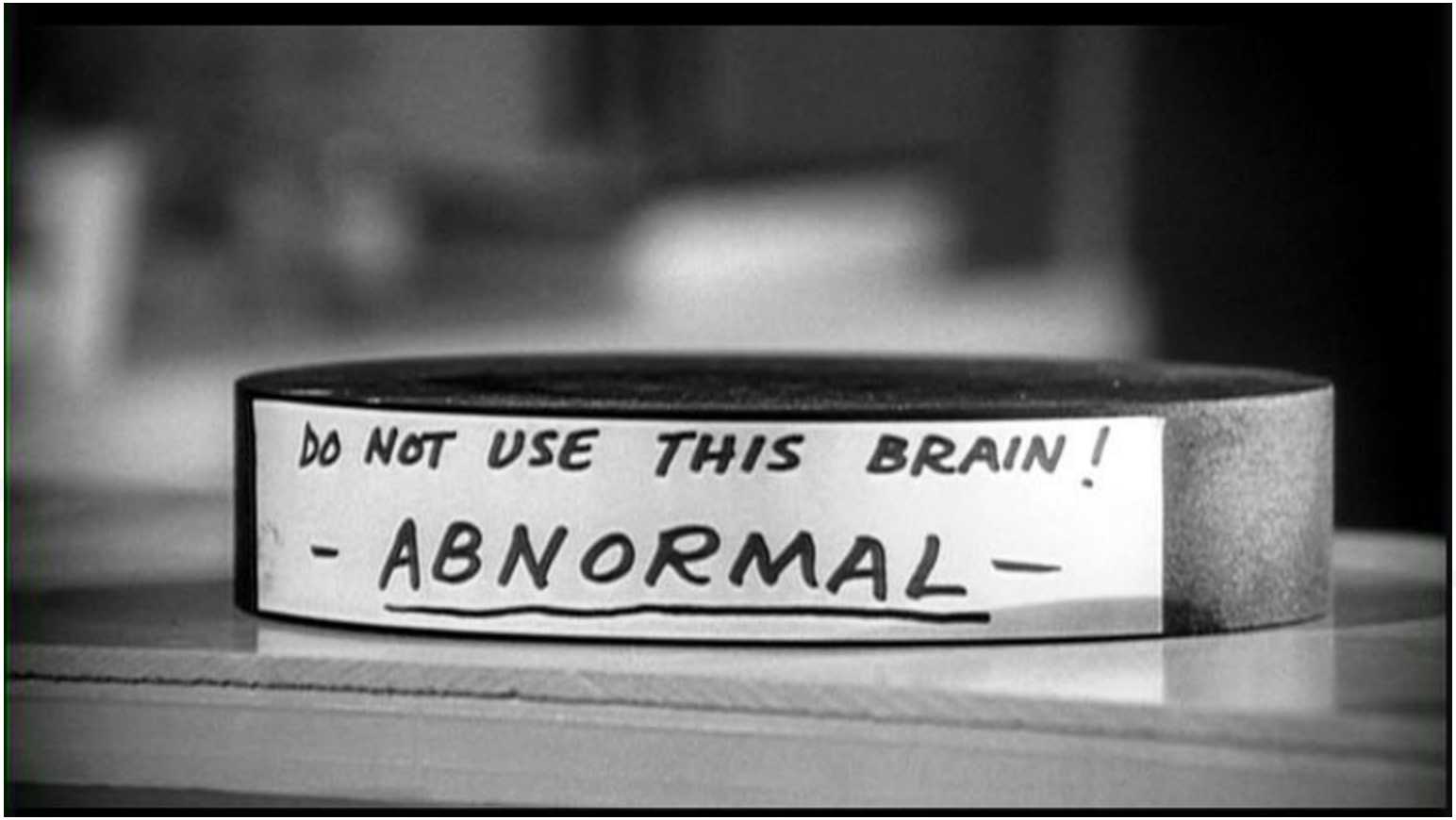
Characterisic	Standard Oxygen Treatment (N=367)	CPAP (N=346)	NIPPV (N=356)
Age (yr)	79±9	78±10	77±10
Male sex (%)	42	45	43
Symptoms of myocardial infarction at presentation (%)	22	22	22
Ischemic heart disease (%)	64	64	60
Congestive heart failure (%)	45	42	47
Valvular heart disease (%)	12	11	9
Chronic obstructive pulmonary disease (%)	19	15	21
Hypertension (%)	56	55	57
Diabetes mellitus (%)	30	30	33
Hypercholesterolemia (%)	30	33	31
Current smoking (%)	16	19	19
Peripheral vascular disease (%)	10	11	10
Cerebrovascular disease (%)	18	17	16
Pulse rate (beats/min)	114±24	113±21	112±22
Blood pressure (mm Hg)			
Systolic	161±38	162±35	161±36
Diastolic	87±25	89±23	87±24
Respiratory rate (breaths/min)	33±7	32±7	32±7
Peripheral oxygen saturation (%)	91±8	90±8	90±8
Arterial pH	7.22±0.08	7.21±0.09	7.22±0.09
PaO_2 (kPa)	13.1±7.6	13.5±7.7	13.4±8.6
$PaCO_2$ (kPa)	7.6±2.5	7.5±1.9	7.7±2.3
Serum bicarbonate level (mmol/liter)	21±4	21±4	21±5
Dyspnea score†	8.9±1.5	8.9±1.8	8.8±1.6

* Plus–minus values are means ±SD. CPAP denotes continuous positive airway pressure, NIPPV noninvasive intermittent positive-pressure ventilation, $PaCO_2$ partial pressure of arterial carbon dioxide, and PaO_2 partial pressure of arterial oxygen. To convert values for PaO_2 and $PaCO_2$ to mm Hg, multiply by 7.50062.
† The patients reported their degree of dyspnea on a visual-analogue scale ranging from 0 (no breathlessness) to 10 (maximal breathlessness).

Table 2. Treatment of Patients.*

Variable	Standard Oxygen Treatment (N=367)	CPAP (N=346)	NIPPV (N=356)	All Patients (N=1069)	P Value†
Initial treatment — % of patients					
Nitrates	93	88	91	90	0.11
Diuretics	90	89	89	89	0.89
Opioids	55	50	49	51	0.31
Inspired oxygen — liters/min	12±4	12±4	12±4	12±4	0.44
Ventilation pressure — cm of water	—	10±4	Inspiratory 14±5, expiratory 7±3	—	
Started assigned treatment — no./total no. (%)‡	365/366 (99.7)	337/343 (98.3)	344/354 (97.2)	1046/1063 (98.4)	0.02
Completed assigned treatment — no./total no. (%)§	298/363 (82.1)	285/340 (83.8)	267/352 (75.9)	850/1055 (80.6)	0.02
Changed to new treatment — no.					
Intubation	3	1	4		
CPAP	43	—	12		
NIPPV	13	5	—		
Standard treatment	—	31	49		
New treatment not stated	6	18	20		
Reason for not completing assigned treatment — no. (%)¶					
Patient discomfort	1 (0.3)	18 (5.2)	30 (8.4)		<0.001
Worsening arterial blood gas values	26 (7.1)	10 (2.9)	15 (4.2)		0.03
Respiratory distress	31 (8.4)	5 (1.4)	12 (3.4)		<0.001
Other	18 (4.9)	24 (6.9)	29 (8.1)		0.21

* Plus–minus values are means ±SD. CPAP denotes continuous positive airway pressure, and NIPPV noninvasive intermittent positive-pressure ventilation.
† P values are for the comparison among the three groups.
‡ Data were missing for six patients.
§ Data were missing for 14 patients.
¶ A patient may have had more than one reason for not completing the assigned treatment.


DO NOT USE THIS BRAIN!
- ABNORMAL -

“… **Cure palliative**
Da Wikipedia, l'enciclopedia libera.

Le cure palliative, secondo la definizione dell'Organizzazione mondiale della sanità, si occupano in maniera attiva e totale dei pazienti colpiti da una malattia che non risponde più a trattamenti specifici e la cui diretta evoluzione è la morte. ...

Il termine deriva da "palliare", ovvero coprire, nascondere con un pallio, che nell'Antica Grecia e nell'Antica Roma era il telo di lana che si poggiava su una spalla e si drappeggiava intorno al corpo, sopra la tunica.

Il controllo del dolore, di altri sintomi e degli aspetti psicologici, sociali e spirituali è di fondamentale importanza. Lo scopo delle cure palliative è il raggiungimento della miglior qualità di vita possibile per i pazienti e le loro famiglie. …”

Treccani, la cultura italiana

palliativa, cura

“Intervento terapeutico e assistenziale che attenua i sintomi di una malattia, senza risolverne la causa. In partic., la cura p. rappresenta l’insieme degli interventi terapeutici e assistenziali finalizzati alla cura attiva e totale di quei pazienti la cui malattia di base è causa di sofferenza fisica, psicologica e spirituale, oltre che sociale. …

… secondo l’Organizzazione mondiale della sanità (OMS) la cura p. rappresenta «un approccio che migliora la qualità di vita di malati e delle loro famiglie che si trovano di fronte a problemi connessi a malattie a rischio per la vita, attraverso la prevenzione e il sollievo della sofferenza, per mezzo di una precoce identificazione e di una ottimale valutazione e trattamento del dolore e degli altri problemi fisici, psicosociali, spirituali». …

Treccani, la cultura italiana

palliativa, cura

… Differenza tra cure palliative e terminali. Anche se nel passato venivano dedicate sostanzialmente ai pazienti oncologici terminali, le cure p. non sono sinonimo di cure terminali, le quali sono per definizione dedicate ai pazienti moribondi. …

L'obiettivo delle cure p. è di prevenire e contenere il più possibile i sintomi invalidanti – quali il dolore, la dispnea, la tosse, la nausea, l'agitazione psicomotoria, la depressione –, che possono caratterizzare fasi specifiche non solo di malattie quali il cancro, ma anche di molte patologie croniche dell'apparato respiratorio e cardiovascolare, …"

Noninvasive Ventilation and Dyspnea in Palliative Medicine

To the Editor:

We read with great interest the position paper of the American College of Chest Physicians about palliative and end-of-life care for patients with cardiopulmonary disease.[1] We agree that it was about time for the "respiratory world" to write an official document on this hot topic. Having said that, we are concern that little emphasis was paid to the important problem of dyspnea and particularly on its treatment. Pain is one of the major fears of human beings, and every effort should be made to relieve this symptom. In the position paper,[1] it is stated for example that "the factors most commonly associated with a request for physician-assisted suicide are patients' fear of losing control of mental faculties and experiencing severe pain". Pain is a classic symptom for example of patients with end-stage cancer. We are, however, pulmonologists dealing not only with cancer patients but also with the patients with end-stage COPD, in whom the "pain of the respiratory system" (*ie*, dyspnea) is the predominant symptom.

In the position paper,[1] it was mentioned that the therapeutic options for dyspnea are oxygen, opioids, anxiolytics, and not-better-specified nonpharmaceutical intervention, basing this statement on a article[2] published 4 years ago. In these last years, several studies were, however, published on the use of noninvasive ventilation (NIV) in patients with do-not-intubate order, with end-stage disease and severe dyspnea and/or respiratory distress. In the two more recent studies,[3,4] it was demonstrated that about half of the patients survived the episode of respiratory distress and were discharged from the hospital. Indeed, in a pilot investigation[5] it was showed that in a large portion of patients with end-stage solid cancer admitted to a palliative care unit for acute respiratory distress, NIV was able to significantly reduce dyspnea after only 1 h of ventilation. A randomized international trial is in progress in 10 palliative care units in order to evaluate the effect of oxygen therapy alone or in combination with NIV, the main outcomes being the reduction in dyspnea and in the use of opioids. Again we congratulate the authors of the position statement for their efforts, but we also wish that the chest physicians will consider in future the possibility of using NIV in the palliative treatment of dyspnea as a peculiar and unique tool of the respiratory world.

Stefano Nava, MD
Annamaria Cuomo, MD
Respiratory Intensive Care Unit
Fondazione S. Maugeri
Pavia, Italy

Correspondence to: Stefano Nava, MD, Respiratory Intensive Care Unit, Fondazione S. Maugeri, Via Ferrata 8, 27100 Pavia, Italy; e-mail: snava@fsm.it

References

1 Selecky PA, Eliasson CA, Hall RI, et al. Palliative and end-of-life care for patients with cardiopulmonary diseases: American College of Chest Physician Position Statement. Chest 2005; 128:3599–3610
2 Luce JM, Luce JA. Perspectives on care at the close of life: management of dyspnea in patients with far-advanced lung disease: "once I lose it, it's kind hard to catch it." JAMA 2001; 285:1331–1337
3 Levy M, Tanios MA, Nelson D, et al. Outcomes of patients with do-not-intubate orders treated with noninvasive ventilation. Crit Care Med 2004; 32:2002–2007

We read with great interest the position paper of the American College of Chest Physicians about palliative and end-of-life care for patients with cardiopulmonary disease.[1] We agree that it was about time for the "respiratory world" to write an official document on this hot topic. Having said that, we are concern that little emphasis was paid to the important problem of dyspnea and particularly on its treatment. Pain is one of the major fears of

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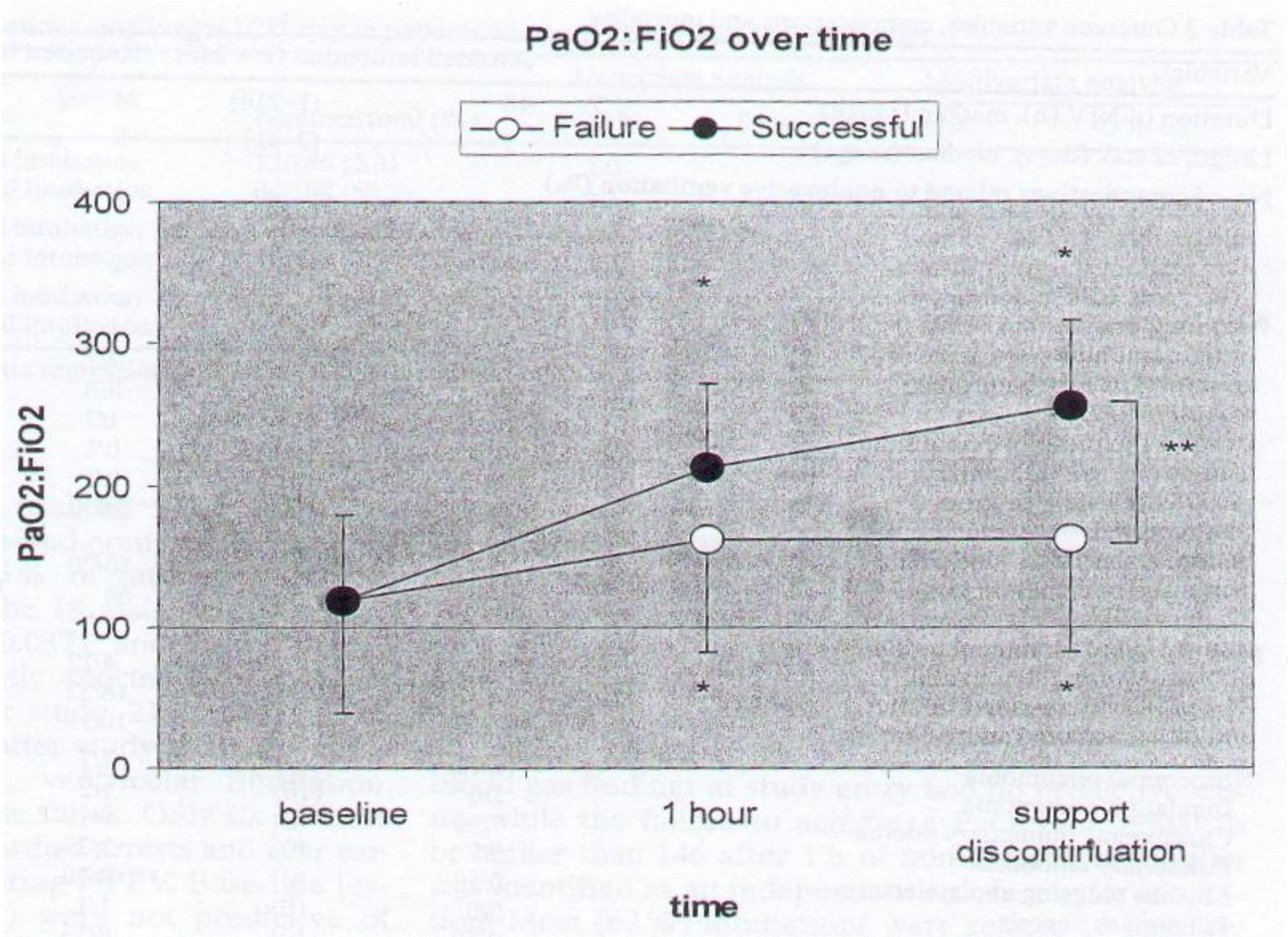
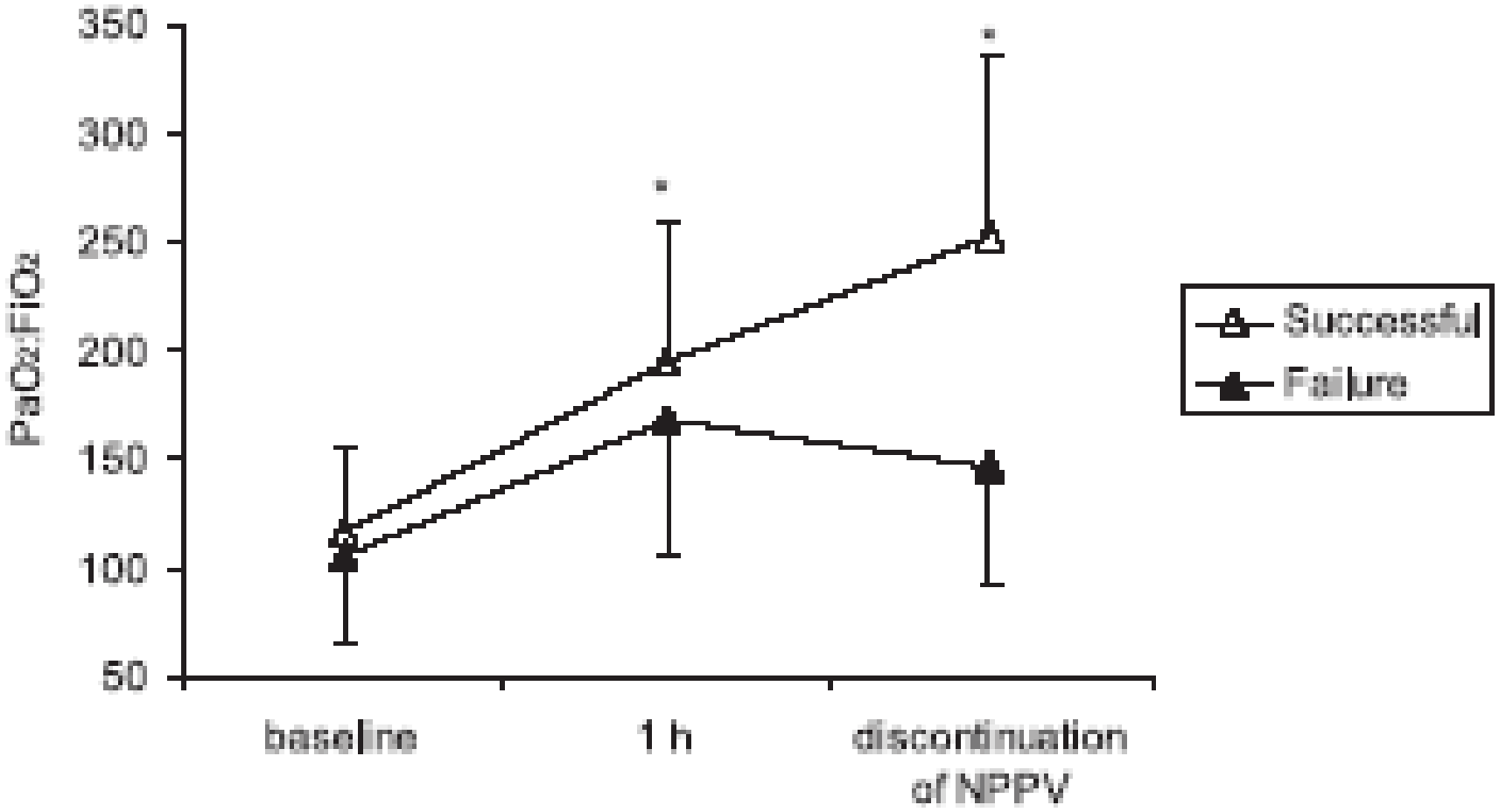
a palliative care unit for acute respiratory distress, NIV was able to significantly reduce dyspnea after only 1 h of ventilation. A random-



Antonelli M, et al. Int Care Med 2001



Antonelli M, et al.
Crit Care Med 2007

SIAARTI
SOCIETÀ ITALIANA DI ANESTESIA ANALGESIA RIANIMAZIONE E TERAPIA INTENSIVA
PRO VITA CONTRA DOLOREM SEMPER

GRANDI INSUFFICIENZE D'ORGANO "END STAGE": CURE INTENSIVE O CURE PALLIATIVE? "DOCUMENTO CONDIVISO" PER UNA PIANIFICAZIONE DELLE SCELTE DI CURA

Documento approvato e condiviso da:

- SOCIETÀ ITALIANA ANESTESIA ANALGESIA RIANIMAZIONE TERAPIA INITENSIVA (SIAARTI)
- ITALIAN RESUSCITATION COUNCIL (IRC)
- ASSOCIAZIONE NAZIONALE MEDICI CARDIOLOGI OSPEDALIERI (ANMCO)
- SOCIETÀ ITALIANA MEDICINA EMERGENZA URGENZA (SIMEU)
- SOCIETÀ ITALIANA CURE PALLIATIVE (SICP)
- SOCIETÀ ITALIANA NEFROLOGIA (SIN)
- ASSOCIAZIONE NAZIONALE INFERMIERI DI AREA CRITICA (ANIARTI)
- SOCIETÀ ITALIANA MEDICINA GENERALE (SIMG)
- ASSOCIAZIONE ITALIANA PNEUMOLOGI OSPEDALIERI (AIPO)

Cure palliative di fine vita (end-of-life palliative care): sono costituite da una serie di interventi terapeutici e assistenziali finalizzati alla "cura attiva, totale di malati la cui malattia di base non risponde più a trattamenti specifici. Fondamentale è il controllo del dolore e degli altri sintomi e in generale dei problemi psicologici, sociali e spirituali. L'obiettivo delle cure palliative è il raggiungimento della migliore qualità di vita possibile per i malati e le loro famiglie. [5]

società italiana medicina d'emergenza-urgenza

c.a. Prof. Massimo Antonelli
Presidente della SIAARTI

p.c. Dott. Giuseppe Gristina
Segretario e Tesoriere SIAARTI

Torino, 7 giugno 2013

Oggetto: documento condiviso "Grandi insufficienze d'organo 'end stage': cure intensive o cure palliative?"

Informiamo che il documento condiviso "Grandi insufficienze d'organo 'end stage': cure

dell'emergenza. E' emersa tuttavia da parte della maggioranza dei presenti la necessità di sottolineare che i percorsi di questi pazienti, una volta intrapresi, non subiscano interruzioni ricadendo inappropriatamente nel percorso dell'emergenza.

Cordiali Saluti

IL Presidente Nazionale SIMEU

Dr. Giorgio Carbone

Il Segretario Nazionale SIMEU

Dr. Andrea Fabbri

SIMEU
Società Italiana di Medicina d'Emergenza-Urgenza e delle Catastrofi

Sede Legale: Via Vittor Pisani,10
20124 MILANO
Sede Operativa: Via Nazionale, 65
10135 TORINO
c.f. 97209490071
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Ajuntament de Barcelona

BTS/ICS guideline for the ventilatory management of acute hypercapnic respiratory failure in adults

A Craig Davidson,[1] Stephen Banham,[1] Mark Elliott,[2] Daniel Kennedy,[3] Colin Gelder,[4] Alastair Glossop,[5] Alistair Colin Church,[6] Ben Creagh-Brown,[7] James William Dodd,[8,9] Tim Felton,[10] Bernard Foëx,[11] Leigh Mansfield,[12] Lynn McDonnell,[13] Robert Parker,[14] Caroline Marie Patterson,[15] Milind Sovani,[16] Lynn Thomas,[17] BTS Standards of Care Committee Member, British Thoracic Society/Intensive Care Society Acute Hypercapnic Respiratory Failure Guideline Development Group, On behalf of the British Thoracic Society Standards of Care Committee

To cite: Davidson AC, Banham S, Elliott M, *et al*. *Thorax* 2016;**71**:ii1–ii35.

End of life care

Good practice points

- Although removal of the NIV mask may be agreed as preferable, a dignified and comfortable death is possible with it in place.
- Clinicians delivering NIV or IMV should have training in end-of-life care and the support of palliative care teams.

Role of NIV in AECOPD

There are three clinical situations in which NIV is recommended in AECOPD.[157] First, the patient with a modest respiratory acidosis with the aim of preventing deterioration to a point when IMV would conventionally be considered. Second, as an alternative to IMV when conventional criteria for IMV are met (lower pH, more distress) with the intention to proceed to IMV if NIV fails. Third, as the 'ceiling' of treatment for patients who, for whatever valid reason, are not candidates for IMV. The evidence base for NIV has rarely defined the particular patient case mix in this way.

Optimising NIV delivery and technical considerations

increased mortality.[181] If NIV is adding to patient distress, and intubation has been deemed to be inappropriate (see below), NIV should be discontinued and palliative care measures adopted.

Palliative care and advanced care planning

It is recognised that palliative interventions may be appropriate and yet be provided at the same time as therapies intended to prolong life.[272] Accordingly, employing NIV as part of care that aims to relieve distress and has escalation limits may be entirely justified.

Evidence statements

In advanced disease, care planning should ideally predate acute presentation or commence as early as possible on presentation with AHRF (Level 4).

Health professionals experienced in NIV delivery have a more positive view of the benefit of NIV and perceive patient treatment wishes more postively than do clinicians with less experience of NIV (Level 4).

Recommendations

78. Clinicians delivering NIV or IMV should have ready access to palliative medicine (Grade D).

79. Multidisciplinary advance care planning should be an integral part of the routine outpatient management of progressive or advanced disease and care plans should be reviewed on presentation during an episode of AHRF (Grade D).

80. The use of NIV may allow time to establish patient preference with regard to escalation to IMV (Grade D).

Palliative care for patients who died in Emergency Departments: analysis of a multicentre cross-sectional survey. Myriam Van Tricht, *et al.* Emergency Medicine Journal 2012; 29: 795-7

e

Palliative care in Emergency Departments: an impossibile challenge? Marie-France Couilliot, *et al.* European Journal of Emergency Medicine 2012; 19: 405-7

La morte, come evento terminale di esacerbazioni acute di processi patologici cronici non reversibili, sta assumendo importanza precedentemente non prevedibile nel mondo della Medicina d'Urgenza. Come documentato da osservazioni svolte sia negli Stati Uniti d'America che in Europa, un numero sempre crescente di pazienti, di età sempre più avanzata, con sempre più numerose e più severe e gravi precedenti limitazioni funzionali e multiple patologie croniche invalidanti, su cui si instaurano sempre più severi e gravi eventi acuti, muore all'interno del Dipartimento di Emergenza (ED). In Francia, ad esempio, la percentuale di individui che muore in ospedale anziché a casa è cresciuta dal 38% degli anni '70 al 58% degli anni '90. Il ED è organizzato per rendere ottimale la valutazione ed il trattamento dei pazienti affetti dalle più variegate forme di acuzie, con l'obiettivo della loro stabilizzazione. Molto spesso (secondo alcune casistiche fin nell'80% dei casi) nel ED vengono prese (con tutti i limiti contestuali che condizionano in tal senso i processi decisionali più fini e personalizzati in emergenza-urgenza sul piano anamnestico e prognostico) decisioni relative al limitare gli interventi terapeutici, verosimilmente allo scopo di astenersi dalle forme di "accanimento", e privilegiando quindi aspetti di palliazione, con l'obiettivo di migliorare la qualità di vita dei pazienti e delle loro famiglie. Altrettanto spesso, i familiari non sono preparati a gestire gli eventi e sintomi acuti al domicilio, e si rivolgono al ED come effetto di un'inadeguata comunicazione al riguardo con gli specialisti di riferimento da cui sono seguiti, o per un'incapacità emotiva di reggere da soli il peso delle ultime ore di vita dei loro cari. Ma nel ED si possono garantire responsabilmente l'assistenza, la tutela, il rispetto, il conforto e la dignità dei pazienti nelle fasi terminali della loro storia (di malattia e non)? Ad oggi, almeno in Italia, ma anche nel resto d'Europa, non fa tipicamente parte della formazione del medico d'Urgenza (ed idem per gli infermieri) quanto concerne gli aspetti specifici del fine vita e soprattutto della palliazione.

The Journal of Emergency Medicine, Vol. 43, No. 5, pp. 803–810, 2012

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Original Contributions

INITIATING PALLIATIVE CARE IN THE EMERGENCY DEPARTMENT

Travis E. DeVader, MD, Robert Albrecht, MD, and Mark Reiter, MD, MBA

Department of Emergency Medicine, St. Luke's Hospital and Health Network, Bethlehem, Pennsylvania
Reprint Address: Travis E. DeVader, MD, Department of Emergency Medicine, St. Luke's Hospital and Health Network, 801 Ostrum Street, Bethlehem, PA 18015

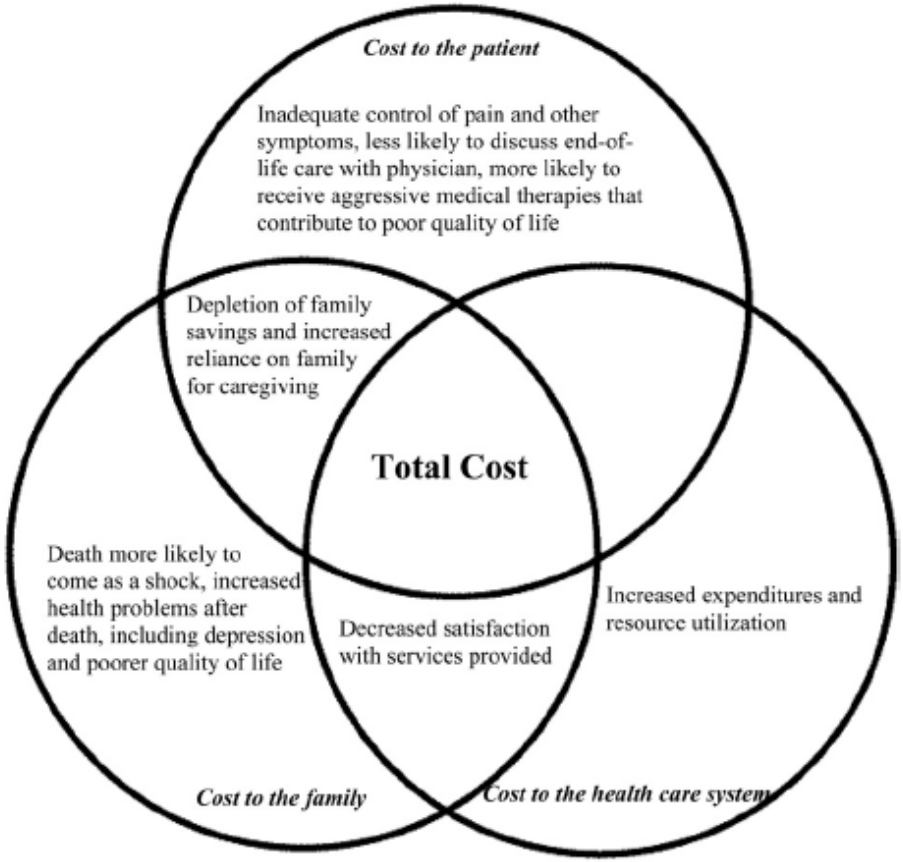

Figure 1. The cost of underutilizing palliative care to patients, their families, and the health care system.


EMERGENCY ROOM
AMBULANCE
AMBULANCE
46

Am I Doing the Right Thing? Provider Perspectives on Improving Palliative Care in the Emergency Department

Alexander K. Smith, MD, MS, MPH
Jonathan Fisher, MD
Mara A. Schonberg, MD, MPH
Daniel J. Pallin, MD, MPH
Susan D. Block, MD
Lachlan Forrow, MD
Russell S. Phillips, MD
Ellen P. McCarthy, PhD, MPH

From the Division of General Medicine and Primary Care, Department of Medicine (Smith, Schonberg, Forrow, Phillips, McCarthy), and Department of Emergency Medicine (Fisher), Beth Israel Deaconess Medical Center, Boston, MA; the Division of Psychosocial Oncology and Palliative Care, Dana-Farber Cancer Institute and Brigham and Women's Hospital, Boston, MA (Smith, Block); and the Department of Emergency Medicine, Brigham and Women's Hospital, and Division of Emergency Medicine, Children's Hospital Boston, Boston, MA (Pallin).

Dr. Smith is now with Division of Geriatrics, University of California, San Francisco, San Francisco, CA.

Study objective: Although the focus of emergency care is on the diagnosis and treatment of acute illnesses and injuries or the stabilization of patients for ongoing treatment, some patients may benefit from a palliative approach. Little is known about delivering palliative care in the emergency department (ED). We explore the attitudes, experiences, and beliefs of emergency providers about palliative care in the ED, using structured qualitative methods.

Methods: We studied 3 focus groups with 26 providers, including 14 physicians (10 residents, 4 attending physicians), 6 nurses, 2 social workers, and 4 technicians, working in 2 academic EDs in Boston. We used a grounded theory approach to code responses, resolving discrepancies by consensus.

Results: Six distinct themes emerged: (1) participants equated palliative care with end-of-life care; (2) participants disagreed about the feasibility and desirability of providing palliative care in the ED; (3) patients for whom a palliative approach has been established often visit the ED because family members are distressed by end-of-life symptoms; (4) lack of communication between outpatient and ED providers leads to undesirable outcomes (eg, resuscitation of patients with a do-not-resuscitate order); (5) conflict around withholding life-prolonging treatment is common (eg, between patient's family and written advance directives); and (6) training in pain management is inadequate.

Conclusion: Providers ranked improved communication and documentation from outpatient providers as their highest priority for improvement. Attitudinal and structural barriers may need to be overcome to improve palliative care in the ED. Despite targeted recruitment, attending physician participation was low. [Ann Emerg Med. 2009;54:86-93.]

Treating Cancer Patients who Are Near the End of Life in the Emergency Department

Dawn Felch Rondeau, MS, ACNP, FNP[a,b,*], Terri A. Schmidt, MD, MS[a]

Emerg Med Clin N Am 27 (2009) 341–354
doi:10.1016/j.emc.2009.01.006
0733-8627/09/$ – see front matter

HIPAA PERMITS DISCLOSURE TO HEALTH CARE PROFESSIONALS AS NECESSARY FOR TREATMENT

Physician Orders for Life-Sustaining Treatment (POLST)

First follow these orders, then contact physician, NP, or PA. These medical orders are based on the person's current medical condition and preferences. Any section not completed does not invalidate the form and implies full treatment for that section.

Last Name/ First/ Middle Initial | Address | City / State / Zip | Date of Birth (mm/dd/yyyy) | Last 4 SSN | Gender M F

A Check One — **CARDIOPULMONARY RESUSCITATION (CPR):** Person has no pulse and is not breathing.
☐ Attempt Resuscitation/CPR ☐ Do Not Attempt Resuscitation/DNR (Allow Natural Death)
When not in cardiopulmonary arrest, follow orders in **B**, **C** and **D**.

B Check One — **MEDICAL INTERVENTIONS:** Person has pulse and/or is breathing.
☐ **Comfort Measures Only** Use medication by any route, positioning, wound care and other measures to relieve pain and suffering. Use oxygen, suction and manual treatment of airway obstruction as needed for comfort. *Do not transfer to hospital for life-sustaining treatment. Transfer if comfort needs cannot be met in current location.*
☐ **Limited Additional Interventions** Includes care described above. Use medical treatment, IV fluids and cardiac monitor as indicated. Do not use intubation, advanced airway interventions, or mechanical ventilation. May consider less invasive airway support (e.g. CPAP, BiPAP). *Transfer to hospital if indicated. Avoid intensive care.*
☐ **Full Treatment** Includes care described above. Use intubation, advanced airway interventions, mechanical ventilation, and cardioversion as indicated. *Transfer to hospital if indicated. Includes intensive care.*
Additional Orders: _____

C Check One — **ANTIBIOTICS**
☐ No antibiotics. Use other measures to relieve symptoms.
☐ Determine use or limitation of antibiotics when infection occurs.
☐ Use antibiotics if medically indicated.
Additional Orders: _____

D Check One — **ARTIFICIALLY ADMINISTERED NUTRITION:** Always offer food by mouth if feasible.
☐ No artificial nutrition by tube.
☐ Defined trial period of artificial nutrition by tube.
☐ Long-term artificial nutrition by tube.
Additional Orders: _____

E **REASON FOR ORDERS AND SIGNATURES**
My signature below indicates to the best of my knowledge that these orders are consistent with the person's current medical condition and preferences as indicated by the **discussion with**:
☐ Patient ☐ Health Care Representative ☐ Parent of Minor
☐ Court-Appointed Guardian ☐ Other _____

Print Primary Care Professional Name | Office Use Only
Print Signing Physician / NP / PA Name and Phone Number ( )
Physician / NP / PA Signature (mandatory) | Date

SEND FORM WITH PERSON WHENEVER TRANSFERRED OR DISCHARGED

© CENTER FOR ETHICS IN HEALTH CARE, Oregon Health & Science University, 3181 Sam Jackson Park Rd, UHN-86, Portland, OR 97239-3098 (503) 494-3965

Fig. 1. Oregon Physician Orders for Life-Sustaining Treatment (POLST) form. (*Courtesy of* the Center for Ethics in Health Care, Oregon Health & Science University, Portland, OR; with permission.)

End-of-Life and Palliative Care in the Emergency Department: A Call for Research, Education, Policy and Improved Practice in This Frontier Area

Author: Garrett K. Chan, APRN, BC-PCM, PhD, CEN, San Francisco, Calif

Section Editors: Ruth E. Malone, RN, PhD, and Angela Hackenschmidt, RN, MS, CEN

Garrett K. Chan is Assistant Clinical Professor and Director, Critical Care/Trauma Graduate Program, University of California, San Francisco, School of Nursing, San Francisco, Calif.

For correspondence, write: Garrett K. Chan, APRN, BC-PCM, PhD, CEN, University of California, San Francisco, School of Nursing, 2 Koret Way, Box 0610, San Francisco, CA 94143-0610; E-mail: garrett.chan@nursing.ucsf.edu.

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0099-1767/$32.00

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Emergency clinicians often care for patients who are dying in the emergency department. Approximately 379,000 people died in emergency departments in a single year (2000).[1] Despite the common occurrence of death across all health care settings, including emergency departments, care at the end of life has been identified as being poor.[2] The end of life is an area that has been neglected in our professions and our practices, and there has been a lack of research and education devoted to improving end-of-life care.[3-5] Yet, the American Nurses Association (ANA) and the American Medical Association (AMA) have identified good care of patients and families at the end of life as core values of nursing and medicine.[6-8]

Palliative and End-of-Life Care in the Emergency Department: Guidelines for Nurses

Authors: Colleen K. Norton, PhD, RN, CCRN, Gwen Hobson, BSN, RN, and Elaine Kulm, BSN, RN, Washington, DC, New York, NY, and San Francisco, CA

Conclusion: Caring for the Emergency Nurse

Emergency nurses work in a stressful, fast-paced environment that may lead to frustration, depression, stress, and burnout. Because caring for patients at the end of life adds an additional stress to the job, emergency nurses also must be sure to take care of themselves. Effective debriefing and coping often are difficult in a fast-paced environment. Nurses who work with dying patients often become painfully aware of their own losses, contributing to anxiety regarding personal fears of loss and fears about one's own death.[13,33] At times, acknowledging emotion and admitting sensitivity is sufficient to allow an emergency nurse some sense of closure. Simple acknowledgment, however, should not replace the process of allowing an emergency nurse the adequate time and resources to debrief and deal with his or her thoughts and feelings regarding death and dying.

Noninvasive positive pressure ventilation in critical and palliative care settings: Understanding the goals of therapy*

J. Randall Curtis, MD, MPH; Deborah J. Cook, MD; Tasnim Sinuff, MD, PhD; Douglas B. White, MD; Nicholas Hill, MD; Sean P. Keenan, MD, MSc(Epid); Joshua O. Benditt, MD; Robert Kacmarek, PhD, RRT; Karin T. Kirchhoff, RN, PhD, FAAN; Mitchell M. Levy, MD; the Society of Critical Care Medicine Palliative Noninvasive Positive Pressure Ventilation Task Force

Objective: Although noninvasive positive pressure ventilation (NPPV) is a widely accepted treatment for some patients with acute respiratory failure, the use of NPPV in patients who have decided to forego endotracheal intubation is controversial. Therefore, the Society of Critical Care Medicine charged this Task Force with developing an approach for considering use of NPPV for patients who choose to forego endotracheal intubation.

Data Sources and Methods: The Task Force met in person once, by conference call twice, and wrote this document during six subsequent months. We reviewed English-language literature on NPPV for acute respiratory failure.

Synthesis and Overview: The use of NPPV for patients with acute respiratory failure can be classified into three categories: 1) NPPV as life support with no preset limitations on life-sustaining treatments, 2) NPPV as life support when patients and families have decided to forego endotracheal intubation, and 3) NPPV as a palliative measure when patients and families have chosen to forego all life support, receiving comfort measures only. For each category, we reviewed the rationale and evidence for NPPV, key points to communicate to patients and families, determinants of success and failure, appropriate healthcare settings, and alternative approaches if NPPV fails to achieve the original goals.

Conclusions: This Task Force suggests an approach to use of NPPV for patients and families who choose to forego endotracheal intubation. NPPV should be applied after careful discussion of the goals of care, with explicit parameters for success and failure, by experienced personnel, and in appropriate healthcare settings. Future studies are needed to evaluate the clinical outcomes of using NPPV for patients who choose to forego endotracheal intubation and to examine the perspectives of patients, families, and clinicians on use of NPPV in these contexts. (Crit Care Med 2007; 35:932–939)

KEY WORDS: intensive care; critical care; noninvasive ventilation; palliative care; end-of-life care

Table 1. Overview of the three-category approach to using noninvasive positive pressure ventilation (NPPV) for acute respiratory failure

Approach	Category 1	Category 2	Category 3
Definition	Life Support Without Preset Limits	Life Support With Preset Limit (Do Not Intubate)	Comfort Measures Only
Primary goals of care	Assist ventilation and/or oxygenation Alleviate dyspnea Achieve comfort Reduce risk of intubation Reduce risk of mortality Avoidance of intubation	Includes same as category 1 except intubation declined Also could include briefly prolonging life for a specific purpose (e.g., arrival of family member)	Palliation of symptoms (relief of dyspnea)
Main goals to communicate with patient and family	Goal is to restore health and use intubation if necessary and indicated	Goal is to restore health without using endotracheal intubation and without causing unacceptable discomfort	Goal is to maximize comfort while minimizing adverse effects of opiates
Determination of success	Improved oxygenation and/or ventilation Tolerance of NPPV or minor discomfort that is outweighed by potential benefit	Improved oxygenation and/or ventilation Tolerance of NPPV or minor discomfort that is outweighed by potential benefit	Improved symptoms Tolerance of NPPV
Endpoint for NPPV	Unassisted ventilation adequately supporting life Intolerance of NPPV	Unassisted ventilation adequately supporting life Intolerance of NPPV	Patient is *not* more comfortable having NPPV on or wants NPPV stopped Patient becomes unable to communicate
Response to failure	Intubation and mechanical ventilation (if indicated)	Change to comfort measures only and palliate symptoms without NPPV	Palliate symptoms without NPPV
Likely location of NPPV	ICU but may include step-down unit or acute care bed in some hospitals with appropriately monitored setting and trained personnel	Variable but may include ICU or step-down unit or acute care bed	Acute care bed but could be applied in hospice by appropriately trained personnel

ICU, intensive care unit.

Table 2. Overview of the evidence supporting use of noninvasive positive pressure ventilation for several diseases in each category of use of noninvasive positive pressure ventilation

Approach Definition	Category 1 Life Support Without Preset Limits	Category 2 Life Support with Preset Limit (Do Not Intubate)	Category 3 Comfort Measures Only
Acute exacerbation of COPD	Multiple randomized trials and several meta-analyses showing benefit (2–5)	Observational studies suggesting benefit (25–28)	No data supporting use
Hypoxic respiratory failure in immunocompromised patient	Several randomized trials and one meta-analysis showing benefit (6, 7)	Observational studies suggesting benefit (26, 27)	No data supporting use
Acute respiratory failure with cardiogenic pulmonary edema	Two randomized trials and one meta-analysis suggesting benefit (8, 9, 19)	Observational studies suggesting benefit (26, 27)	No data supporting use
Neuromuscular diseases	Two small uncontrolled observational studies suggesting possible benefit (20, 21)	No data supporting use in acute setting	No data supporting use

COPD, chronic obstructive pulmonary disease.

Palliative use of non-invasive ventilation in end-of-life patients with solid tumours: a randomised feasibility trial

Stefano Nava, Miguel Ferrer, Antonio Esquinas, Raffaele Scala, Paolo Groff, Roberto Cosentini, Davide Guido, Ching-Hsiung Lin, Anna Maria Cuomo, Mario Grassi

Summary

Background Despite best-possible medical management, many patients with end-stage cancer experience breathlessness, especially towards the end of their lives. We assessed the acceptability and effectiveness of non-invasive mechanical ventilation (NIV) versus oxygen therapy in decreasing dyspnoea and the amount of opiates needed.

Methods In this randomised feasibility study, we recruited patients from seven centres in Italy, Spain, and Taiwan, who had solid tumours and acute respiratory failure and had a life expectancy of less than 6 months. We randomly allocated patients to receive either NIV (using the Pressure Support mode and scheduled on patients' request and mask comfort) or oxygen therapy (using a Venturi or a reservoir mask). We used a computer-generated sequence for randomisation, stratified on the basis of patients' hypercapnic status ($PaCO_2$ >45 mm Hg or $PaCO_2$ ≤45 mm Hg), and assigned treatment allocation using opaque, sealed envelopes. Patients in both groups were given sufficient subcutaneous morphine to reduce their dyspnoea score by at least one point on the Borg scale. Our primary endpoints were to assess the acceptability of NIV used solely as a palliative measure and to assess its effectiveness in reducing dyspnoea and the amount of opiates needed compared with oxygen therapy. Analysis was done by intention to treat. This study is registered with ClinicalTrials.gov, number NCT00533143.

Findings We recruited patients between Jan 15, 2008, and March 9, 2011. Of 234 patients eligible for recruitment, we randomly allocated 200 (85%) to treatment: 99 to NIV and 101 to oxygen. 11 (11%) patients in the NIV group discontinued treatment; no patients in the oxygen group discontinued treatment. Dyspnoea decreased more rapidly in the NIV group compared with the oxygen group (average change in Borg scale –0·58, 95% CI –0·92 to –0·23, p=0·0012), with most benefit seen after the first hour of treatment and in hypercapnic patients. The total dose of morphine during the first 48 h was lower in the NIV group than it was in the oxygen group (26·9 mg [37·3] for NIV *vs* 59·4 mg [SD 67·1] for oxygen; mean difference –32·4 mg, 95% CI –47·5 to –17·4). Adverse events leading to NIV discontinuation were mainly related to mask intolerance and anxiety. Morphine was suspended because of severe vomiting and nausea (one patient in each group), sudden respiratory arrest (one patient in the NIV group), and myocardial infarction (one patient in the oxygen group).

Interpretation Our findings suggest that NIV is more effective compared with oxygen in reducing dyspnoea and decreasing the doses of morphine needed in patients with end-stage cancer. Further studies are needed to confirm our findings and to assess the effectiveness of NIV on other outcomes such as survival. The use of NIV is, however, restricted to centres with NIV equipment, our findings are not generalisable to all cancer or palliative care units.

Intensive Care Med
DOI 10.1007/s00134-011-2263-8

REVIEW

Élie Azoulay
Alexandre Demoule
Samir Jaber
Achille Kouatchet
Anne-Pascale Meert
Laurent Papazian
Laurent Brochard

Palliative noninvasive ventilation in patients with acute respiratory failure

Table 2 Possible advantages and disadvantages of palliative NIV in the ICU

Advantages	Disadvantages
Improves survival in some patients	Unreasonable persistence in curative treatment with the generation of false hopes and lack of understanding of side effects (facial necrosis)
Can be incorporated into a strategy of continuous care for the patient	Mediocre results, unnecessarily prolongs the dying process
Palliation: relieves the subjective sensation of dyspnea	Patient comfort and family satisfaction have not been evaluated
Enables the patient to communicate verbally	No study has systematically evaluated the results of palliative NIV along the entire chain of care, using qualitative and quantitative approaches
The ICU could be one of the best places for using palliative NIV when indicated (presence of physicians and other health-care professionals). When palliative NIV fails, the 24-h presence of the ICU staff enables the prompt initiation of opiates and anxiolytic agents	High mortality rate. The process for deciding whether to use palliative NIV is complex, possibly suboptimal, and a potential source of confusion, ambiguity, conflict, and burnout not only in the staff, but also in the patients and families

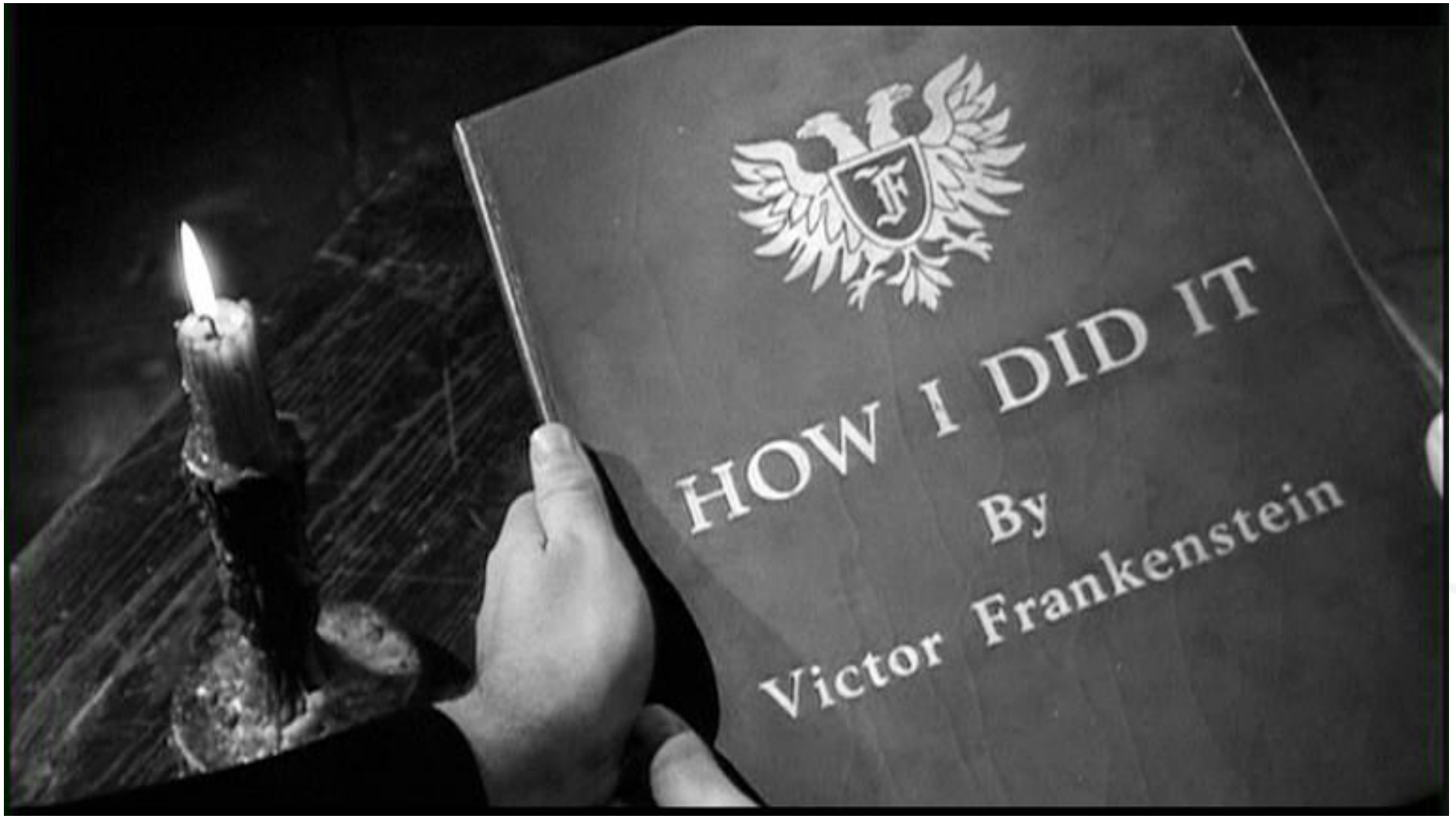
Table 3 Classification of situations for NIV use established by the SCCM (from [56])

Primary goals of care	Determination of success	Response to failure	What is said to the family
Category 1: life support without preset limits			
Assist ventilation and/or oxygenation Alleviate dyspnea Achieve comfort Reduce risk of intubation Reduce risk of mortality Avoidance of intubation	Improved oxygenation and/or ventilation Tolerance of NPPV or minor discomfort that is outweighed by potential benefit	Intubation and mechanical ventilation	Goals are to restore health and use intubation if necessary and indicated
Category 2: life support with preset limit (do not intubate)			
Includes same as category 1 except intubation declined Also could include briefly prolonging life for a specific purpose (e.g., arrival of family member)	Improved oxygenation and/or ventilation Tolerance of NPPV or minor discomfort that is outweighed by potential benefit	Change to comfort measures only and palliate symptoms without NPPV	Goal is to restore health without using endotracheal intubation and without causing unacceptable discomfort
Category 3: comfort measures only			
Palliation of symptoms (relief of dyspnea)	Improved symptoms Tolerance of NPPV	Palliate symptoms without NPPV	Goal is to maximize comfort while minimizing adverse effects of opiates

NPPV noninvasive positive pressure ventilation

Table 4 Data on situations for NIV use as established by the SCCM [56]

Approach definition	Category 1: life support without preset limits	Category 2: life support with preset limit (do not intubate)	Category 3: comfort measures only
Acute exacerbation of COPD	Multiple randomized trials and several meta-analyses showing benefit	Observational studies suggesting benefit	No data supporting use
Hypoxic respiratory failure in immunocompromised patient	Several randomized trials and one meta-analysis showing benefit	Observational studies suggesting benefit	No data supporting use
Acute respiratory failure with cardiogenic pulmonary edema	Two randomized trials and one meta-analysis suggesting benefit	Observational studies suggesting benefit	No data supporting use
Neuromuscular diseases	Two small uncontrolled observational studies suggesting possible benefit	No data supporting use in acute setting	No data supporting use


HOW I DID IT
By
Victor Frankenstein

X CONGRESSO NAZIONALE SIMEU
Il volto della Medicina di Emergenza-Urgenza:
identità professionale e servizio pubblico

NON-INVASIVE MECHANICAL VENTILATION FOR ACUTE RESPIRATORY FAILURE IN THE EMERGENCY DEPARTMENT: UNCONVENTIONAL INDICATIONS

Rodolfo Ferrari *, Riccardo Voza ^, Giorgio Monti *, Roberto Lazzari *, Daniela Agostinelli *, Nicola Binetti ^, Mario Cavazza *

*Medicina d'Urgenza e Pronto Soccorso, Policlinico Sant'Orsola – Malpighi, Azienda Ospedaliero Universitaria di Bologna

^ Pronto Soccorso ed Emergenza Territoriale, Area Nord, Azienda USL di Bologna

Results

313 cases MV (media 2.57 / day)

297 NIV (media 2.43 / day)

Age (media, median): 81 years, 81

pH:7.32, 7.33;

PaO_2/FiO_2: 214 mmHg, 209;

NIV as a “ceiling treatment” rate: 27.4%;

failure rate: 22.7%

Results

Unconventional indications

rate: 51.1%

“ceiling” rate: 32.6%

failure rate: 26.7%

“ceiling” in failures rate: 52.8%

failure without ETI rate: 80.0%

higher “complexity”

(intensivist involvement rate, total NIV time, changing technique rate, changing interface rate, vasopressors rate, BC transfusion rate)

Conclusions

Failure rate (22.7%) of NIV in our ED is superimposable to data published in the literature (25%),

even including 51.1 cases with unconventional indication to NIV

Unconventional cases have a higher failure rate than conventional ones;

80% of death cases is not treated by ETI (other causes, “ceiling”, etc.);

5.3% of cases fails because treated by ETI in first 72 hours

Ozyilmaz et al. BMC Pulmonary Medicine 2014, 14:19
http://www.biomedcentral.com/1471-2466/14/19

BMC Pulmonary Medicine

REVIEW Open Access

Timing of noninvasive ventilation failure: causes, risk factors, and potential remedies

Ezgi Ozyilmaz[1], Aylin Ozsancak Ugurlu[2] and Stefano Nava[3*]

Abstract

Background: Identifying the predictors of noninvasive ventilation (NIV) failure has attracted significant interest because of the strong link between failure and poor outcomes. However, very little attention has been paid to the timing of the failure. This narrative review focuses on the causes of NIV failure and risk factors and potential remedies for NIV failure, based on the timing factor.

Results: The possible causes of immediate failure (within minutes to <1 h) are a weak cough reflex, excessive secretions, hypercapnic encephalopathy, intolerance, agitation, and patient-ventilator asynchrony. The major potential interventions include chest physiotherapeutic techniques, early fiberoptic bronchoscopy, changing ventilator settings, and judicious sedation. The risk factors for early failure (within 1 to 48 h) may differ for hypercapnic and hypoxemic respiratory failure. However, most cases of early failure are due to poor arterial blood gas (ABGs) and an inability to promptly correct them, increased severity of illness, and the persistence of a high respiratory rate. Despite a satisfactory initial response, late failure (48 h after NIV) can occur and may be related to sleep disturbance.

Conclusions: Every clinician dealing with NIV should be aware of these risk factors and the predicted parameters of NIV failure that may change during the application of NIV. Close monitoring is required to detect early and late signs of deterioration, thereby preventing unavoidable delays in intubation.

Keywords: Noninvasive ventilation, Treatment failure, Respiratory insufficiency

Review

The utilization of noninvasive mechanical ventilation (NIV) has become one of the most important developments in the field of mechanical ventilation over the past two decades. The use of NIV during acute respiratory failure (ARF) has increased since the late 1990s for all diagnoses, including patients with and without chronic obstructive pulmonary disease (COPD), regardless of the supporting evidence for the later [1].

NIV failure has been defined as the need for endotracheal intubation (ETI) or death [2]. Its rate greatly varies between 5 and 60%, depending on numerous factors, including the cause of ARF [3,4]. Unsuccessful NIV was found to be independently associated with death, especially in patients with de novo ARF [5]. This may indicate the need for caution with regard to the application of NIV and for close monitoring to switch promptly to ETI when necessary.

Several investigators have tried to assess the best predictors of NIV failure [6-12]. However, to the best of our knowledge, despite the rather extensive literature in the NIV field, there is only one paper, published 10 years ago, summarizing the evidence for the risk factors for NIV failure, and no studies of the timing of the failure [13]. Based on data from randomized controlled trials (RCTs), three temporal moments were identified: 1) immediate failure (within minutes to <1 h), 2) early failure (1 to 48 h), and 3) late failure (after 48 h) (Figure 1) [6-12]. The purpose of this narrative review is to illustrate the main patient-related predictors or risks factors of immediate, early, and late failure. We also discuss possible remedies to avoid ETI and nonpatient-related risk factors.

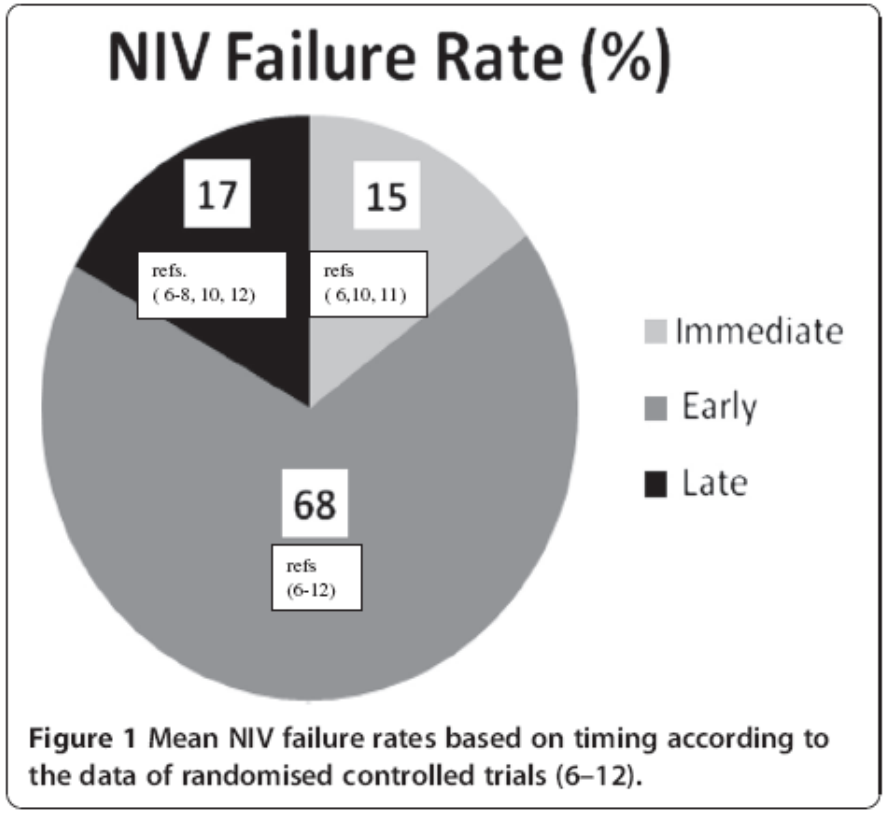


Figure 1 Mean NIV failure rates based on timing according to the data of randomised controlled trials (6–12).

* Correspondence: stefanava@gmail.com
[3]Department of Specialistic, Diagnostic and Experimental Medicine (DIMES), Respiratory and Critical Care, University of Bologna, Sant'Orsola Malpighi Hospital building #15, Alma Mater Studiorum, via Massarenti n.15, Bologna 40138, Italy
Full list of author information is available at the end of the article

Table 1 Indications and contraindications for NIV in acute care [4,16,17,35]

Indications:

A- Gas exchange:

- Acute or acute on chronic ventilator failure (best indication), $PaCO_2 > 45$ mmHg
- Ph < 7.35
- Hypoxemia (use with caution), PaO_2/FIO_2 ratio < 200

B- Bedside observations:

- Increased dyspnea- moderate to severe
- Tachypnoea (24 breaths per minute in obstructive, >30 per minute in restrictive)
- Signs of increased work of breathing, accessory muscle use, and abdominal paradox

Absolute contraindications:

- Cardiac or respiratory arrest
- Unable to fit mask

Relative contraindications:

- Non-respiratory organ failure (severe encephalopathy with GCS < 10, severe upper gastrointestinal bleeding, hemodynamic instability or unstable cardiac arrthythmia)
- Inability to cooperate/protect the airway
- Inability to clear respiratory secretions
- High risk of aspiration
- Recent facial surgery, trauma, or deformity
- Upper airway obstruction

NIV: Noninvasive ventilation, GCS: Glasgow coma scale.

Exclusion criteria (any may be present)
Respiratory arrest
Cardiovascular instability (hypotension, arrhythmias, myocardial infarction)
Somnolence, impaired mental status, uncooperative patient
High aspiration risk; viscous or copious secretions
Recent facial or gastroesophageal surgery
Craniofacial trauma, fixed nasopharyngeal abnormalities
Extreme obesity

GOLD 2005


HELP!

inedita energia

leggere e saper leggere

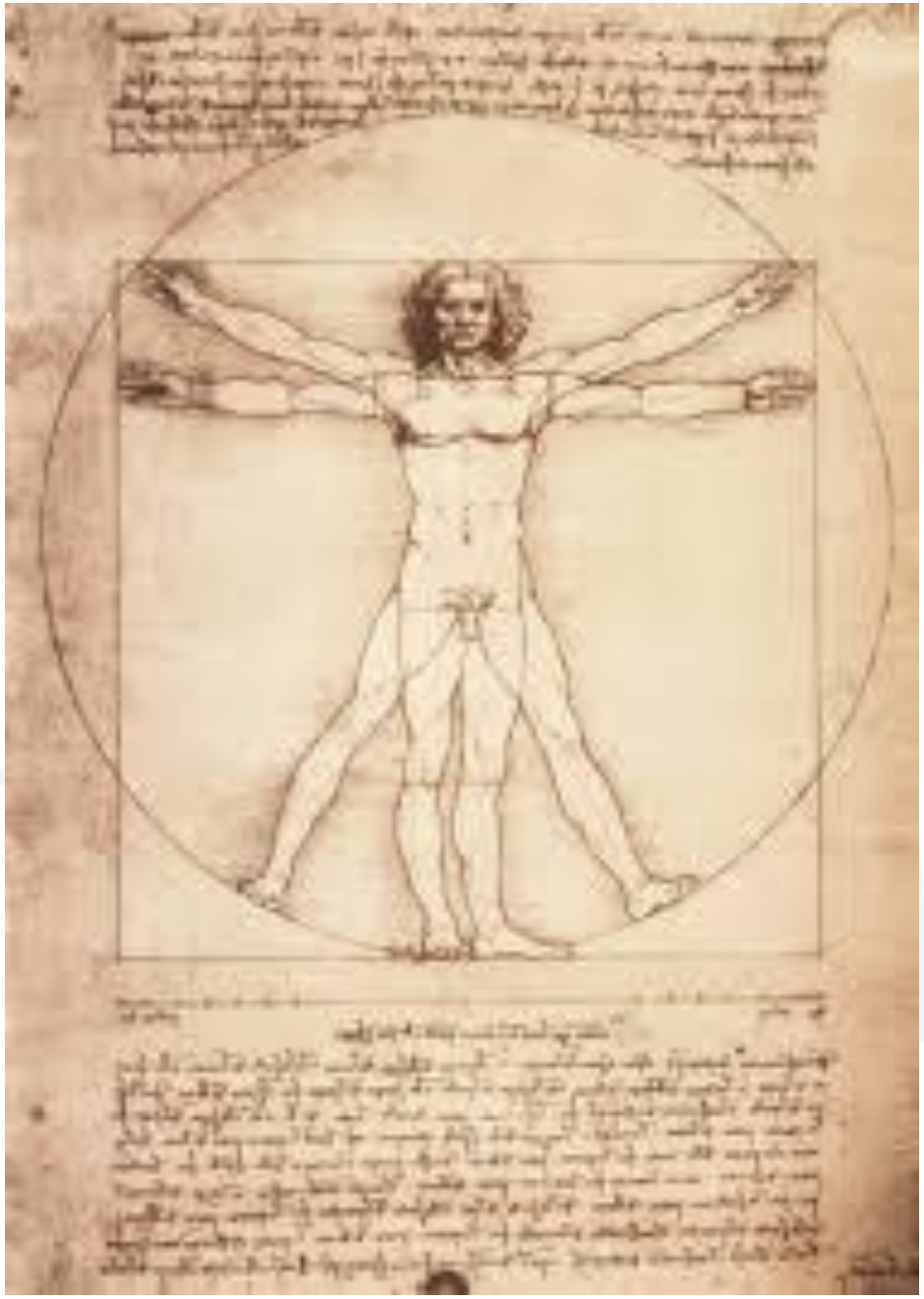
saggi di critica letteraria
per "Il Gatto Selvatico" 1955-1965

Intensive Care Med (2016) 42:1–2
DOI 10.1007/s00134-015-4092-7

EDITORIAL

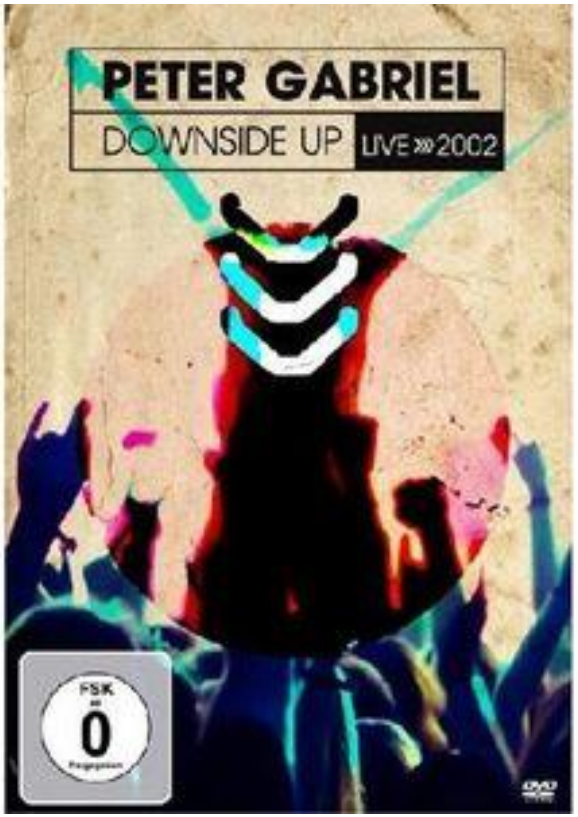
Antoni Torres
Matteo Bassetti
Jan Bakker

Hospitalized patients at risk of dying: an *Intensive Care Medicine* call for papers




CARLO PONTI
ETTORE SCOLA
NINO MANFREDI
BRUTTI, SPORCHI e CATTIVI


Jimi Hendrix
if six were nine


PETER GABRIEL
DOWNSIDE UP
LIVE »» 2002
FSK
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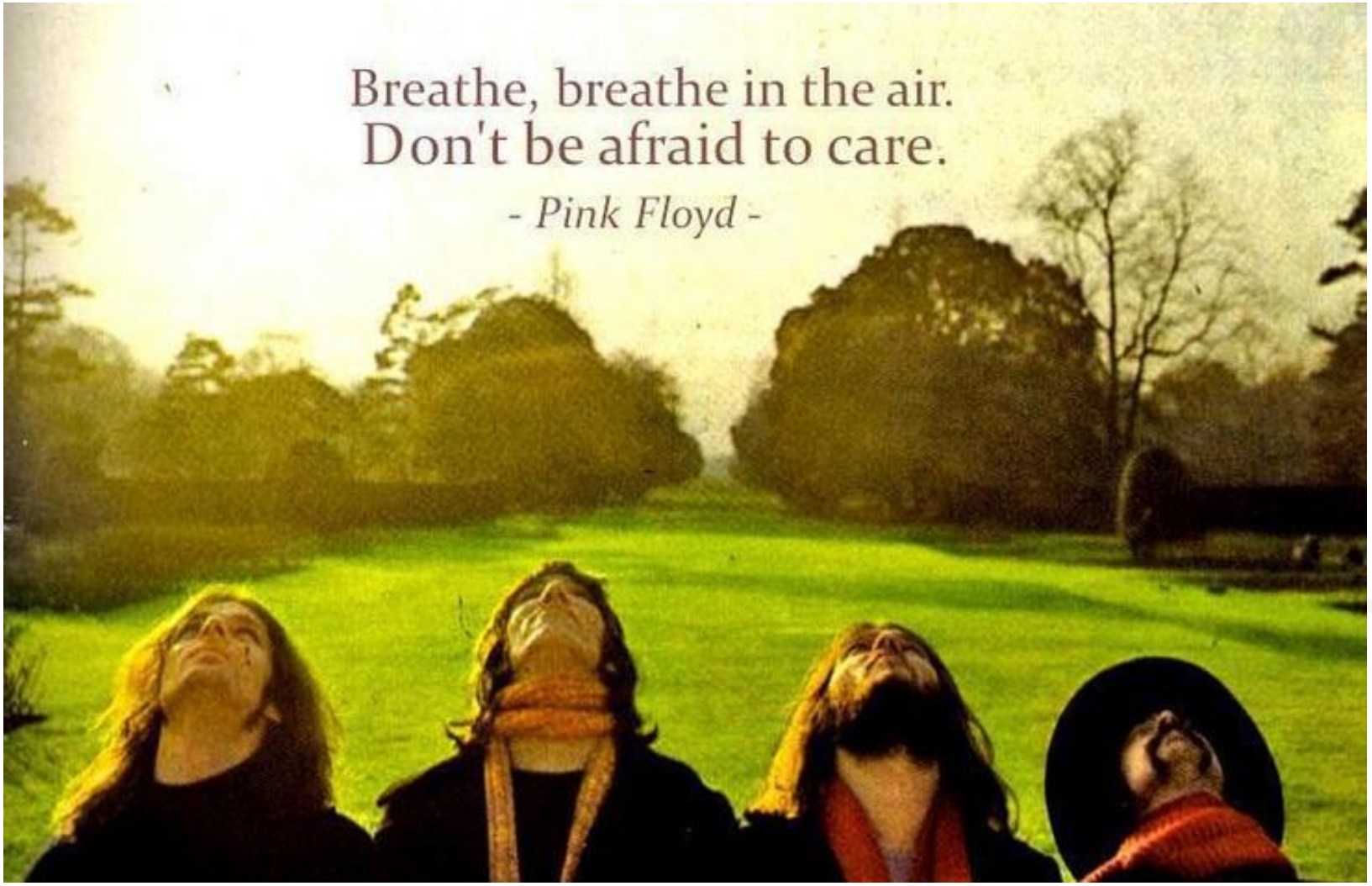
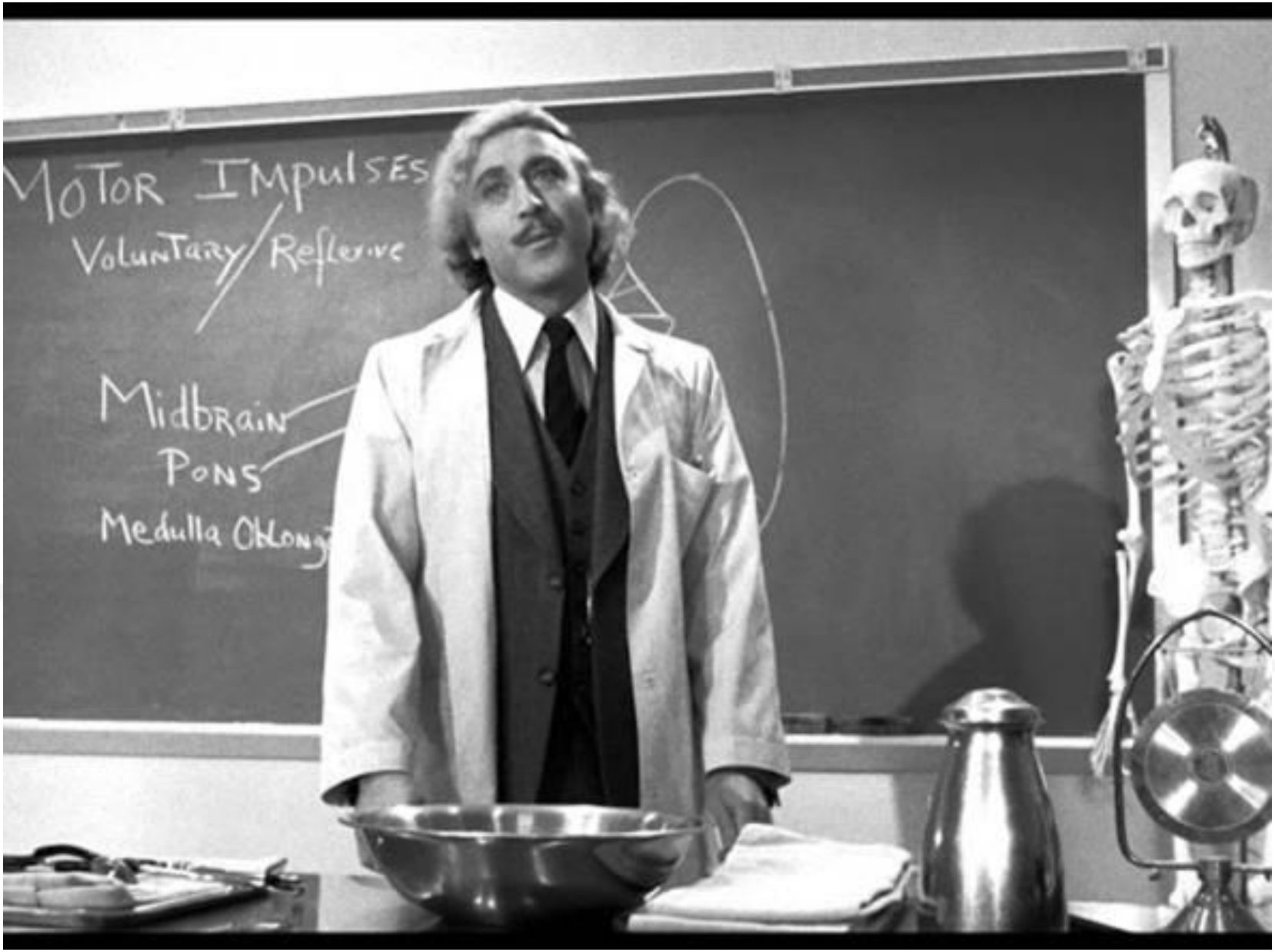
“NIV works – an evidence based verdict.”

BTS GUIDELINE. Thorax 2002;57:192-211


Breathe, breathe in the air.
Don't be afraid to care.
- Pink Floyd -



... la lezione è terminata ...

Fino all'ultimo respiro:

NIV e palliazione

Rodolfo Ferrari

Medicina d'Urgenza e Pronto Soccorso
Policlinico Sant'Orsola - Malpighi
Bologna

dr.rofer @ gmail.com