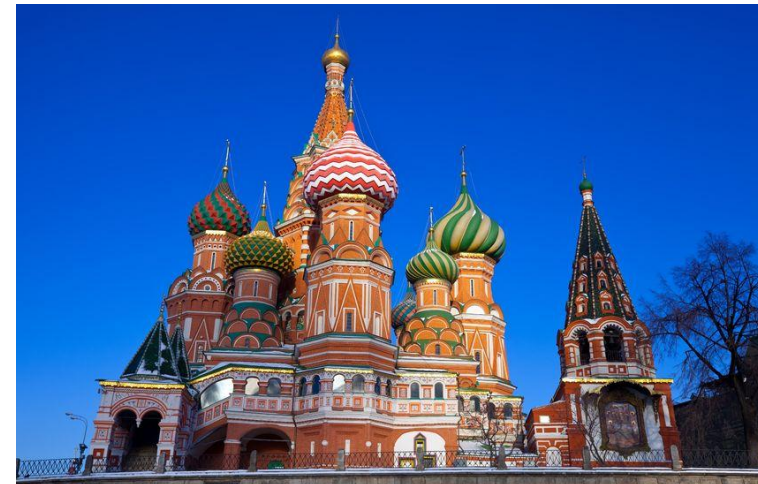


# Updating the guidelines for procedural sedation

Dr. Jannicke Mellin-Olsen, Norway  
European Society of Anaesthesiology Secretary



Moscow September 2016





# XIV

Съезд Федерации  
Анестезиологов  
и Реаниматологов

XIV Congress of the Federation  
of Anaesthesiologists  
and Reanimatologists of Russia

20–22 сентября 2014  
Россия, г. Казань



# XIV

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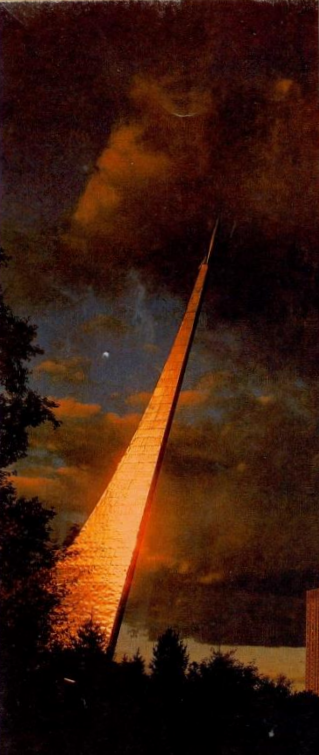




PARKING:  
FINN TORE MÅTTE  
SELVSAGT VENTE TIL  
DET SÅ SIKKELIG  
ROTETE UT FOR HAN  
FOREVIGET ROMMET!

EN DEL AV GJENGEN  
TILBAAGTE DET MESTE  
AV MOSKVATUREN PÅ HOIENHREN

HOTELL KOSMOS  
ROMFARTSMONUMENTET I TITAN





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ордена Ленина  
государственный  
ЦИРК



НА ЛЕНИНСКИХ ГОРАХ

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Серия АП Б/кв. № **СЕКТОР «Г»** Начало  
000086 \* Ряд 8 МЕСТО 65 в 19 часов

**Цена 2 рубля**



# Conflicts of Interest:



- Financial: none
- Secretary ESA
- Past President European Board of Anaesthesiology
- Deputy Secretary WFSA
- Consultant Anaesthesiologist Bærum Hospital, Norway

Many hats but not involving money

# Presentation Overview:

- Anaesthesiology and patient safety
- Procedural sedation and Patient Safety
- Developing guidelines on Procedural Sedation





**HELSINKI DECLARATION ON  
PATIENT SAFETY IN ANAESTHESIOLOGY**

# Anaesthesiology and patient safety

October 16, 1846

Morton's ether operation

The start of effective  
anaesthesia



January 28, 1848

The first fatality directly attributed to chloroform anaesthesia (Hannah Greener) was recorded.



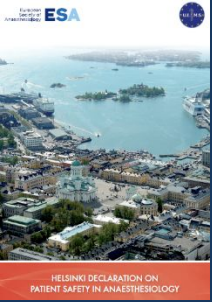
## HELSINKI DECLARATION ON PATIENT SAFETY IN ANAESTHESIOLOGY

### BACKGROUND

Anaesthesiology shares responsibility for quality and safety in Anaesthesia, Intensive Care, Emergency Medicine and Pain Medicine, including the whole perioperative process and also in many other situations inside and outside the hospital where patients are at their most vulnerable.

- Around 230 million patients undergo anaesthesia for major surgery in the world every year. Seven million develop severe complications associated with these surgical procedures from which one million die (200,000 in Europe).<sup>1</sup> All involved should try to reduce this complication rate significantly.
- Anaesthesiology is the key specialty in medicine to take up responsibility for achieving the goals listed below which will notably improve Patient Safety in Europe.





# Launch Helsinki Declaration

Helsinki, June 13, 2010

Seminar at the Euroanaesthesia Congress

Presentations demonstrating our role in the OT, ICU, Pain, EM, **Sedation**, and more.

Support by the WHO, Patients, WFSA, UEMS, Medical-Technical Industry, Health Care Politicians

Signatures



# Helsinki Declaration on Patient Safety in Anaesthesiology

- “Patients have a right to expect to be safe and protected from harm during their medical care and Anaesthesiology has a key role to play improving patient safety in **all situations where vital functions of patients are potentially at risk.**
- **“All institutions providing sedation to patients must comply with anaesthesiology recognised sedation standards for safe practice.”**

Slide adaption from Hans Knape  
at the launch of the Helsinki Declaration

# Queen Victoria's 8th labour



# Recent developments in medicine

- Enormous development of less traumatic surgical procedures
- Surgery may be associated with decreased stress response in patients
- Massive increase in diagnostic and therapeutic procedures, unpleasant to undergo, but not necessarily requiring anaesthesia performed by a full anaesthesia team (anaesthesiologist supported by non-physician anaesthesia personnel)
- Limited availability of anaesthesiological specialist support



# Recent developments in medicine

- More potent medicines:
  - Midazolam
  - Short acting opioids with short onset time (alfentanil, remifentanil)
  - IV hypnotics (propofol, etomidate, ketamine)
- Easy to administer
- Increases the productivity of surgeons and physicians and
- Few risks?





**12****AUTOPSY REPORT**

No.

2009-04415

JACKSON, MICHAEL

I performed an autopsy on the body of



at \_\_\_\_\_ the DEPARTMENT OF CORONER

Los Angeles, California on JUNE 26, 2009 @ 1000 HOURS  
(Date) (Time)From the anatomic findings and pertinent history I ascribe the death to:

(A) ACUTE PROPOFOL INTOXICATION

DUE TO OR AS A CONSEQUENCE OF

(B)

DUE TO OR AS A CONSEQUENCE OF

(C)

DUE TO OR AS A CONSEQUENCE OF

(D)

OTHER CONDITIONS CONTRIBUTING BUT NOT RELATED TO THE IMMEDIATE CAUSE OF DEATH:

BENZODIAZEPINE EFFECT

*Anatomical Summary:*

1. Toxicology findings (see separate report).
  - A) Propofol, lorazepam, midazolam, lidocaine, diazepam and nordiazepam, identified in blood samples (see toxicology report for details).
  - B) Propofol, midazolam, lidocaine and ephedrine identified in urine.
  - C) Propofol and lidocaine identified in liver tissue.
  - D) Propofol identified in vitreous humor.
  - E) Lidocaine and propofol identified in stomach contents.

# Why did Michael Jackson die?

- Wrong diagnosis.
- Wrong indication for Procedural Sedation
- Wrong PSA medicine administration
- Incompetent and non-qualified doctor
- Failing or absent personnel supervision
- Failing or absent monitoring



**12****AUTOPSY REPORT**

No.

2009-04415

JACKSON, MICHAEL

Page 11

## OPINION:

Toxicology studies show a high blood concentration of propofol, as well as the presence of benzodiazepines as listed in the toxicology report. The autopsy did not show any trauma or natural disease which would cause death.

The cause of death is acute propofol intoxication. A contributory factor in the death is benzodiazepine effect.

The manner of death is **homicide**, based on the following:

1. Circumstances indicate that propofol and the benzodiazepines were administered by another.
2. The propofol was administered in a non-hospital setting without any appropriate medical indication.
3. The standard of care for administering propofol was not met (see anesthesiology consultation). Recommended equipment for patient monitoring, precision dosing, and resuscitation was not present.
4. The circumstances do not support self-administration of propofol.

*Christopher Rogers*  
CHRISTOPHER ROGERS, MD, MBA  
CHIEF FORENSIC MEDICINE DIVISION

DATE

*8-19-09*

*Lakshmanan Sathyavagiswaran*  
LAKSHMANAN SATHYAVAGISWARAN, MD  
FRCP (C), FCAP, FACP  
CHIEF MEDICAL EXAMINER-CORONER

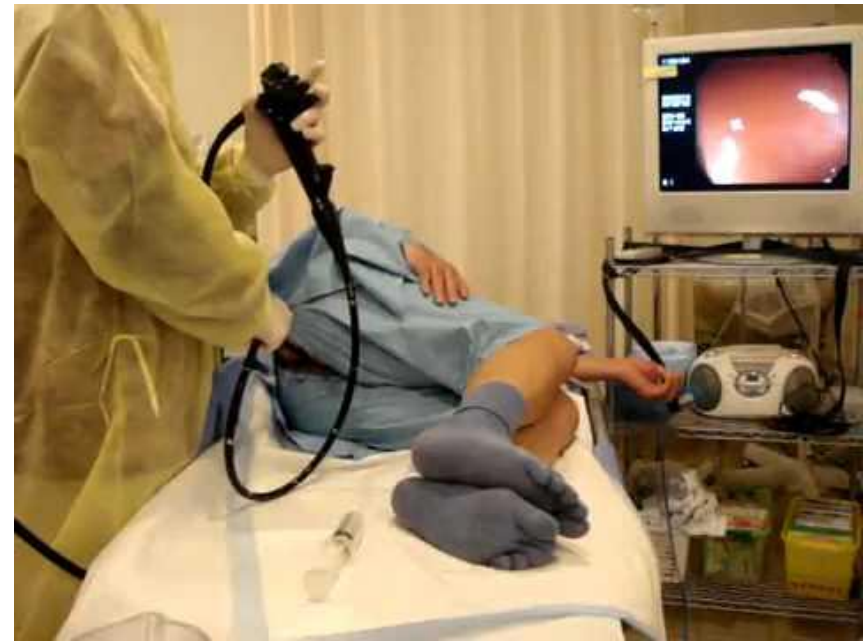
DATE

*8-19-09*

CR:mtm:c  
D-06/26/09  
T-06/30/09

# Prerequisites for safe PSA

- PSA is an independent medical act.
- Training of PSA practitioners
- Composition and competencies of the PSA team
- Selection of patients
- Definition of PSA
- Equipment and monitoring
- Recovery facilities
- Discharge criteria
- Registration
- Quality indicators: quality and safety



Slide adaption from Hans Knape  
at the launch of the Helsinki Declaration

# How does Anaesthesiology respond?

1. Anaesthesiologists should regulate all procedural sedation and analgesia and maintain full authority over the process.
2. Laissez faire. Provide each specialty the flexibility to define and enforce its PSA practice without anaesthesiology oversight.
3. Let hospitals delegate authority for sedation leadership to an individual or a multidisciplinary hospital-wide sedation committee.
4. Create hospital-wide PSA committees to teach and be a resource to translate guidelines to hospital protocols meeting requirements of the hospital involved.

Slide adaption from Hans Knape  
at the launch of the Helsinki Declaration

# Guidelines on PSA by non-anaesthesiologists

- European Guidelines
- ESGE-ESGENA-ESA-Guideline:  
Non-anesthesiologist administration of  
propofol for GI endoscopy

Slide adaption from Hans Knape  
at the launch of the Helsinki Declaration

## European Society of Gastrointestinal Endoscopy, European Society of Gastroenterology and Endoscopy Nurses and Associates, and the European Society of Anaesthesiology Guideline: Non-anesthesiologist administration of propofol for GI endoscopy



European  
Society of  
Anaesthesiology



### Authors

J. M. Dumonceau<sup>1,1</sup>, A. Riphaus<sup>2,1</sup>, J. R. Aparicio<sup>3</sup>, U. Beilenhoff<sup>4</sup>, J. T. A. Knape<sup>5</sup>, M. Ortman<sup>6</sup>, G. Paspatis<sup>7</sup>, C. Y. Ponsioen<sup>8</sup>, I. Racz<sup>9</sup>, F. Schreiber<sup>10</sup>, P. Vilmann<sup>11</sup>, T. Wehrmann<sup>12</sup>, C. Wientjes<sup>8</sup>, B. Walder<sup>13</sup> and the NAAP Task Force Members<sup>2</sup>

### Institutions

Institutions are listed at the end of article.

### Bibliography

**DOI** <http://dx.doi.org/10.1055/s-0030-1255728>  
Endoscopy 2010; 42:  
960–974 © Georg Thieme  
Verlag KG Stuttgart · New York  
ISSN 0013-726X

### Corresponding authors

**J. M. Dumonceau, MD, PhD**  
Division of Gastroenterology  
and Hepatology

Propofol sedation by non-anesthesiologists is an upcoming sedation regimen in several countries throughout Europe. Numerous studies have shown the efficacy and safety of this sedation regimen in gastrointestinal endoscopy. Nevertheless, this issue remains highly controversial. The aim of this evidence- and consensus-based set of guideline is to provide non-anesthesiologists with a comprehensive framework for propofol sedation during digestive endoscopy. This guideline results from a collaborative effort from representatives of

the European Society of Gastrointestinal Endoscopy (ESGE), the European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA) and the European Society of Anaesthesiology (ESA). These three societies have endorsed the present guideline.

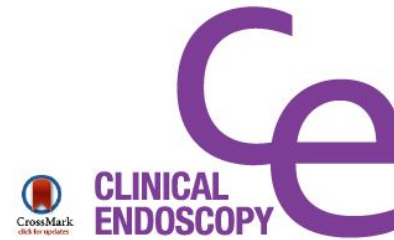
The guideline is published simultaneously in the Journals *Endoscopy* and *European Journal of Anaesthesiology*.

## COMMENTARY

Clin Endosc 2016;49:1-3

<http://dx.doi.org/10.5946/ce.2016.49.1.1>

Print ISSN 2234-2400 • On-line ISSN 2234-2443



### Open Access

## Sedation for Gastrointestinal Endoscopy: Practical Issues in Patient Safety and Quality Management

Seung Bae Yoon and Young-Seok Cho

Division of Gastroenterology, Department of Internal Medicine, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

- In 2010, ESGE, ESGEN and ESA formulated guidelines for NAAP for GI endoscopy.
- However, the ESA has officially and publicly dissociated itself from the NAAP guideline after the death of Michael Jackson as a result of propofol administration without appropriate monitoring.

## SPECIAL ARTICLE

# **Non-anaesthesiologists should not be allowed to administer propofol for procedural sedation: a Consensus Statement of 21 European National Societies of Anaesthesia**

Azriel Perel

Propofol, which is the most commonly used drug for induction of general anaesthesia, has also become a popular drug for procedural sedation. Because its use may be associated with serious and potentially fatal side-effects, the manufacturers of propofol restrict its use solely to personnel trained in general anaesthesia. In spite of this warning, the use of propofol for procedural sedation by non-anaesthesiologists is rapidly expanding in many countries. Recently, the US Food and Drugs Administration (FDA) denied a petition from gastroenterologists seeking the removal of this particular restriction. This unequivocal ruling of the FDA received strong support from the American Society of Anesthesiologists (ASA). At about the same time, the European Society of Anaesthesiology (ESA), together with various European gastroenterology societies, published new guidelines entitled 'Nonanaesthesiologist Administration of Propofol for

Gastrointestinal Endoscopy' (NAAP). Following publication of the NAAP guidelines, many reservations have been expressed by ESA member societies and individuals, dealing with professional, political, procedural and safety-oriented concerns. Out of concern for patient safety, and in order to officially and publicly dissociate themselves from the NAAP guidelines, 21 national societies of anaesthesiology in Europe, all of whom are ESA members, have signed a Consensus Statement confirming that due to its significant well known risks, propofol should be administered only by those trained in the administration of general anaesthesia.

*Eur J Anaesthesiol* 2011;28:580–584

Published online 24 June 2011

Keywords: guidelines, patient safety, propofol, sedation, standards

**Guidelines on non-anaesthesiologist administration of propofol for gastrointestinal endoscopy: a double-edged sword**

Christian Werner, Andrew Smith and Hugo Van Aken



European Journal of Anaesthesiology 2011, 28:553-555

## Controversy

- One group opposes the guideline through perceived lack of scientific validity and apparent abandonment of anaesthesiologists' interests
- Another views the approach as an enhancement of safety standards, particularly for those countries currently providing care below the required level.
- The diverse positions among ESA members reflect the different medical practices, reimbursement policies and political leanings within individual countries.
- The guideline offers guidance and is not composed of fast and hard rules. Implementation may be subject to domestic regulations or local policy



**Guidelines on non-anaesthesiologist administration of propofol for gastrointestinal endoscopy: a double-edged sword**

Christian Werner, Andrew Smith and Hugo Van Aken



European Journal of Anaesthesiology 2011, 28:553-555

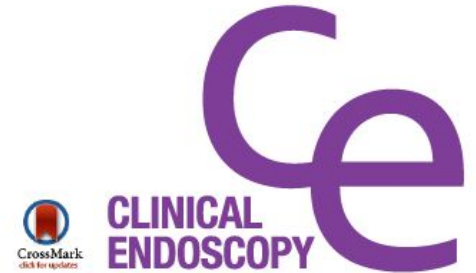
- Anaesthesiologists in every European nation have a **unique opportunity to show leadership** in shaping the practice of procedural sedation and in training sedation practitioners.
- Using our influence and expertise to create the right conditions for skilled sedation can only enhance the quality and safety of sedation practice throughout Europe. It would be unfortunate if fundamentalism and populism were to weaken our position as a profession.

## ORIGINAL ARTICLE

Clin Endosc 2016;49:47-55

<http://dx.doi.org/10.5946/ce.2016.49.1.47>

Print ISSN 2234-2400 • On-line ISSN 2234-2443



### Open Access

# Considerable Variability of Procedural Sedation and Analgesia Practices for Gastrointestinal Endoscopic Procedures in Europe

Hermanus H. B. Vaessen and Johannes T. A. Knapé

Division of Anaesthesiology, Intensive Care and Emergency Medicine, University Medical Centre Utrecht, Utrecht, Netherlands

Questionnaire, 2012:

National Associations of Nurse Anesthetists in Europe National Delegates of the European Section and Board of Anaesthesiology

Country	Patients served by USC for GI endoscopy, %	% Patients served by CSC for GI endoscopy, %
Austria	<25	50–75
Belgium	50–75	25–50
Bulgaria	<25	>75
Czech Republic	50–75	<25
England	>75	<25
France	<25	>75
Germany	<25	>75
Italy	50	25–50
Luxembourg	<25	25–50
Norway	75	<25
Poland	30	60
Portugal	<25	>75
Spain	<25	>75
The Netherlands	>75	<25
Switzerland	<25	>75
Sweden	50–75	25–50

USC, uncontrolled sedation care; CSC, controlled sedation care; GI, gastrointestinal.

Country	Anesthesiologist (MD)	Endoscopist (MD)	Endoscopist nurse	Nurse administered propofol sedation	Non-anesthesiologist	Endoscopy assistant (MD)	Nurse anesthetist	Sedation practitioner
Austria						×		
Belgium					×			
Bulgaria	★ <sup>a)</sup>							
Czech Republic	★ <sup>a)</sup>							
France							×	
Germany		×						
Great Britain		×						×
Italy		×	×			×		
Luxembourg	★ <sup>a)</sup>							
Norway							×	
Poland							×	
Portugal	★ <sup>a)</sup>							
Spain		×	×				×	
The Netherlands		×						×
Switzerland		×	×	×				
Sweden							×	

<sup>a)</sup>Sedation: confined to anesthesiologist.

**Table 3.** Routine Patient Controlled Sedation Care Monitoring during Gastrointestinal Endoscopy

Country	Pulse oximetry	Heart rate	NIBP	ECG	Capnography
Austria	+	+	+	-	-
Belgium	+	+	+	+	+
Bulgaria	+	+	-	-	-
Czech Republic	+	+	+	-	-
England	+	+	+	+	+
France	+	+	+	+	+
Germany	+	+	+	-	-
Italy	+	+	+	+	-
Luxembourg	+	+	+	+	+
Norway	+	+	+	+	+
Poland	+	+	+	-	-
Portugal	+	+	+	+	+
Spain	+	+	+	+	-
The Netherlands	+	+	+	+	+
Switzerland	+	+	+	-	-
Sweden	+	+	+	-	-

NIBP, non-invasive blood pressure; ECG, electrocardiography.

**Table 4.** Monitoring during Recovery after Controlled Sedation Care Gastrointestinal Endoscopy

Country	Pulse oximetry	Heart rate	NIBP	ECG	Capnography
Austria	+	+	+	-	-
Belgium	+	+	+	-	-
Bulgaria	+	-	-	-	-
Czech Republic	+	+	+	-	-
England	+	+	+	-	-
France	+	+	+	+	-
Germany	+	+	+	-	-
Italy	+	+	+	+	+
Luxembourg	+	+	+	+	-
Norway	+	+	+	+	-
Poland	+	+	+	-	+
Portugal	+	+	+	+	-
Spain	+	+	+	+	+
The Netherlands	+	+	+	+	-
Switzerland	+	+	+	-	-
Sweden	+	+	+	-	-

NIBP, non-invasive blood pressure; ECG, electrocardiography.

# Results:

## ORIGINAL ARTICLE

Clin Endosc 2016;49:47-55  
http://dx.doi.org/10.5946/ce.2016.49.1.47  
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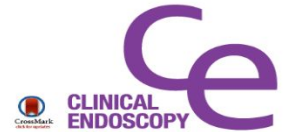
- Huge variation
  - Safety
  - type of practitioners
  - Responsibilities
  - Monitoring
  - informed consent
  - patient satisfaction
  - complication registration
  - training requirements.
- 75 % were not familiar with international sedation guidelines. Safe sedation practices (mainly propofol-based moderate to deep sedation) are rapidly gaining popularity.



# Conclusion:

## ORIGINAL ARTICLE

Clin Endosc 2016;49:47-55  
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## Considerable Variability of Procedural Sedation and Analgesia Practices for Gastrointestinal Endoscopic Procedures in Europe

Hermanus H. B. Vaessen and Johannes T. A. Knapé

Division of Anaesthesiology, Intensive Care and Emergency Medicine, University Medical Centre Utrecht, Utrecht, Netherlands

The risky medical procedure of moderate to deep sedation has become common practice for gastrointestinal endoscopy.

Safe sedation practices:

- adequate selection of patients
- adequate monitoring
- training of sedation practitioners
- adequate after-care

are gaining attention in a field that is in transition from uncontrolled sedation care to controlled sedation care



# Conclusion:

## ORIGINAL ARTICLE

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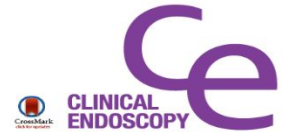
Division of Anaesthesiology, Intensive Care and Emergency Medicine, University Medical Centre Utrecht, Utrecht, Netherlands

- International guidelines in existence.
- Lack of formal implementation processes has limited the development of uniform policies of sedation, obstructing comparative scientific research into quality and outcomes of sedation.

# Conclusion:

## ORIGINAL ARTICLE

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## Considerable Variability of Procedural Sedation and Analgesia Practices for Gastrointestinal Endoscopic Procedures in Europe

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Division of Anaesthesiology, Intensive Care and Emergency Medicine, University Medical Centre Utrecht, Utrecht, Netherlands

- For a risky medical procedure such as moderate-to-deep sedation further improvement of quality by harmonization of practices will contribute to quality, patient safety, and comfort.
- The international guidelines were translated into medical practice to a very limited extent.
- Many changes taking place in sedation practices in Europe, but much remains to be done to ensure maximum safety of the sedated patient.

# Evidence based Guidelines on adult Procedural Sedation

## Task Force on Sedation

The Task Force on Sedation has been set-up in order to elaborate an ESA/EBA guideline covering this matter.

## Composition

### Co-chairperson



Robert Fitzgerald  
EBA

Thomas Fuchs-Buder  
ESA

### ESA representatives

Filippo Bressan
Jochen Hinkelbein
Massimo Lamperti - Methodologist
Pablo Rama Maceiras
Andrew Smith
Michel Struys
Francis Veyckemans

### EBA representatives

Jonas Åkeson
Edoardo de Robertis
Hans Knape
Flavia Petrini
Vesna Novak Jankovic

### Advisory group

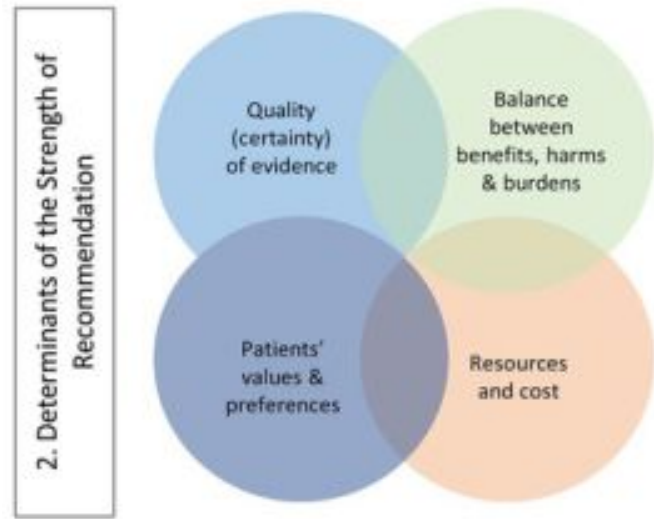
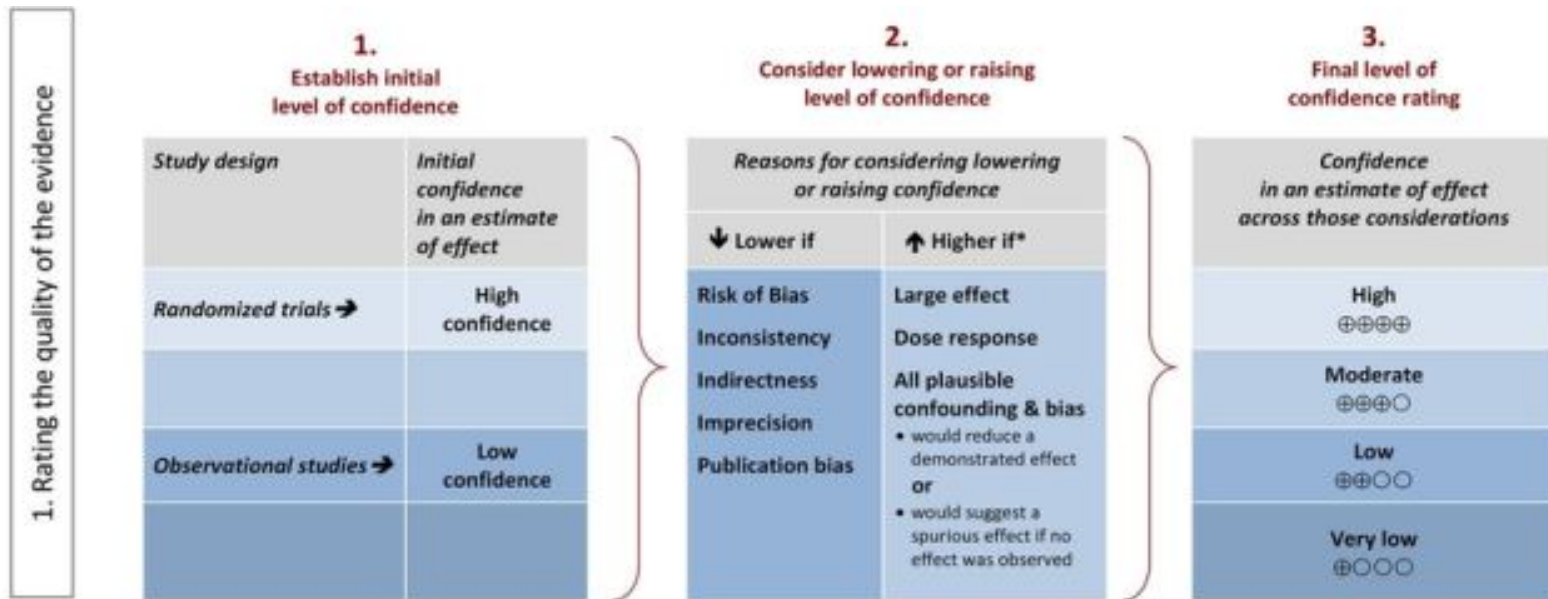
Azriel Perel

# Task force – six subcommittees

- Competences
- Medicines and adverse effects
- Monitoring
- Patient selection
- Quality and follow-up
- Recovery and discharge

# GRADE methodology

Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology (unrestricted use of the figure granted by the US GRADE Network)

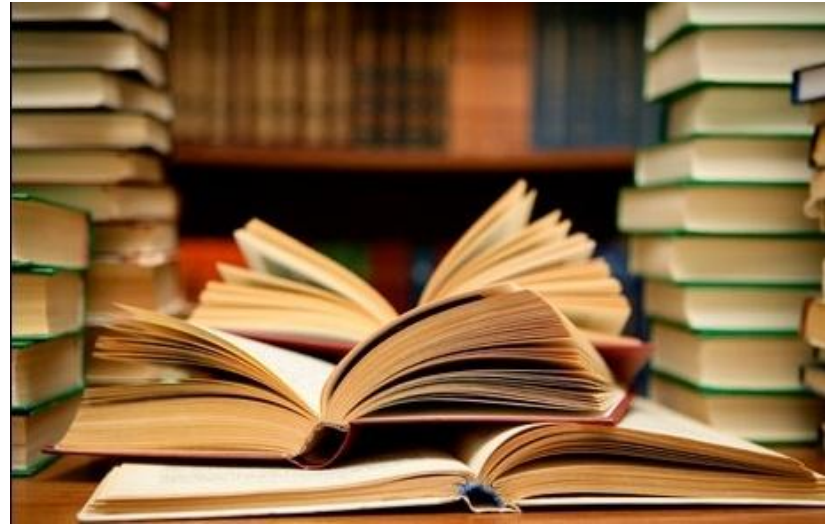


**3. Implication of the Strength of Recommendation**

Strength of Recommendation	Implication
<b>Strong</b>	<ul style="list-style-type: none"> <li>❖ Population: Most people in this situation would want the recommended course of action and only a small proportion would not</li> <li>❖ Healthcare workers: Most people should receive the recommended course of action</li> <li>❖ Policy makers: The recommendation can be adapted as a policy in most situations</li> </ul>
<b>Weak</b>	<ul style="list-style-type: none"> <li>❖ Population: The majority of people in this situation would want the recommended course of action, but many would not</li> <li>❖ Healthcare workers: Be prepared to help people to make a decision that is consistent with their own values/decision aids and shared decision making</li> <li>❖ Policy makers: There is a need for substantial debate and involvement of stakeholders</li> </ul>

# Literature search MEDLINE, EMBASE, Cochrane :

- Conscious sedation
  - Deep sedation
  - Procedure
  - Intervention
  - Exam
- 12,263 records



- Second cleaning round □ 2,248 records
- Third cleaning round □ 482 full text papers

# CMS Manual System

Pub. 100-07 State Operations

## Provider Certification

Transmittal 74


Department of Health &  
Human Services (DHHS)  
Centers for Medicare &  
Medicaid Services (CMS)

Date: December 2, 2011

**SUBJECT:** Revised Appendix A, Interpretive Guidelines for Hospitals

**I. SUMMARY OF CHANGES:** Clarification is being provided for various provisions of 42 CFR 482.52, concerning anesthesia services.

**NEW/REVISED MATERIAL -**      **EFFECTIVE DATE:** December 2, 2011  
**IMPLEMENTATION DATE:** December 2, 2011

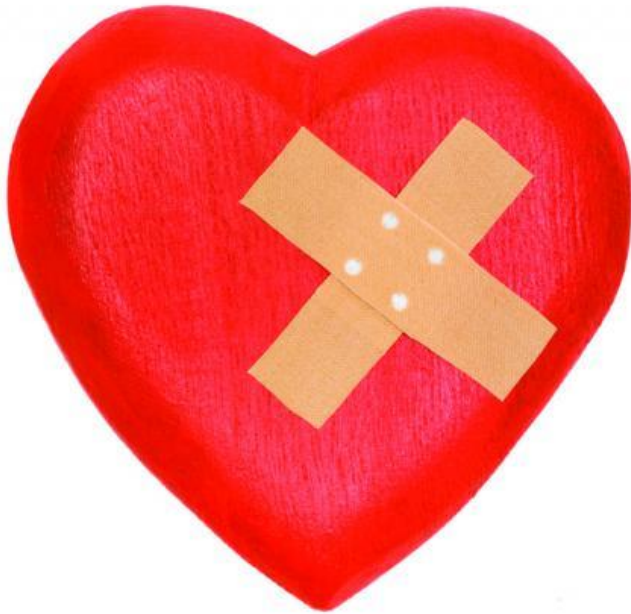


**Continuum of Depth of Sedation**  
(Developed by the American Society of Anesthesiologists)  
(Approved by ASA House of Delegates on October 13, 1999,  
and amended on October 27, 2004)

	Minimal Sedation ("Anxiolysis")	Moderate Sedation / Analgesia ("Conscious Sedation")	Deep Sedation / Analgesia	General Anesthesia
Responsiveness	Normal response to verbal stimulation	Purposeful* response to verbal or tactile stimulation	Purposeful* response following repeated or painful stimulation	Unarousable, even with painful stimulus
Airway	Unaffected	No intervention required	Intervention may be required	Intervention often required
Spontaneous Ventilation	Unaffected	Adequate	May be inadequate	Frequently inadequate
Cardiovascular Function	Unaffected	Usually maintained	Usually maintained	May be impaired

\* Reflex withdrawal from a painful stimulus is NOT considered a purposeful response

# Selection of adult patients undergoing PSA - Cardiac patients



- Assess cardiac status and reserves
- Current practice: small doses of opioids + midazolam and propofol
- Dexmedetomidine?
- Anaesthesiologist: Moderate and severe hypotension and with severe cardiac abnormalities

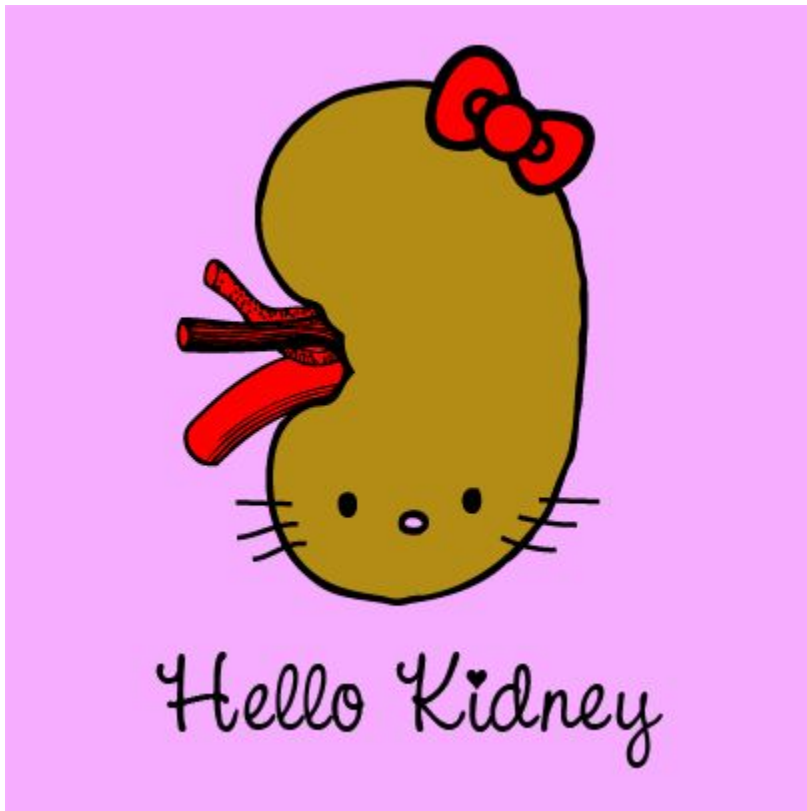


# Obstructive Sleep Apnoea



- OSAS not per se predictive of anaesthesia related cardiopulm complications during deep sedation.
- Indication carefully assessed
- Avoid opioids, minimise midazolam and propofol
- 
- Dexmedetomidine
- Anaesthesiologist if high risk of OSAS
- Nasal CPAP advisable

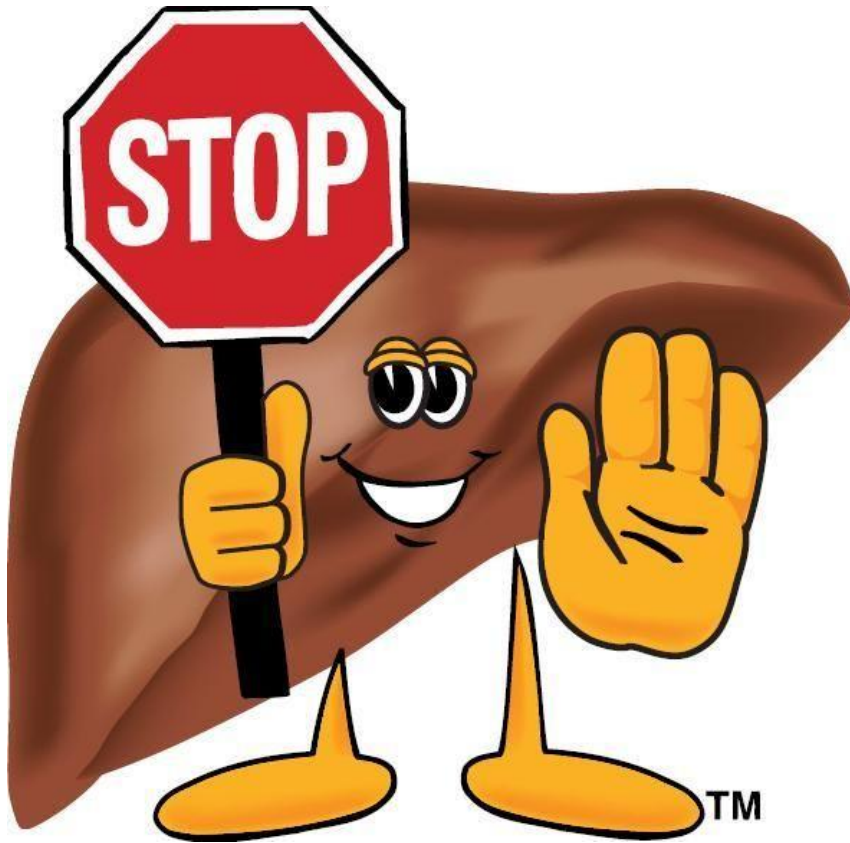
# Chronic Renal Failure



- Increased risk of developing respiratory problems during sedation
- Midazolam and fentanyl –metabolised in liver

# Chronic Liver Disease

Propofol



# Morbidly Obese

- High risk of respiratory complications
- Beach chair positioning
- ET-tubes preferred airway management
- Remifentanyl and dexmedetomidine preferred



# ASA III and IV and old patients



Increased risk of hypoxaemia, hypotension, arrhythmias.

Reduce dose, go slow

# Airway Assessment



Always part of the procedure.

PSA relatively contraindicated in patients who are likely to be difficult to ventilate or oxygenate should respiratory difficulties arise while the patient is sedated.

# Fasting

"Fasting" doesn't mean eating fast food!



ASA guidelines:

Patients undergoing PSA for "elective procedures" fast according to the standards used for general anesthesia.

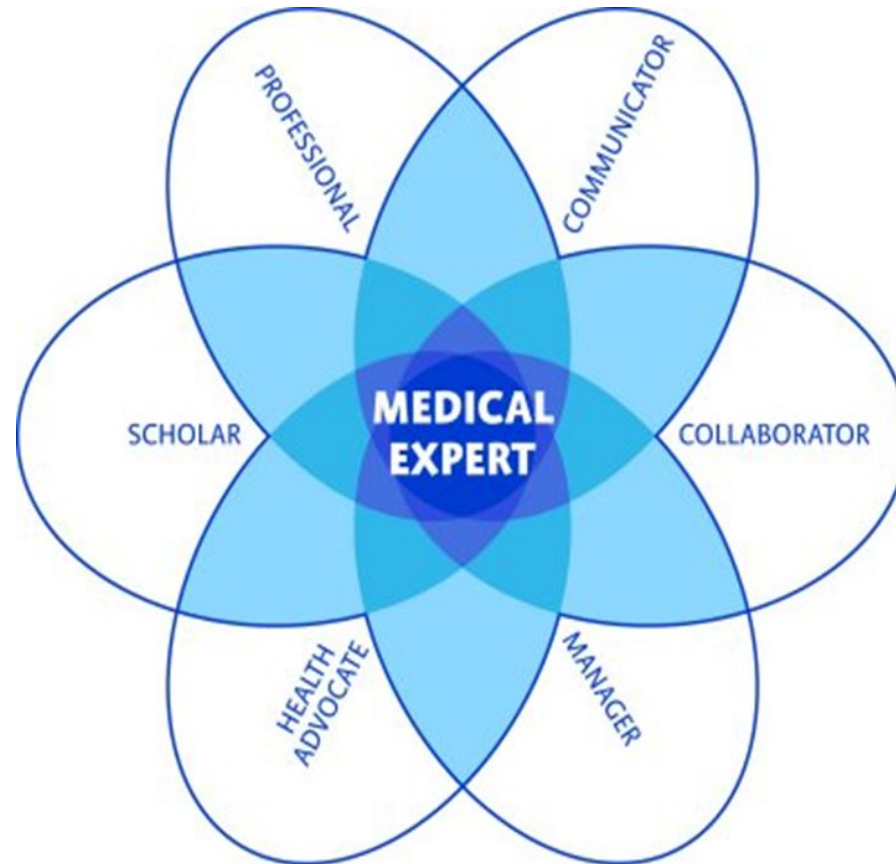
# Monitoring



- NIBP
- ECG
- Pulse oximetry
- Capnography
- BIS?
- Spectral entropy?
- Auditory evoked potentials?



# Minimal competencies



THE  
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ROLES FRAMEWORK

# Minimal requirements of the sedation provider

- Theoretical training on sedation medicines, including emergency medicines
- Ability to perform a pre-procedure clinical assessment (including airways)
- Skills in assessing the different level of sedation
- Intravenous cannulation
- Certification in advanced life support.



■ SPECIAL ARTICLE

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Anesthesiology 2002; 96:1004-17

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## ***Practice Guidelines for Sedation and Analgesia by Non-Anesthesiologists***

*An Updated Report by the American Society of Anesthesiologists Task Force on Sedation and Analgesia by Non-Anesthesiologists*

<http://www.uptodate.com/contents/procedural-sedation-in-adults>

# Procedural sedation in adults

Robert L Frank, Allan B Wolfson, Jonathan Grayzel

Literature review current through: Aug 2016. | This topic last updated: Apr 22, 2016.

# Sedation medicines – often used

- Pethidine
- Morphine and other opioids
- Benzodiazepines
- Propofol
- Ketamine
- Ketofol
- Etomidate
- Etc...



# Post sedation care - discharge:

Safe for discharge:

- The procedure should be of sufficiently low risk that additional monitoring for complications is unnecessary.
- Symptoms e.g. pain, lightheadedness, and nausea should be well-controlled.
- Vital signs and respiratory and cardiac function should be stable.
- Mental status and physical function should have returned to a point where the patient can care for himself or herself with minimal to no assistance.
- A reliable person who can provide support and supervision should be present at the patient's home for at least a few hours.



# Discharge

- Safely discharged within 30 minutes of receiving their last dose of sedative provided that no significant adverse events.
- Serious adverse events, e.g. hypoxia, rarely occur after discharge.
- Mild symptoms, such as nausea, lightheadedness, fatigue, or unsteadiness, for up to 24 hours common.
- This should be made clear to the patient.





**HELSINKI DECLARATION ON  
PATIENT SAFETY IN ANAESTHESIOLOGY**

European  
Society of  
Anaesthesiology

ESA





большое спасибо!

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