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HELSINKI DEKLARATION
ZUR PATIENTENSICHERHEIT IN DER ANAESTHESIE

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HELSINKI DEKLARATION
ZUR PATIENTENSICHERHEIT IN DER ANAESTHESIE

SICHERHEIT IN DER MEDIZIN

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ZUR PATIENTENSICHERHEIT IN DER ANAESTHESIE

SICHERHEIT IN DER ANAESTHESIE

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HELSINKI DEKLARATION
ZUR PATIENTENSICHERHEIT IN DER ANAESTHESIE

STRATEGIE DER ESA

WIR GEHEN TÄGLICH RISIKEN EIN ...

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… UND WIR MACHEN FEHLER.

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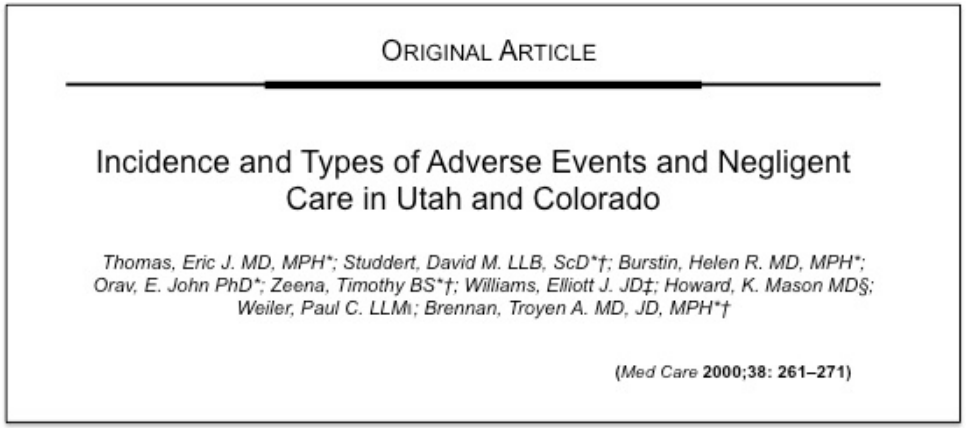

ORIGINAL ARTICLE

Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado

Thomas, Eric J. MD, MPH; Studdert, David M. LLB, ScD*†; Burstin, Helen R. MD, MPH*; Orav, E. John PhD*; Zeena, Timothy BS*†; Williams, Elliott J. JD‡; Howard, K. Mason MD§; Weiler, Paul C. LLM‖; Brennan, Troyen A. MD, JD, MPH*†*

(*Med Care* **2000;38: 261–271**)

Fälle

14‘052

Adverse Events*, n = 422

Vermeidbar

50 %

Thomas EJ et al. *Med Care* 2000;38:261

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ORIGINAL ARTICLE

Incidence and Types of Adverse Events and Negligent Care in Utah and Colorado

Thomas, Eric J. MD, MPH; Studdert, David M. LLB, ScD*†; Burstin, Helen R. MD, MPH*; Orav, E. John PhD*; Zeena, Timothy BS*†; Williams, Elliott J. JD‡; Howard, K. Mason MD§; Weiler, Paul C. LLM‖; Brennan, Troyen A. MD, JD, MPH*†*

(*Med Care* **2000;38: 261–271**)

Fälle

14‘052

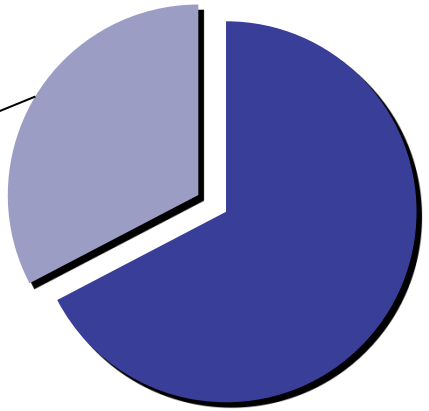
Adverse Events*, n = 422

Tod

n = 28

n = 12

Fahrlässig
33%



Thomas EJ et al. *Med Care* 2000;38:261

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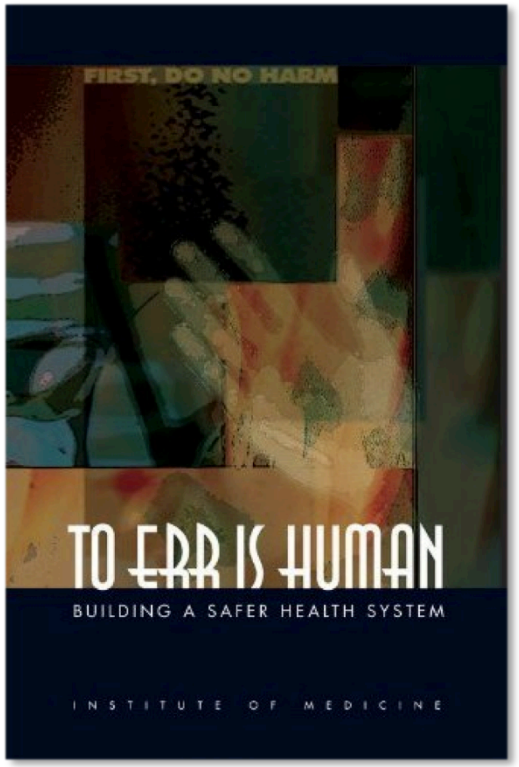
INSTITUT OF MEDICINE (IOM)



USA

44’000
vermeidbare
Todesfälle
jährlich

Utah
Colorado

Kohn LT et al. *Nat. Acad. Science* 2000

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„ADVERSE EVENT“ STUDIEN

Staender S. et. al. *Eur. J. Anaesth.* 2012, 29:303–306

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NACH DEM IOM REPPORT > 10 JAHRE

International Journal for Quality in Health Care 2009; Volume 21, Number 4: pp. 285–291
Advance Access Publication: 25 June 2009
10.1093/intqhc/mzp025

The incidence of adverse events in Swedish hospitals: a retrospective medical record review study

MICHAEL SOOP[1], ULLA FRYKSMARK[1], MAX KÖSTER[2] AND BENGT HAGLUND[2]

[1]Department for Supervision of Healthcare Services, National Board of Health and Welfare, Stockholm, Sweden, and [2]Centre for Epidemiology, National Board of Health and Welfare, Stockholm, Sweden

Ergebnisse

- Repräsentative Stichprobe in 28 Schwedischen Spitälern (1976 Fälle)
- 12 % ‚Adverse events' (AE) (davon 70% vermeidbar)
- 55 % der vermeidbaren AE → Behinderung oder Dauerschaden
- 3 % der AE trugen zur Mortalität bei

Schlussfolgerung

„...preventable adverse events were common, and they caused extensive human suffering and consumed a significant amount of the available hospital resources."

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Soop M. et al. Int J Quality Health Care 2009;21, No 4:285–291

WIR IN DER ANÄSTHESIE SIND CLEVER ☺

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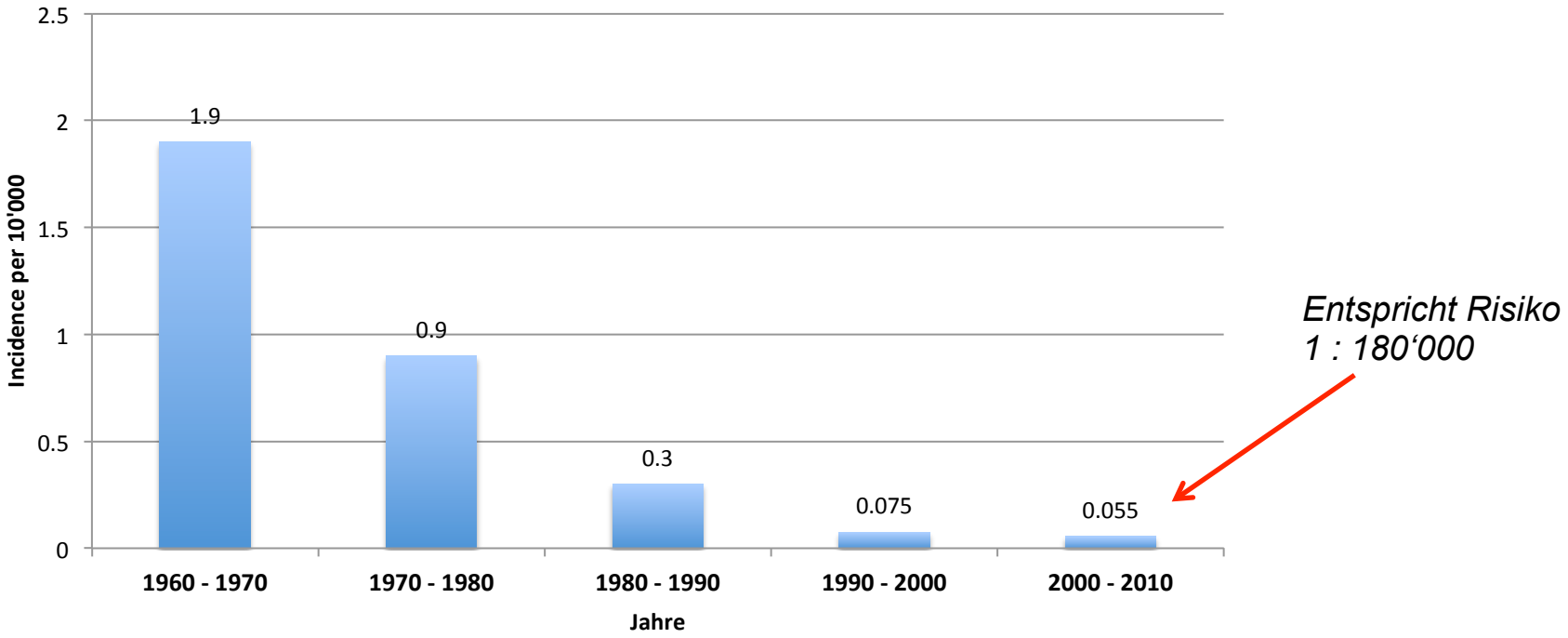
ANÄSTHESIE BEDINGTE STERBLICHKEIT (MORTALITÄT)



Warden JC, *Med J Austr.*; 1994
Keenan RL. *J Clin Anesth*. 1991
Lunn JN. *Lancet* 1987

Gibbs N, et al. *Australian and NZ College of Anaesthetists*, 2006
Arbous MS, et al. *Anaesthesia* 2001
Lienhart A, et al. *Anesthesiology* 2006

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ANÄSTHESIE BEDINGTER SCHADEN (MORBIDITÄT)

Geringe Morbidität	18 – 22	per 100
Schwere Ereignisse (IPS-Zuweisung)	0.45 – 1.4	per 100
Kardiale Morbidität (Nicht Herzchir.)	1 – 2	per 100
Permanenter Schaden	0.2 – 0.6	per 1‘000

Bothner U, et al. Br J Anaesth 2000; 85: 271-80.
Fastings S, Gisvold SE. Can J Anaesth 2003; 50: 767-74.
Kheterpal S, et al. Anesthesiology 2009 Jan;110(1):58-66.

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ANÄSTHESIE BEDINGTER SCHADEN (MORBIDITÄT)

z.B. zentrale Nervenblockaden

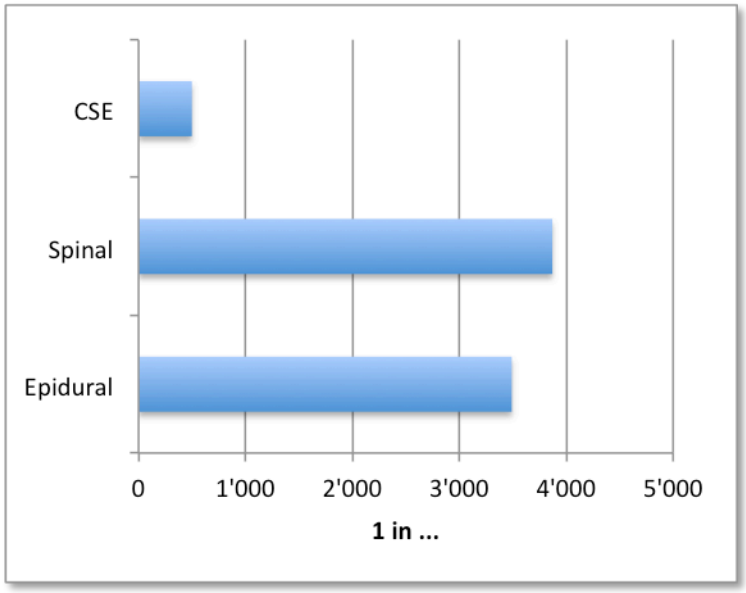
United Kingdom (2009):

700‘000 zentrale Nervenblockaden pro Jahr

NAP 3

The 3rd National Audit Project of
The Royal College of Anaesthetists

	Total	Full recovery
Epidural Abscess	20	7
Meningitis	6	3
Vertebral canal haematoma	8	1
Nerve injury	18	7
Spinal cord ischaemia	6	0
Wrong route error	11	8
Cardiovascular collapse	6	3
Miscellaneous	9	1
TOTAL	84	30



http://www.rcoa.ac.uk/nap3

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ANÄSTHESIE BEDINGTER SCHADEN (MORBIDITÄT)

z.B. Airway-Ereignisse

United Kingdom (2011):

3 Mio Vollnarkosen pro Jahr

Ca 400 schwerwiegende Airway-Ereignisse pro Jahr

http://www.rcoa.ac.uk/nap4

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ANÄSTHESIE BEDINGTER SCHADEN (MORBIDITÄT)

z.B. Airway-Ereignisse

Ursachen

- Ungenügende Beurteilung des Atemweges
- Ungenügende Planung bei erwartet schwierigem Atemweg (kein „Plan B“)
- Notwendige Massnahmen nicht ergriffen (z.B. FO)
- Hohe Versagerquote bei Cricothyreotomien
- Missinterpretationen von Kapnographie-Signalen

- 30% der Fälle während der Ausleitung
- 25% der Fälle auf IPS oder Notfallstationen

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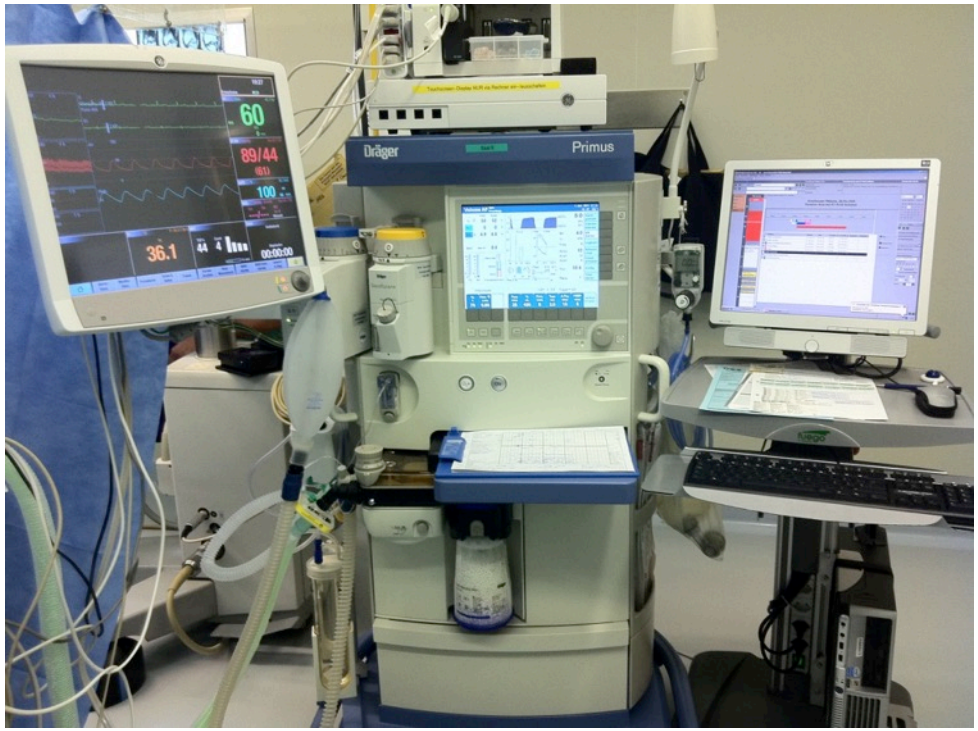
ANÄSTHESIE BEDINGTER SCHADEN (MORBIDITÄT)

z.B. Airway-Ereignisse

Ursachen II

- Verzicht auf Kapnographie in der IPS hat in 70% der Fälle zum Tod des Patienten beigetragen.

SCHNITTSTELLE MENSCH-TECHNIK



Wir haben das Wissen, die Ausbildung und die Technik.... aber die Art wie wir das alles einsetzen bleibt kritisch!

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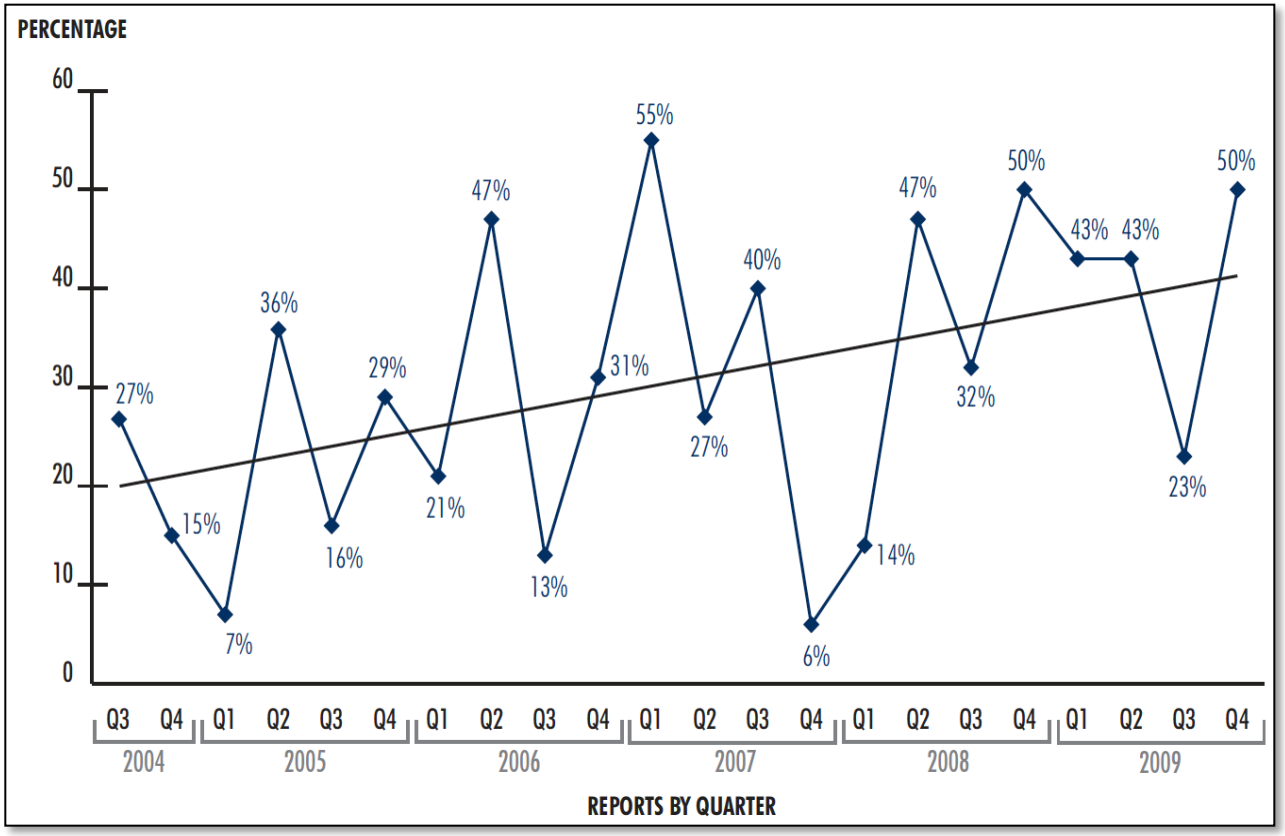
Seitenverwechselungen in der Anästhesie Ein neuer Trend ?



Fälle in der Anästhesie

(% aller Seitenver-

wechselungen im OP)

Pennsylvania Patient Safety Authority http://patientsafetyauthority.org

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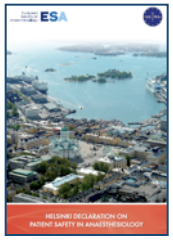
HELSINKI DEKLARATION ZUR PATIENTENSICHERHEIT

Eur J Anaesthesiol. 2010 Jul;27(7):592-7.

European Society of Anaesthesiology ESA

HELSINKI DEKLARATION - WAS



Grundsätzliche Anforderungen

- Minimale Monitoring Standards
- Verfügbarkeit klinischer Behandlungs-Protokolle
  - Schwieriger Atemweg
  - Anaphylaxie
  - Massiver Blutverlust
  - ...
- Anwendung von akzeptierten Standards der Sedation
- Unterstützung der WHO Safe Surgery Campaign
- Beitrag an Incident reporting Systeme
  - Lokal
  - National

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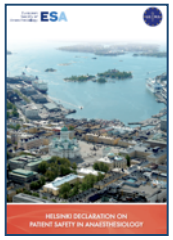
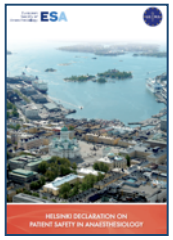
HELSINKI DEKLARATION - WAS



Vereinbarungen

- Inkraftsetzung der WFSA Standards
- Einbezug der Patienten
- Bereitstellung ausreichender Resourcen
- Training und Ausbildung in Patientensicherheit
- Berücksichtigung der Bedeutung HF und Teamwork
- Kooperation mit der Industrie

HELSINKI DEKLARATION - WIE



Wie ?

- EBA/ESA Task Force Patientensicherheit
  - Andrew Fairley-Smith (UK)
  - Guttorm Bratteboe (N)
  - David Whitaker (UK)
  - Sven Staender (CH, Vorsitz)

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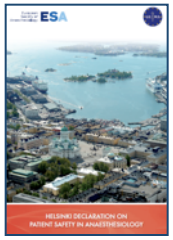
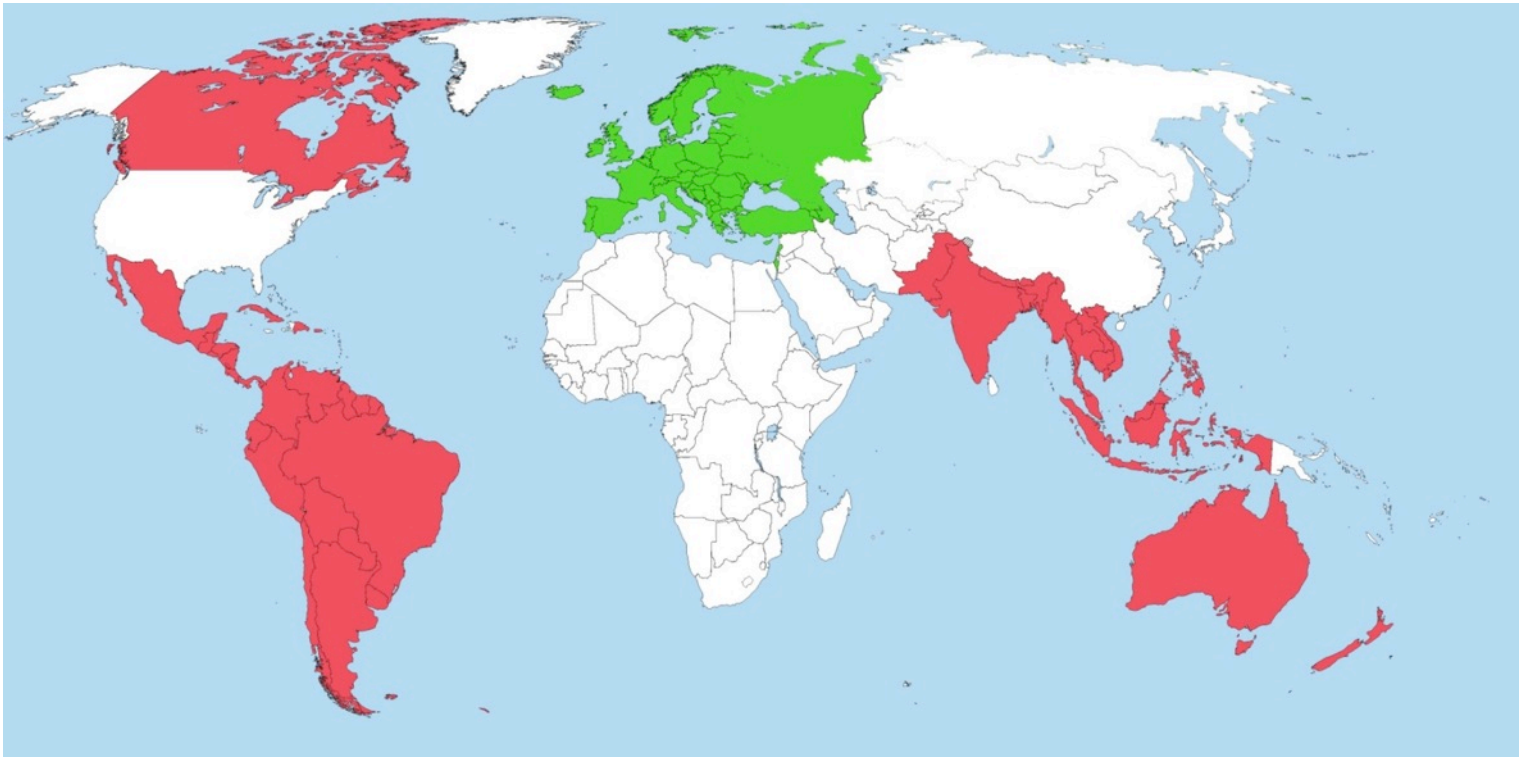
HELSINKI DEKLARATION - WO





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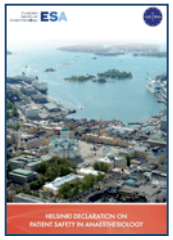

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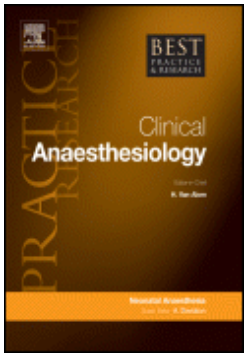
Best Practice and Research
Clinical Anaesthesiology
Volume 25, number 2 June 2011
SAFETY IN ANAESTHESIA
Guest Editors: Sven Staender, Jannike Mellin-Olsen, Paolo Pelosi & Hugo Van Aken



- **How do we know that we are doing a good job - can we measure the quality of our work?**
- **Morbidity in anaesthesia : today and tomorrow**
- **High Reliability Organizations (HROs)**
- **The contribution of labelling to safe medication administration in anaesthetic practice**
- **WHO Surgical Checklist**
- **Effective handover communication: an overview of research and improvement efforts**
- **Human performance limitations (stress, fatigue, prospective memory, communication)**
- **Incident Reporting in Anaesthesiology**
- **Safety culture in anaesthesiology: basic concepts and practical application**
- **Simulation and CRM**
- **Education, Teaching & Training in Patient Safety**
- **Closed claims analysis**
- **Etc..**

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HELSINKI DEKLARATION – BILANZ SEIT 2010

European Patient Safety Course

Direktor: M. Rall
Mitglieder Task Force & Patient Safety SC (SC-17) der ESA

Vorträge, Fallbesprechungen, Workshops

8-stündiger Kurs, zwei Halbtage vor dem Euroanaesthesia Kongress

Teil 1:	Freitag	14:00 to 18:00
Teil 2:	Samstag	08:00 to 12:00

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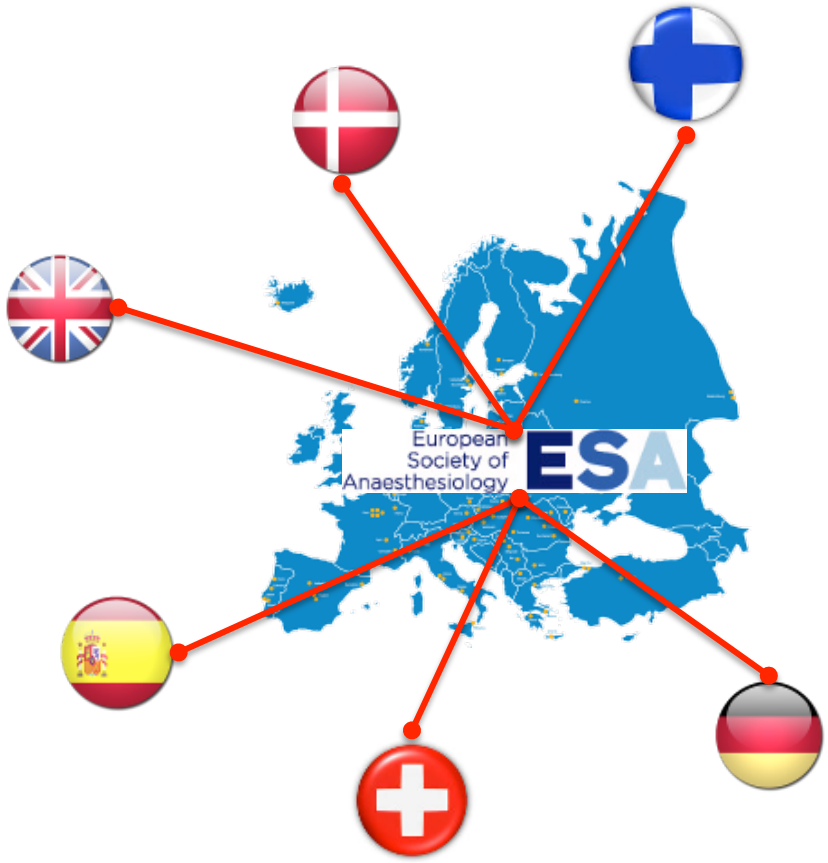
“Anaesthesia Safety Alert Platform” - ASAP



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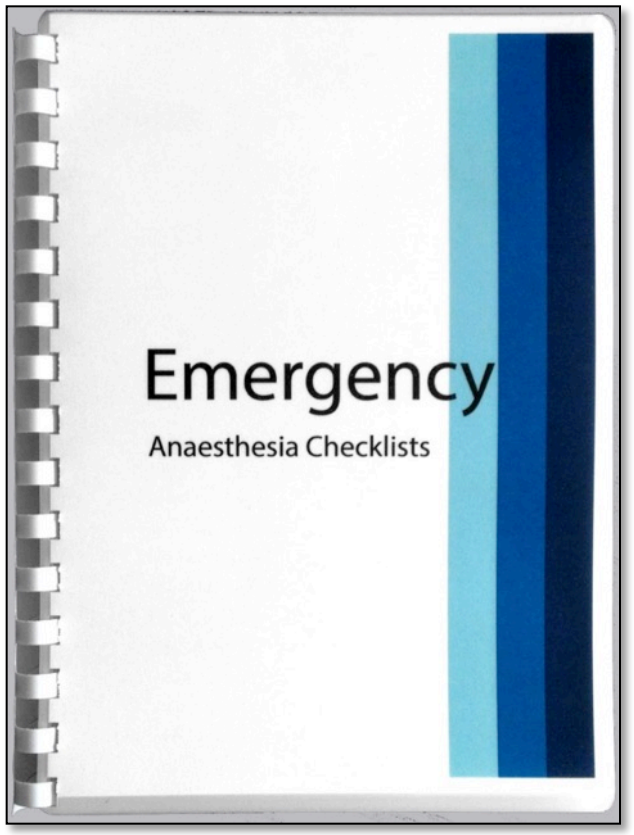
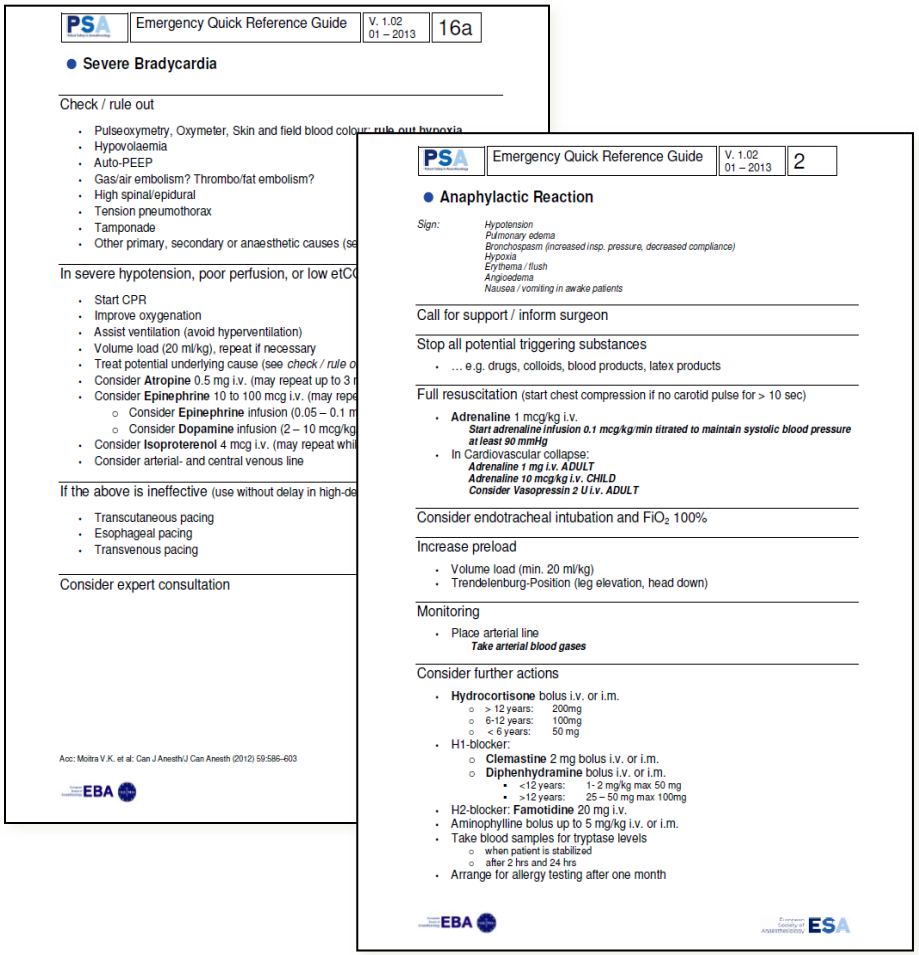
Checklisten





PSA | Emergency Quick Reference Guide | V. 1.02 01 – 2013 | 16a

Severe Bradycardia

Check / rule out

- Pulseoxymetry, Oxymeter, Skin and field blood colour: **rule out hypoxia**
- Hypovolaemia
- Auto-PEEP
- Gas/air embolism? Thrombo/fat embolism?
- High spinal/epidural
- Tension pneumothorax
- Tamponade
- Other primary, secondary or anaesthetic causes (se

In severe hypotension, poor perfusion, or low etC0

- Start CPR
- Improve oxygenation
- Assist ventilation (avoid hyperventilation)
- Volume load (20 ml/kg), repeat if necessary
- Treat potential underlying cause (see *check / rule o*
- Consider **Atropine** 0.5 mg i.v. (may repeat up to 3 r
- Consider **Epinephrine** 10 to 100 mcg i.v. (may repe
  - Consider **Epinephrine** infusion (0.05 – 0.1 m
  - Consider **Dopamine** infusion (2 – 10 mcg/kg
- Consider **Isoproterenol** 4 mcg i.v. (may repeat whi
- Consider arterial- and central venous line

If the above is ineffective (use without delay in high-de

- Transcutaneous pacing
- Esophageal pacing
- Transvenous pacing

Consider expert consultation

Acc: Moitra V.K. et al: Can J Anesth/J Can Anesth (2012) 59:586–603

EBA

PSA | Emergency Quick Reference Guide | V. 1.02 01 – 2013 | 2

Anaphylactic Reaction

Sign:
Hypotension
Pulmonary edema
Bronchospasm (increased insp. pressure, decreased compliance)
Hypoxia
Erythema / flush
Angioedema
Nausea / vomiting in awake patients

Call for support / inform surgeon

Stop all potential triggering substances

- … e.g. drugs, colloids, blood products, latex products

Full resuscitation (start chest compression if no carotid pulse for > 10 sec)

- **Adrenaline** 1 mcg/kg i.v.
  Start adrenaline infusion 0.1 mcg/kg/min titrated to maintain systolic blood pressure at least 90 mmHg
- In Cardiovascular collapse:
  Adrenaline 1 mg i.v. ADULT
  Adrenaline 10 mcg/kg i.v. CHILD
  Consider Vasopressin 2 U i.v. ADULT

Consider endotracheal intubation and FiO_2 100%

Increase preload

- Volume load (min. 20 ml/kg)
- Trendelenburg-Position (leg elevation, head down)

Monitoring

- Place arterial line
  Take arterial blood gases

Consider further actions

- **Hydrocortisone** bolus i.v. or i.m.
  - > 12 years: 200mg
  - 6-12 years: 100mg
  - < 6 years: 50 mg
- H1-blocker:
  - **Clemastine** 2 mg bolus i.v. or i.m.
  - **Diphenhydramine** bolus i.v. or i.m.
    - <12 years: 1- 2 mg/kg max 50 mg
    - >12 years: 25 – 50 mg max 100mg
- H2-blocker: **Famotidine** 20 mg i.v.
- Aminophylline bolus up to 5 mg/kg i.v. or i.m.
- Take blood samples for tryptase levels
  - when patient is stabilized
  - after 2 hrs and 24 hrs
- Arrange for allergy testing after one month

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PATIENT SAFETY STARTER KIT (USB-stick)

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PATIENT SAFETY STARTER KIT (USB-stick)

PATIENT SAFETY STARTER KIT (USB-stick)

PATIENT SAFETY STARTER KIT (USB-stick)

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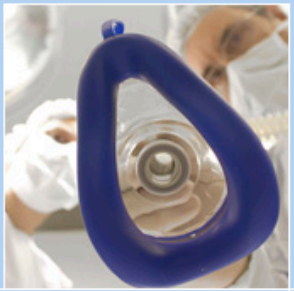
HOME | BASICS | PODCASTS | HAZARD WARNINGS | BASIC LECTURES | CHECKLISTS | U.E.M.S. Section European Board of Anaesthesiology

PATIENT SAFETY IN ANAESTHESIOLOGY



Read the 2010 Helsinki Declaration and other key publications on patient safety in anaesthesiology.

01 BASICS

- Helsinki Declaration on Patient Safety in Anaesthesiology (Original)
- Helsinki Declaration on Patient Safety in Anaesthesiology (Article)
- Departmental Patient Safety Report
- Best Practice & Research: Clinical Anaesthesiology - Safety in Anaesthesia (Selected chapters):
- Essentials of Patient Safety (Ch. Vincent)
- Important and Useful Internet Links

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01

ANNUAL DEPARTMENTAL PATIENT SAFETY REPORT

PATIENT SAFETY STARTER KIT (USB-stick)

PATIENT SAFETY STARTER KIT (USB-stick)

PATIENT SAFETY STARTER KIT (USB-stick)

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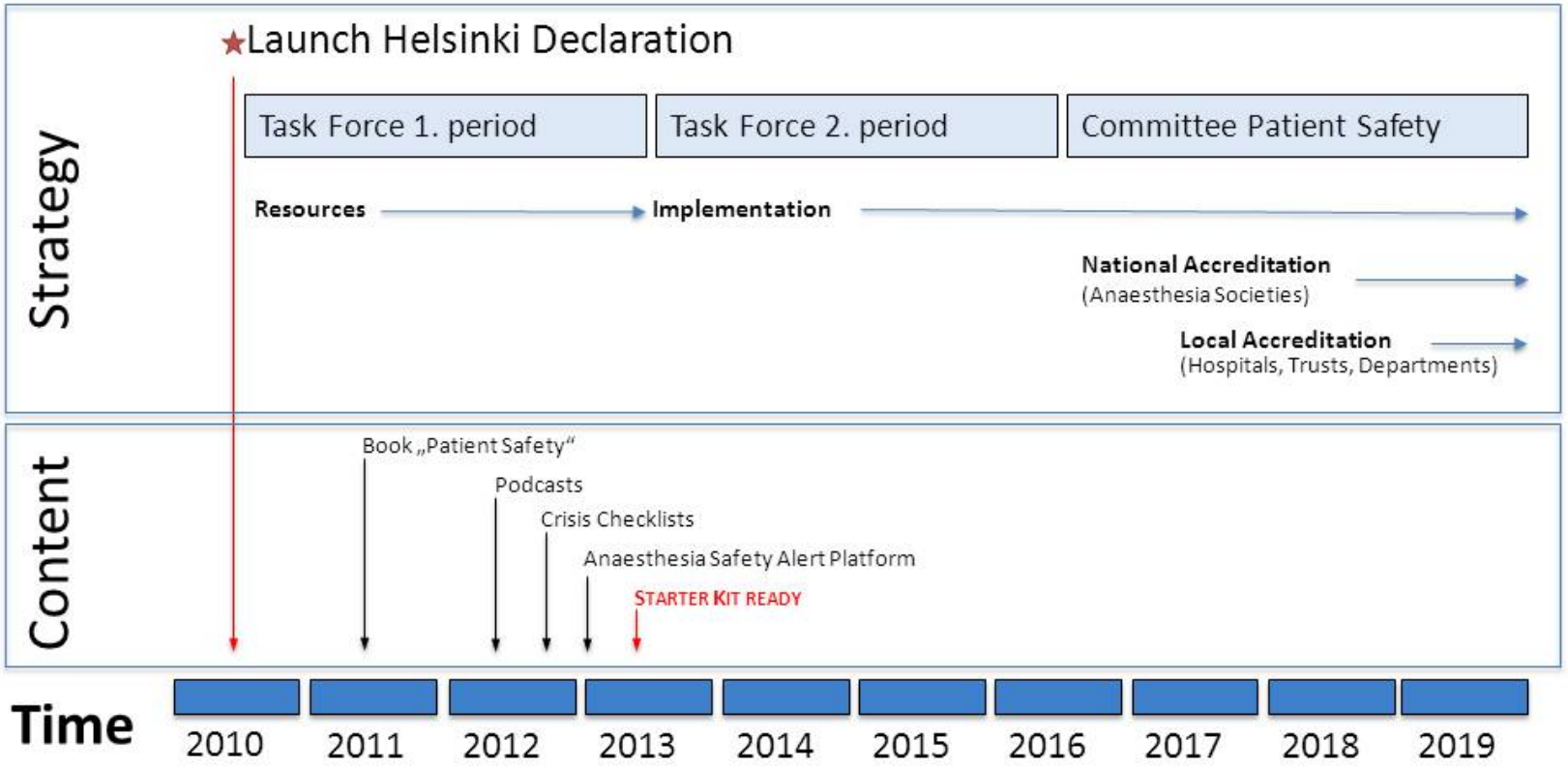
PATIENT SAFETY IN ANAESTHESIOLOGY

"Hospitals not using a surgical safety checklist are endangering patient safety..." Sir Liam Donaldson, Chairman of the WHO Patient Safety programme
Download checklists to be used for routine work and in emergencies to make your hospital safe.

05
CHECKLISTS

- Routine Checklists
- Emergency Checklists
  - ESA
    - Emergency Checklists (pdf)
    - Emergency Checklists (doc) for download
- Various Recommendations / Guidelines

HELSINKI DEKLARATION – STRATEGIE 2010 - 2019



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Sicherheit in der Anästhesie: wir dürfen nicht nachlassen und auf die nächste Generation warten!

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