Dra. Viviane Cordeiro Veiga
Unidade de Terapia Intensiva – BP – A Beneficência Portuguesa de São Paulo
Presidente do Comitê de Analgesia, Sedação e Delirium – AMIB
Presidente SOPATI – Gestão 2022/23

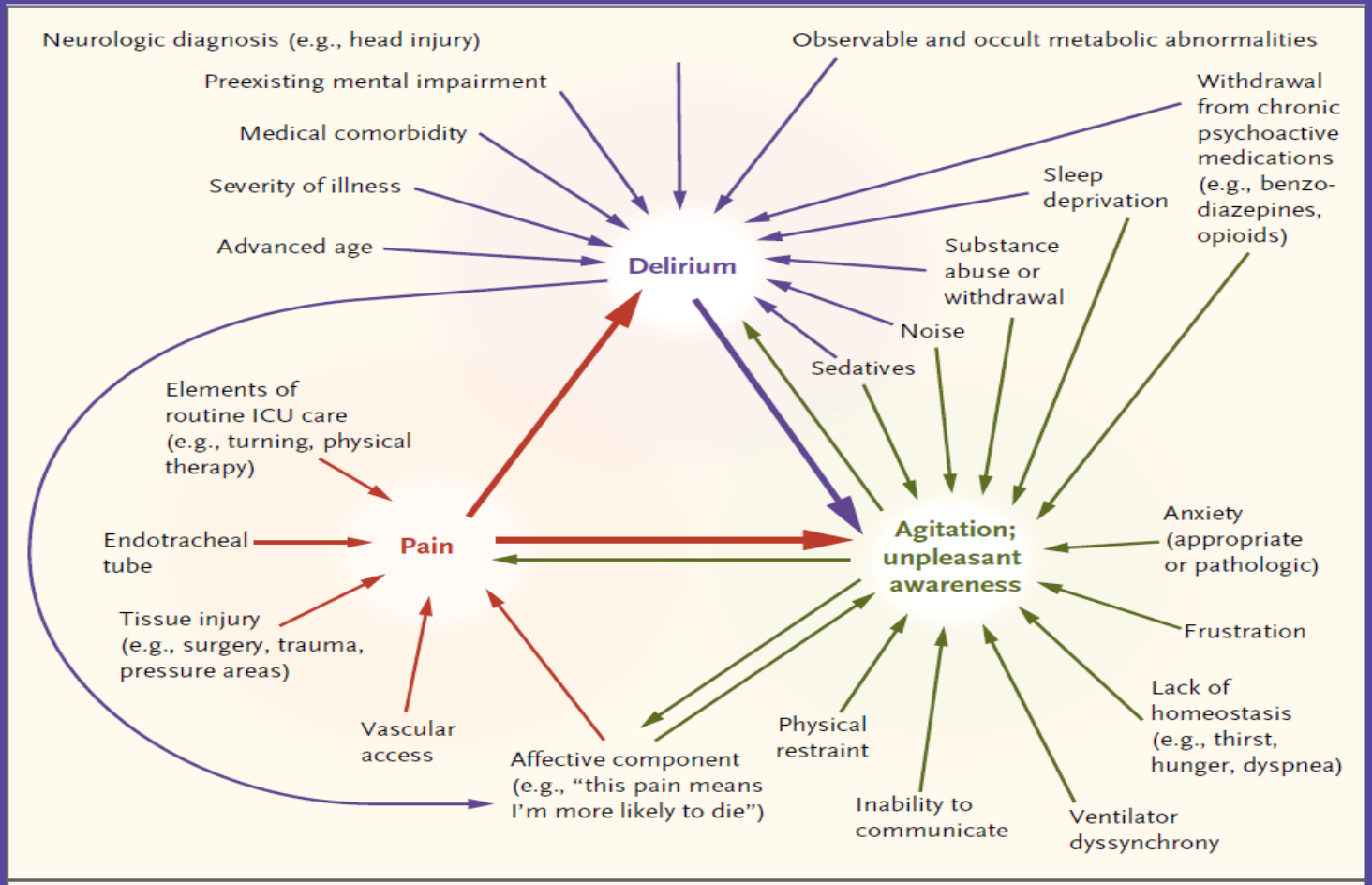
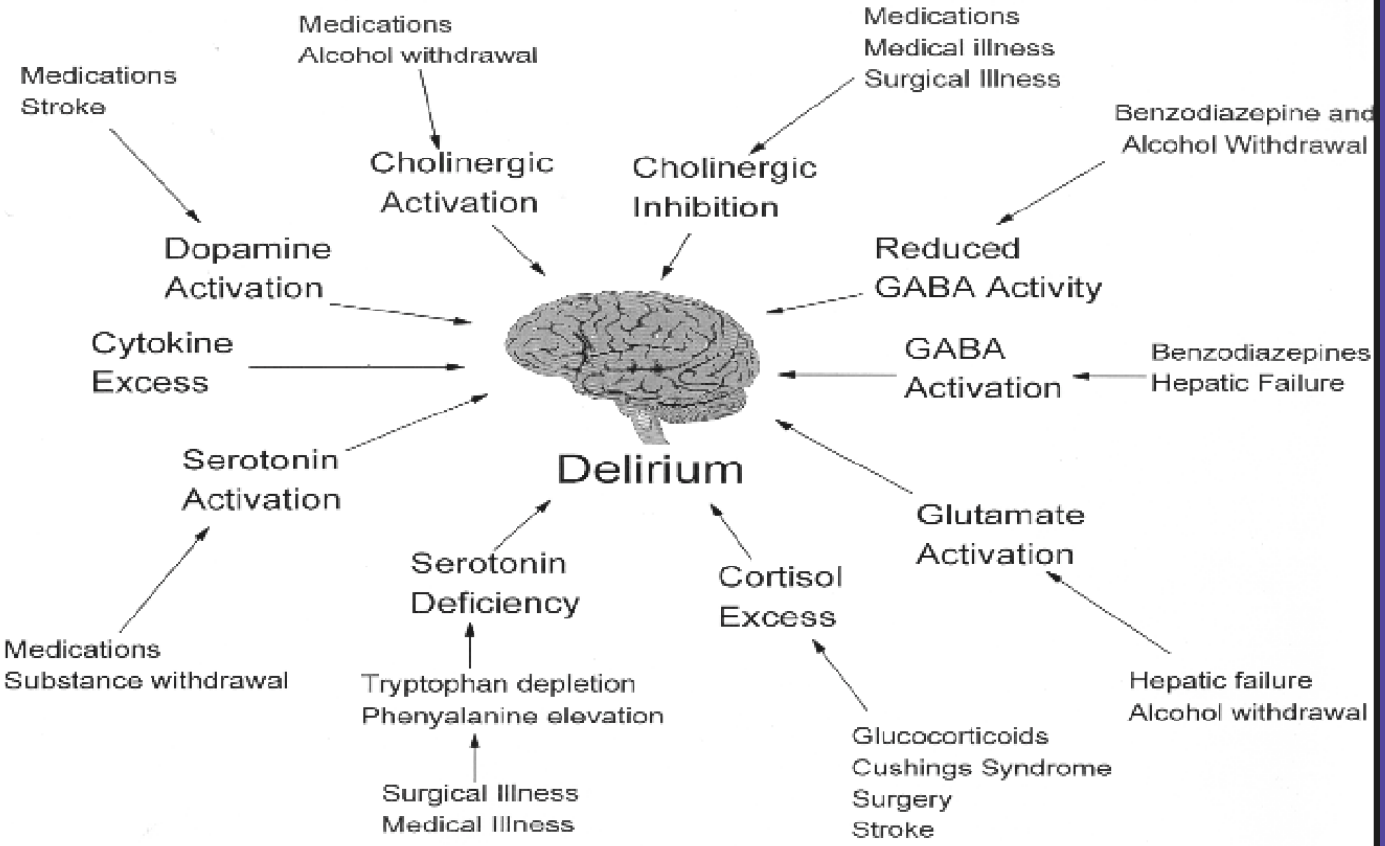
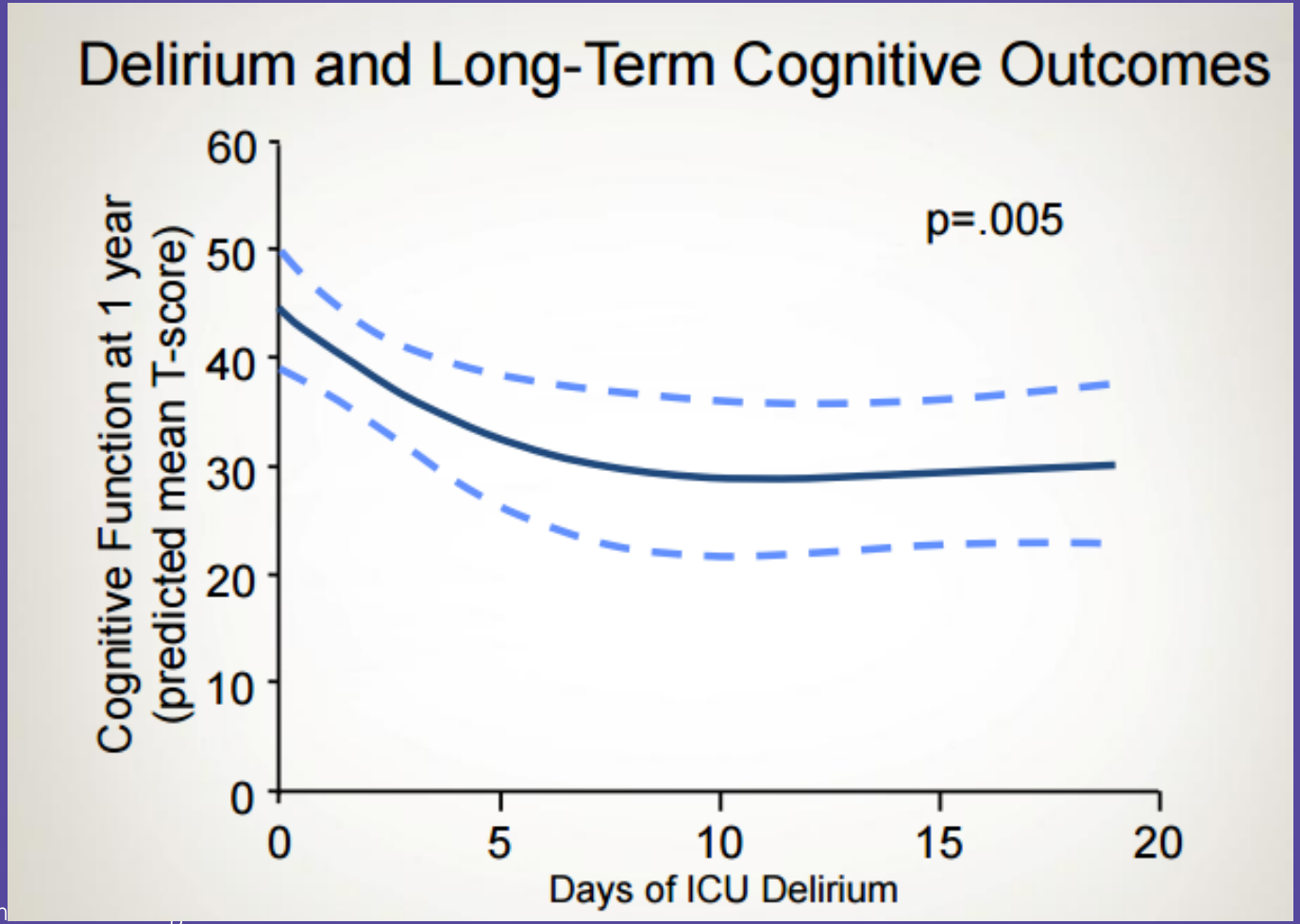


Figure 1. Causes and Interactions of Pain, Agitation, and Delirium.

Reade MC & Finfer S NEJM 2014; 370:444-5

Delirium involves complex pathways...

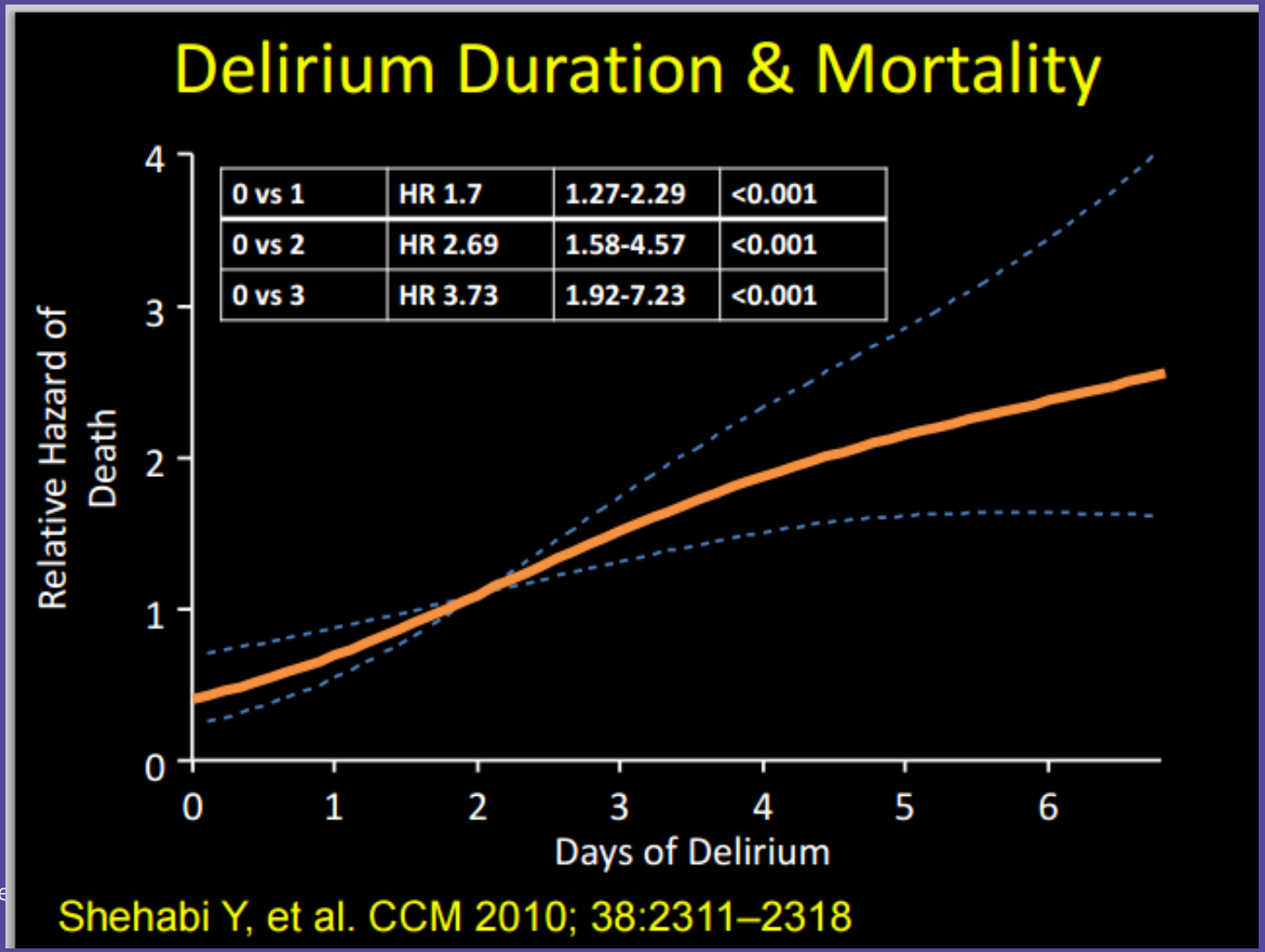




A Ben

Girard T et al CCM 2010; 38:1513–1520’

Delirium Duration & Mortality



Shehabi Y, et al. CCM 2010; 38:2311–2318

Avaliação Delirium

Avaliação clínica convencional não tem a acurácia necessária para o diagnóstico do delirium

Avaliação por médicos não psiquiátricas subdiagnosticaram até ¾ dos pacientes com delirium.

Não utilização de ferramentas estruturadas: erro diagnóstico em 75% Devlin et al. Crit Care Med 2007; 35(12): 2721-4.

Tratamento

Prevenção Primária:

- Correção distúrbios metabólicos/hipóxia
- Tratamento de infecções
- Estratégia de sedação nos pacientes sedados
- Mobilização precoce
- Evitar restrições no leito
- Respeitar ciclo sono/vigília
- Permitir utilização óculos e equipamentos auditivos, quando necessário

Clinical Practice Guidelines for the Prevention and Management of Pain, Agitation/Sedation, Delirium, Immobility, and Sleep Disruption in Adult Patients in the ICU

www.ccmjournal.org September 2018 • Volume 46 • Number 9

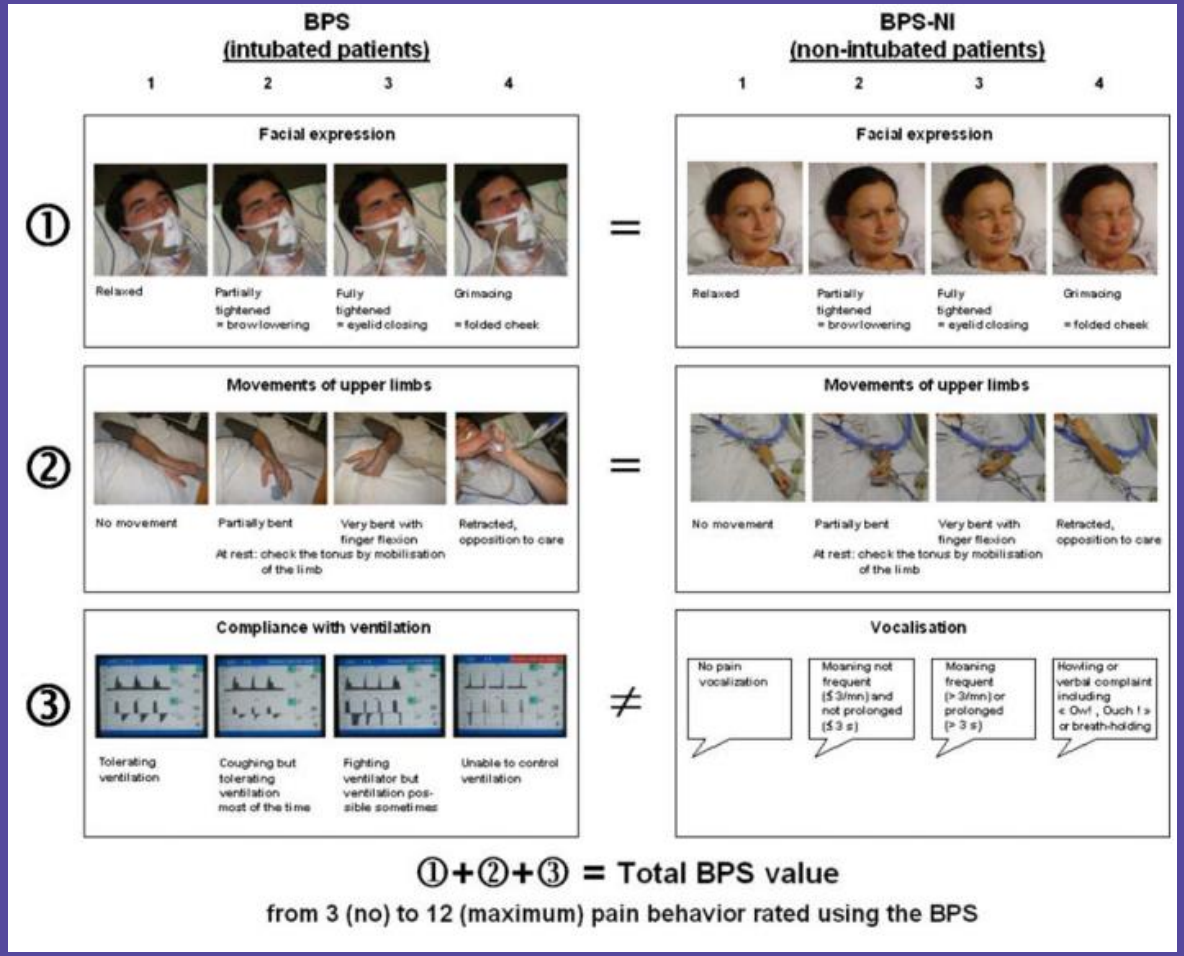
Avaliação da dor

Escalas de auto report: Avaliação numérica de dor (visual ou verbal)

Escalas de avaliação comportamental: BPS, BPS-NI e CPOT

Envolvimento da família no manejo da dor

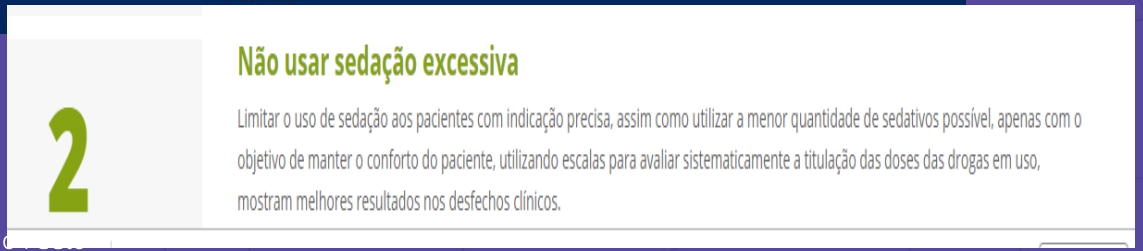
Alteração dos sinais vitais (FC, FR, PA, Sat O2) não são válidos como indicadores de avaliação de dor e pode ser usado somente para iniciar avaliação.



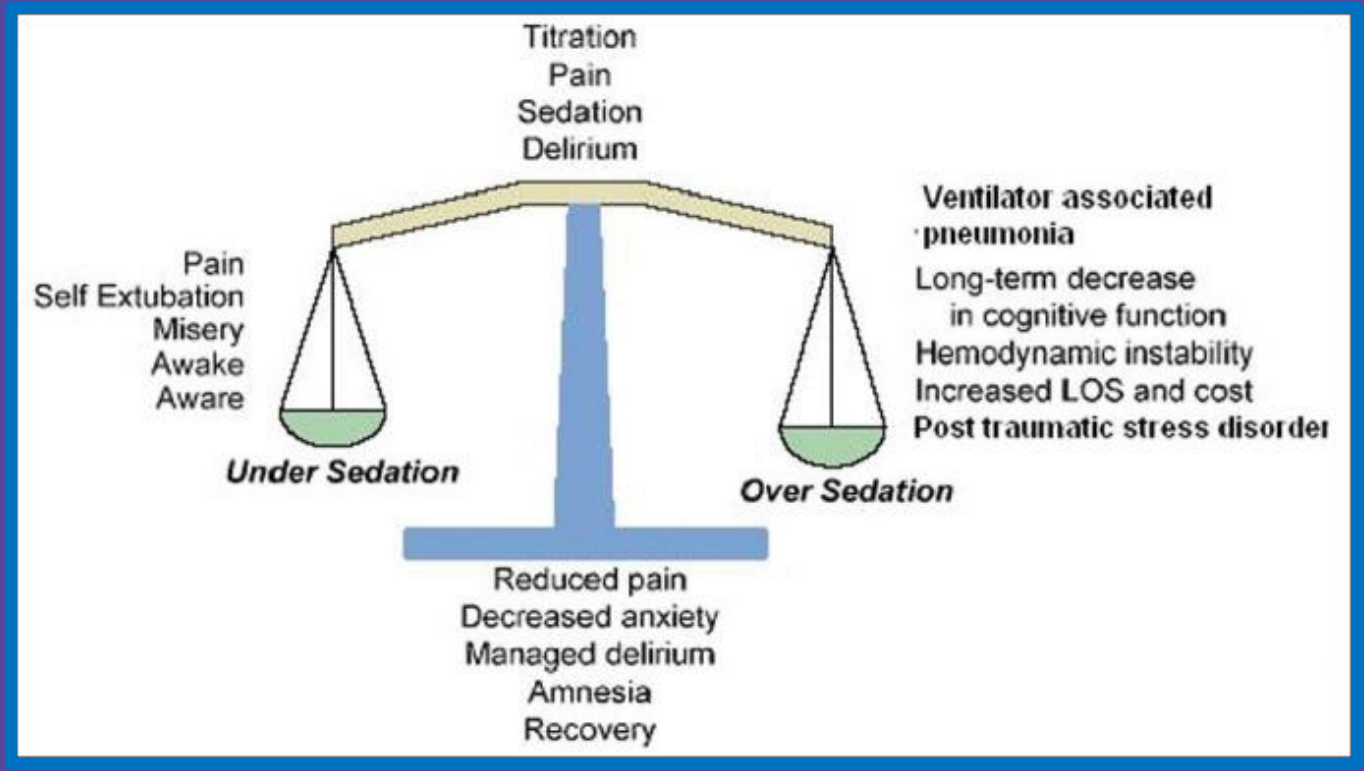
Intensive Care Med (2009) 35:2060–2067


Choosing Wisely
An initiative of the ABIM Foundation
Critical Care Societies Collaborative - Critical Care
AMERICAN ASSOCIATION of CRITICAL-CARE NURSES
CHEST AMERICAN COLLEGE of CHEST PHYSICIANS
ATS We help the world breathe
Society of Critical Care Medicine
Five Things Physicians and Patients Should Question
4
Don't deeply sedate mechanically ventilated patients without a specific indication and without daily attempts to lighten sedation.
Many mechanically ventilated ICU patients are deeply sedated as a routine practice despite evidence that using less sedation reduces the duration of mechanical ventilation and ICU and hospital length of stay. Several protocol-based approaches can safely limit deep sedation, including the explicit titration of sedation to the lightest effective level, the preferential administration of analgesic medications prior to initiating anxiolytics and the performance of daily interruptions of sedation in appropriately selected patients receiving continuous sedative infusions. Although combining these approaches may not improve outcomes compared to one approach alone, each has been shown to improve patient outcomes compared with approaches that provide deeper sedation for ventilated patients.


AMOR intenso pela VIDA
Choosing Wisely AMIB
AMIB
Filiada à WFSICCM
ASSOCIAÇÃO DE MEDICINA INTENSIVA BRASILEIRA


2
Não usar sedação excessiva
Limitar o uso de sedação aos pacientes com indicação precisa, assim como utilizar a menor quantidade de sedativos possível, apenas com o objetivo de manter o conforto do paciente, utilizando escalas para avaliar sistematicamente a titulação das doses das drogas em uso, mostram melhores resultados nos desfechos clínicos.

MONITORIZAÇÃO



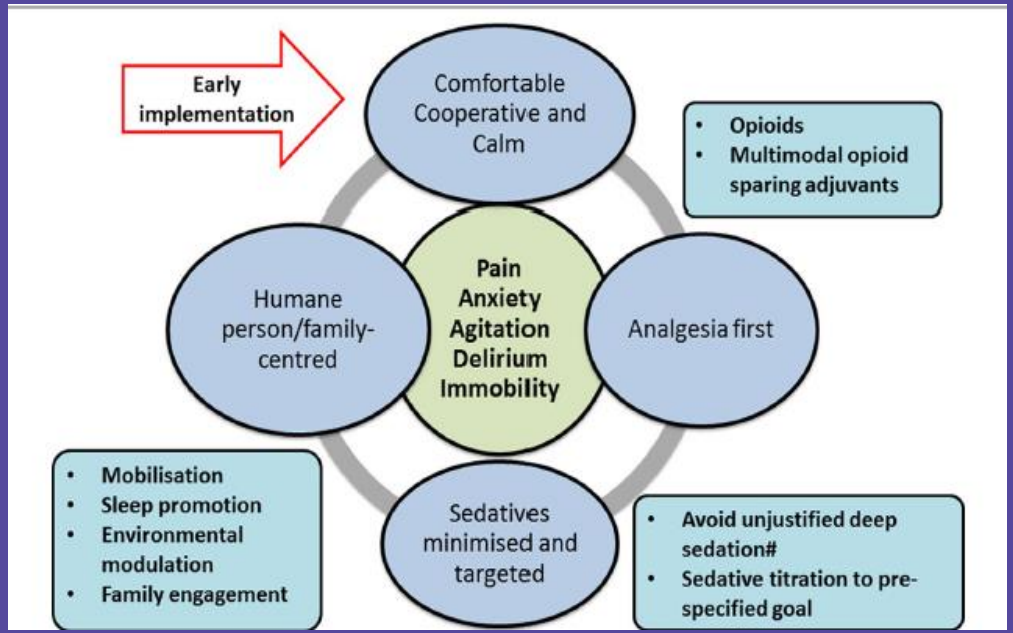
Intensive Care Med (2016) 42:962–971
DOI 10.1007/s00134-016-4297-4

REVIEW

Comfort and patient-centred care without excessive sedation: the eCASH concept

Jean-Louis Vincent[1*], Yahya Shehabi[2], Timothy S. Walsh[3], Pratik P. Pandharipande[4], Jonathan A. Ball[5], Peter Spronk[6], Dan Longrois[7], Thomas Strøm[8], Giorgio Conti[9], Georg-Christian Funk[10], Rafael Badenes[11], Jean Mantz[12], Claudia Spies[13] and Jukka Takala[14]

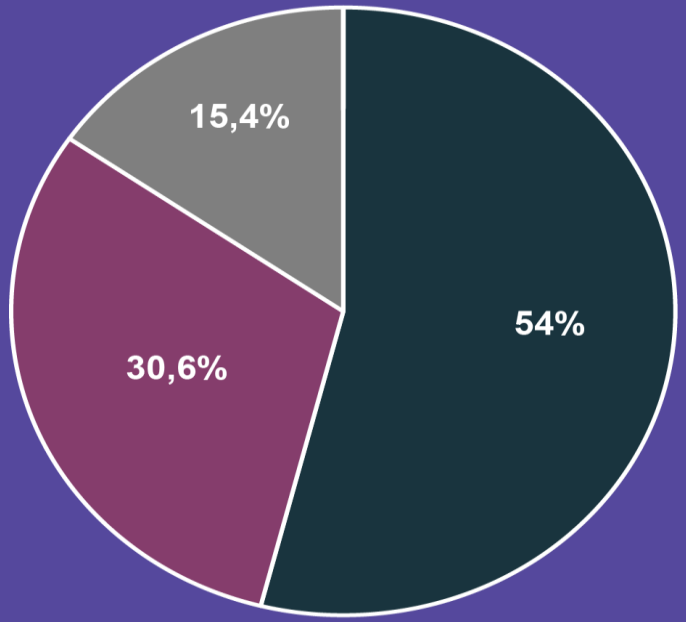
Early Comfort using Analgesia, Minimal Sedatives and Maximal Humane care



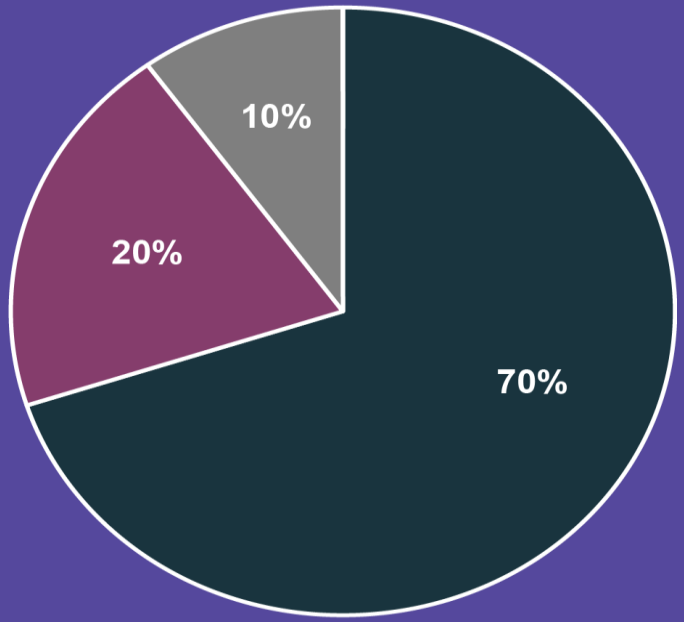
Estratégias de sedação

- Sedação alvo
- Sedação intermitente
- Sedação guiada por metas

Kaplan e Bailey, 2000



Olson et al., 2003



Sedação excessiva Alvo Sedação insuficiente

Two-years survival

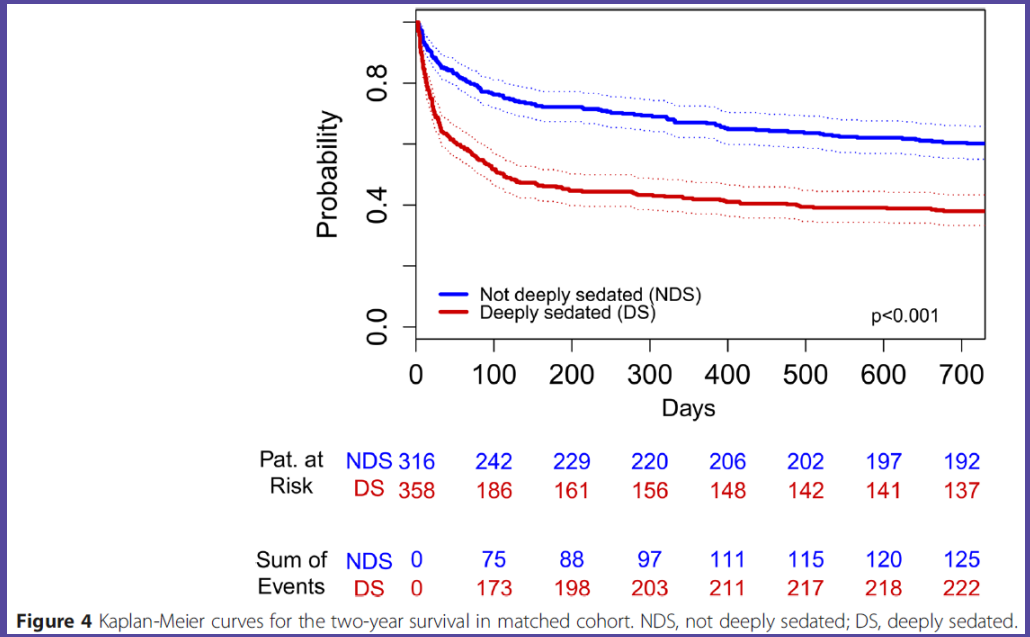
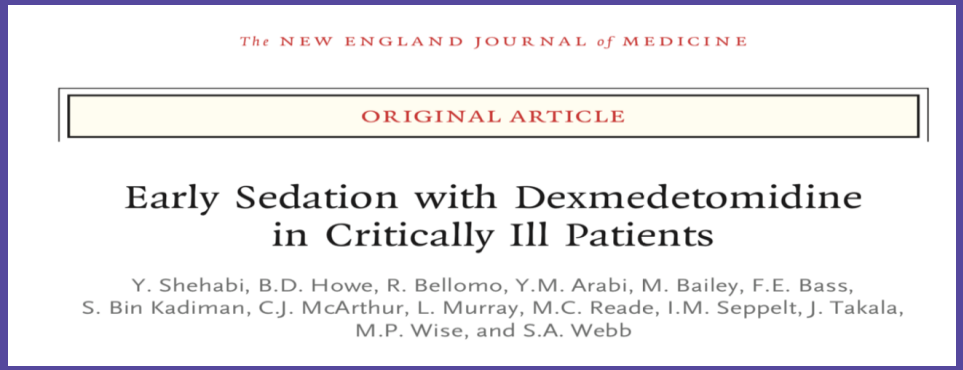


Figure 4 Kaplan-Meier curves for the two-year survival in matched cohort. NDS, not deeply sedated; DS, deeply sedated.

Balzer F, Weiß B, Kumpf O et al. Early deep sedation is associated with decreased in-hospital and two-year follow-up survival. Critical Care. 2105;19(1):197



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

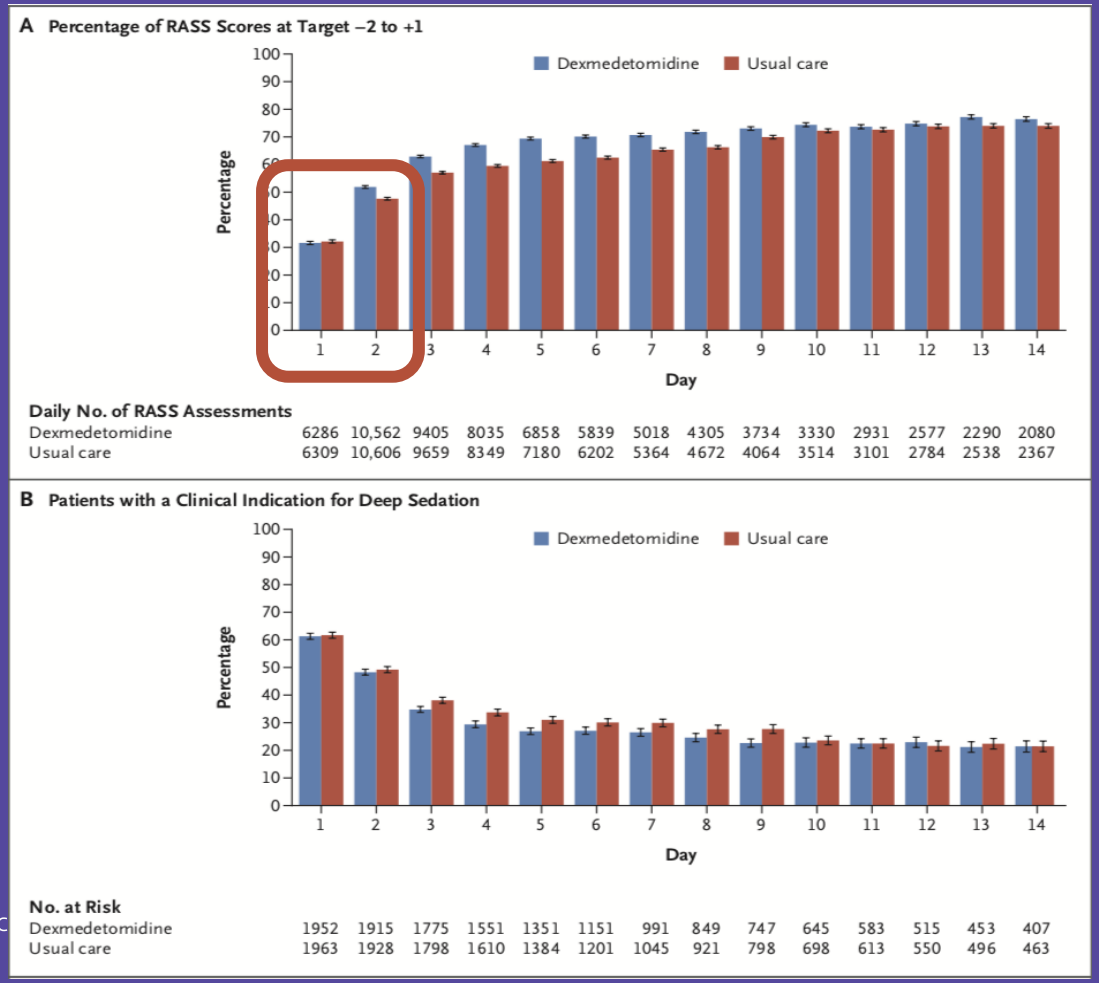
Early Sedation with Dexmedetomidine in Critically Ill Patients

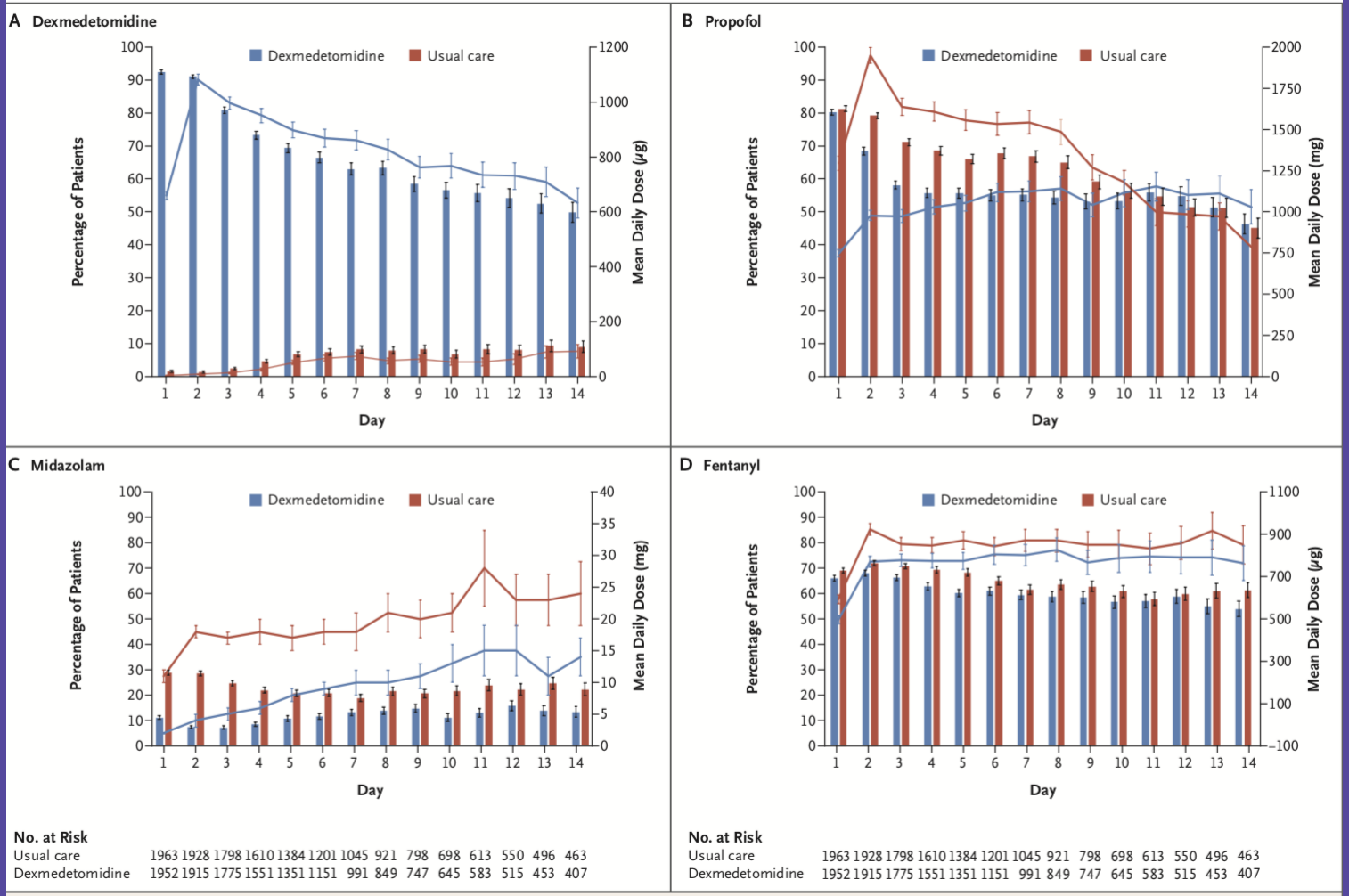
Y. Shehabi, B.D. Howe, R. Bellomo, Y.M. Arabi, M. Bailey, F.E. Bass, S. Bin Kadiman, C.J. McArthur, L. Murray, M.C. Reade, I.M. Seppelt, J. Takala, M.P. Wise, and S.A. Webb

In ventilated, critically ill patients, does the use of dexmedetomidine as the primary sedative agent compared with usual sedative agents effect 90 day mortality?

74 ICUs in 8 countries (Australia, Ireland, Italy, Malaysia, New Zealand, Saudi Arabia, Switzerland, UK)

November 2013 to February 2018


A Percentage of RASS Scores at Target −2 to +1
Dexmedetomidine
Usual care
Percentage
Day
Daily No. of RASS Assessments
Dexmedetomidine 6286 10,562 9405 8035 6858 5839 5018 4305 3734 3330 2931 2577 2290 2080
Usual care 6309 10,606 9659 8349 7180 6202 5364 4672 4064 3514 3101 2784 2538 2367
B Patients with a Clinical Indication for Deep Sedation
Dexmedetomidine
Usual care
Percentage
Day
No. at Risk
Dexmedetomidine 1952 1915 1775 1551 1351 1151 991 849 747 645 583 515 453 407
Usual care 1963 1928 1798 1610 1384 1201 1045 921 798 698 613 550 496 463


A Dexmedetomidine
Dexmedetomidine
Usual care
Percentage of Patients
Mean Daily Dose (μg)
Day
B Propofol
Dexmedetomidine
Usual care
Percentage of Patients
Mean Daily Dose (mg)
Day
C Midazolam
Dexmedetomidine
Usual care
Percentage of Patients
Mean Daily Dose (mg)
Day
D Fentanyl
Dexmedetomidine
Usual care
Percentage of Patients
Mean Daily Dose (μg)
Day
No. at Risk
Usual care 1963 1928 1798 1610 1384 1201 1045 921 798 698 613 550 496 463
Dexmedetomidine 1952 1915 1775 1551 1351 1151 991 849 747 645 583 515 453 407
No. at Risk
Usual care 1963 1928 1798 1610 1384 1201 1045 921 798 698 613 550 496 463
Dexmedetomidine 1952 1915 1775 1551 1351 1151 991 849 747 645 583 515 453 407

	DEX (n – 1954)	USUAL CARE (N- 1964)
NEUROMUSCULAR BLOCKADE N (%)	684 (35%)	692 (35.2%)
NMB FOR≥ 2 CONSECUTIVE DAYS N (%)	265 (13.6%)	278 (14.2%)

Escassez de recursos

SP: Hospitais apontam 'desabastecimento gravíssimo' de 'kit intubação'

Funcionários de hospitais denunciam a falta de sedativos para intubação de pacientes com Covid no RJ

Pacientes são intubados sem sedação nos hospitais Albert Schweitzer, do Andaraí e da Posse. Ministério da Saúde justifica a falta do medicamento devido a empréstimos entre as unidades hospitalares.

Por Diego Haidar, RJ1

22/05/2021 12h54 · Atualizado há 5 meses

Pacientes com Covid são amarrados a macas no Amazonas por falta de sedativo

Em um hospital público de Parintins, acabou o sedativo usado para intubação. A Defensoria Pública vai apurar a situação dos pacientes.

Por Jornal Nacional

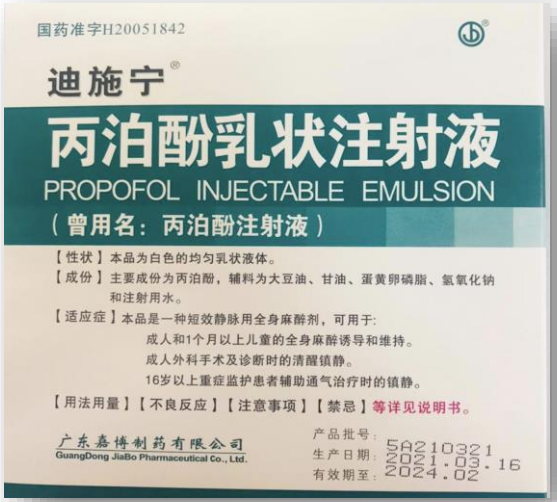
22/02/2021 21h29 · Atualizado há 8 meses

PANDEMIA

Anvisa facilita importações e regras para remédios de intubação e oxigênio

No que diz respeito ao registro de medicamentos utilizados para intubação, a Anvisa estabeleceu que esses medicamentos poderão ser comercializados excepcionalmente apenas com notificação à Anvisa, que é um registro simplificado

Cenário de escassez



10ml/h é igual?

Mobilization = Less Delirium

Variable	Intervention (n=49)	Control (n=55)	P-value
ICU/Hosp Delirium Days	2 days	4 days	0.03
Time in ICU with Delirium	33%	57%	0.02
Time in Hosp. with Delirium	28%	41%	0.01

VANDERBILT UNIVERSITY MEDICAL CENTER

Schweickert et al, Lancet 2009;373:1874-82

Programa de Mobilização Precoce- Hospital BP

Admissão na UTI

RASS -5/-4

- Mobilização passiva
- Eletroestimulação
- Alongamentos
- Posicionamento

RASS -3/-2/-1

- Mobilização passiva
- Eletroestimulação
- Alongamentos
- Posicionamento
- **Ortostatismo assistido**
- **Sedestação**

RASS 0/+1/+2

- **Exercícios ativos**
- **Exercícios resistidos**
- Alongamentos
- Posicionamento
- Ortostatismo assistido
- **Ortostatismo ativo**
- **Cicloergômetro**
- **Sedestação na poltrona**
- **Deambulação**

Progresso conforme tolerância

Alta Hospitalar

Protocolo de Reabilitação Cognitiva Precoce Hospital BP

Admissão na UTI

RASS -5/-4

Sem intervenção
Paciente arresponsivo

RASS -3/-2

Orientação de exercícios

RASS -1/0/+1

Orientação de exercícios

Exercícios para memória

Terapia assistida

Exercícios com jogos, hobbies e instrumentos

Adaptações para AVDs

Progresso conforme tolerância

Alta Hospitalar

Promoção sono

Should noise and light reduction strategies (vs not using these strategies) be used at night to improve sleep in critically ill adults?	We suggest using noise and light reduction strategies to improve sleep in critically ill adults.

Contents lists available at ScienceDirect

Journal of Clinical Anesthesia

journal homepage: www.elsevier.com/locate/jclinane

Original Contribution

Ketamine vs. haloperidol for prevention of cognitive dysfunction and postoperative delirium: A phase IV multicentre randomised placebo-controlled double-blind clinical trial

182 pacientes

Cirurgia eletiva/emergência

Grupos: haloperidol, ketamina, haloperidol + keta, placebo

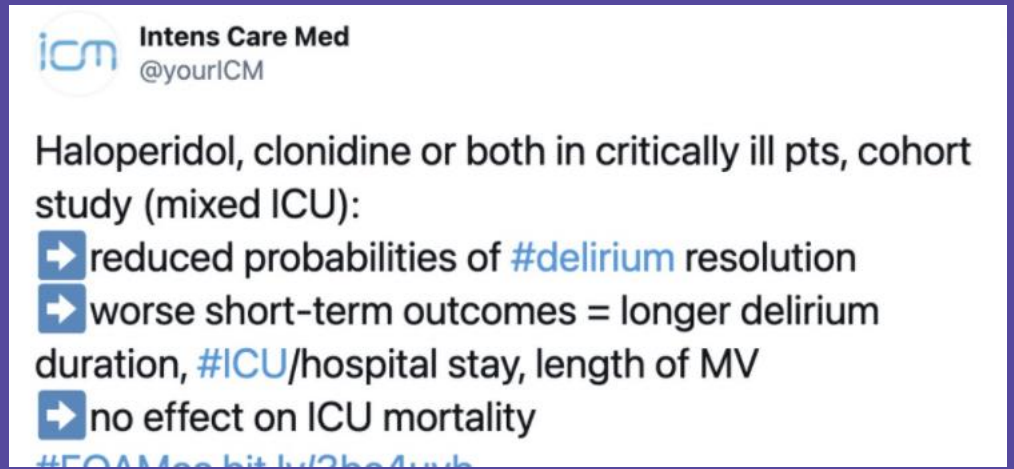
NENHUM DOS 3 GRUPOS FOI SUPERIOR AO PLACEBO PARA PREVENÇÃO DE DELIRIUM.

Intensive Care Med
https://doi.org/10.1007/s00134-021-06355-9

ORIGINAL

Haloperidol, clonidine and resolution of delirium in critically ill patients: a prospective cohort study

Lisa Smit[1*], Sandra M. A. Dijkstra-Kersten[2], Irene J. Zaal[2], Mathieu van der Jagt[1] and Arjen J. C. Slooter[2]



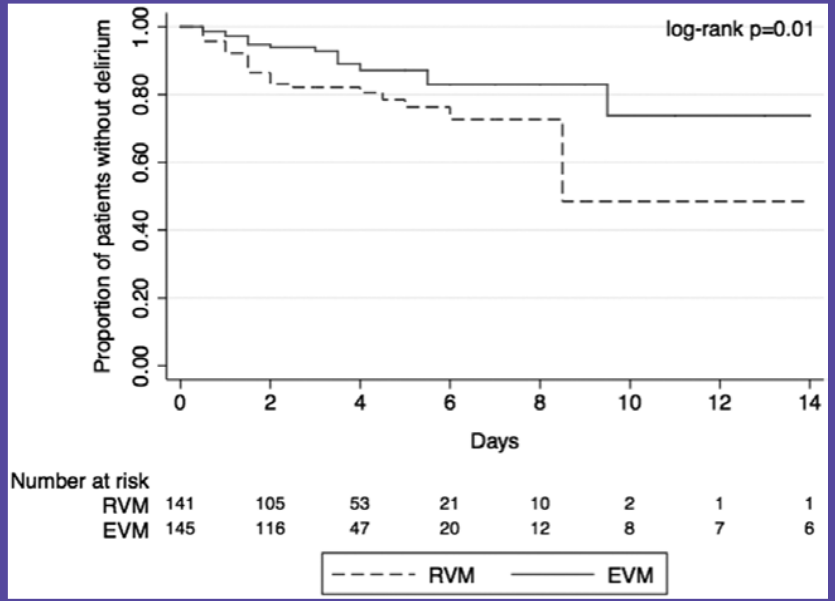
Published: 16 February 2021

Effectiveness and Safety of an Extended ICU Visitation Model for Delirium Prevention: A Before and After Study

286 pacientes

Restrita (4.5h/d) x Estendida (12h/d)

Outcome primário: delirium

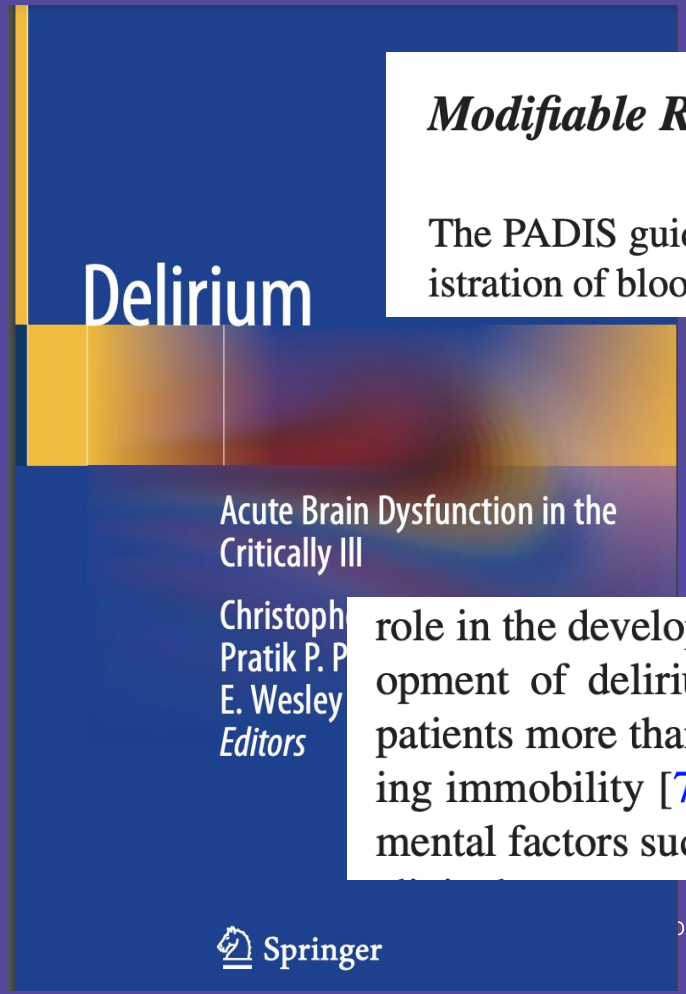


Crit Care Med 2017

Effectiveness and Safety of an Extended ICU Visitation Model for Delirium Prevention: A Before and After Study

TABLE 2. Comparison of Outcomes Before and After Implementation of an Extended ICU Visitation Model

Outcomes	Restricted Visitation Model ($n = 141$)	Extended Visitation Model ($n = 145$)	Unadjusted RR (95% CI)	p	Adjusted RR[a] (95% CI)	p
Primary outcome, *n* (%)						
Cumulative incidence of delirium	29 (20.5)	14 (9.6)	0.47 (0.26–0.85)	0.02	0.50 (0.26–0.95)	0.03
Secondary outcomes						
Duration of delirium/coma[b] (d), median (IQR)	3.0 (2.5–5.0)	1.5 (1.0–2.0)	0.48 (0.31–0.73)	0.001	0.61 (0.39–0.97)	0.03
Any ICU-acquired infection, *n* (%)	13 (9.2)	8 (5.5)	0.59 (0.24–1.44)	0.25	0.63 (0.24–1.66)	0.35
ICU-acquired pneumonia, *n* (%)	8 (8.5)	6 (4.1)	0.72 (0.25–2.10)	0.55	1.04 (0.34–3.15)	0.94
ICU-acquired bloodstream infection, *n* (%)	3 (2.1)	2 (1.3)	0.64 (0.10–3.87)	0.63	0.70 (0.11–4.24)	0.70
ICU-acquired urinary tract infection, *n* (%)	2 (1.4)	2 (1.3)	0.97 (0.13–6.90)	0.97	1.08 (0.15–7.71)	0.93
ICU mortality, *n* (%)	9 (6.3)	3 (2.1)	0.32 (0.08–1.21)	0.09	0.34 (0.09–1.26)	0.10
Length of ICU stay (d), median (IQR)	4.0 (2.0–6.0)	3.0 (2.0–4.0)	0.87 (0.78–0.98)	0.02	0.89 (0.79–0.99)	0.04



Modifiable Risk Factors

The PADIS guidelines identify two modifiable risk factors for delirium: the administration of blood transfusions and the use of benzodiazepines [1]. Restricting blood

role in the development of delirium [2]. Other modifiable risk factors for the development of delirium identified in the literature include the practice of sedating patients more than clinically necessary [3–6], use of physical restraints with resulting immobility [7–9], social isolation [7], sleep deprivation [10, 11], and environmental factors such as excessive light and noise [7, 12]. Finally, the maintenance of

COVID-19

O que mudou nas UTIs com o COVID-19?

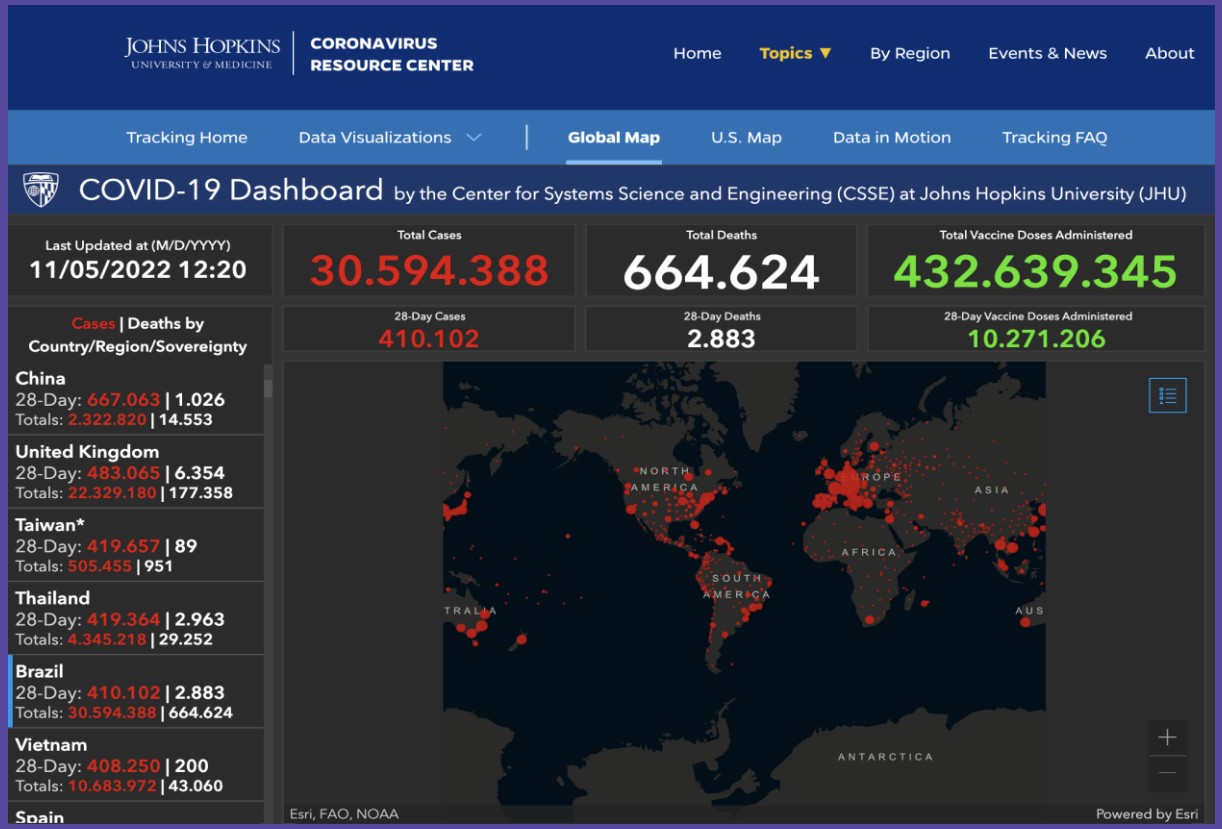
- ✓ O COVID-19 gerou um número imenso de casos simultâneos e de elevada gravidade.
- ✓ Um em cada 3 pacientes hospitalizados precisa de UTI.
- ✓ 50% usarão VM invasiva, com uma duração média de 8 dias.
- ✓ A combinação destes fatores fará com que um grande número de pacientes precisem ser sedados de modo prolongado.

PHUA, J. et al. Intensive care management of coronavirus disease 2019 (COVID-19): challenges and recommendations. Lancet Respir Med 2020; 8: 506–17.

Uso de Suporte na Unidade e Principais Desfechos –
Internações em UTI Adulto com Desfecho Hospitalar Atribuído
Período: **01/03/2020 – 22/04/2022**
(consulta realizada em 23/04/2022)

	SARI			COVID-19		
Hospitais	**Todos**	**Privados**	**Públicos**	**Todos**	**Privados**	**Públicos**
Saídas do hospital	**280.761**	192.238	88.523	**210.356**	146.517	63.839
VNI	**33,7%**	36,1%	28,4%	**38,3%**	40,5%	33,0%
VM	**47,1%**	40,4%	62,3%	**49,1%**	42,9%	63,3%
VM (dias)*	**14,1**	15,2	12,5	**14,7**	15,7	13,1
VM > 7 dias	**53,2%**	56,4%	48,5%	**57,4%**	60,5%	52,5%

www.utisbrasileiras.com.br
Acesso em 11.05.2022



A Beneficência Portuguesa de São Paulo

Acesso em 11.05.2022

Utilização sedativos

- 5% UTI (1,4M)
- 50% em VM – 700k – utilizar sedativos

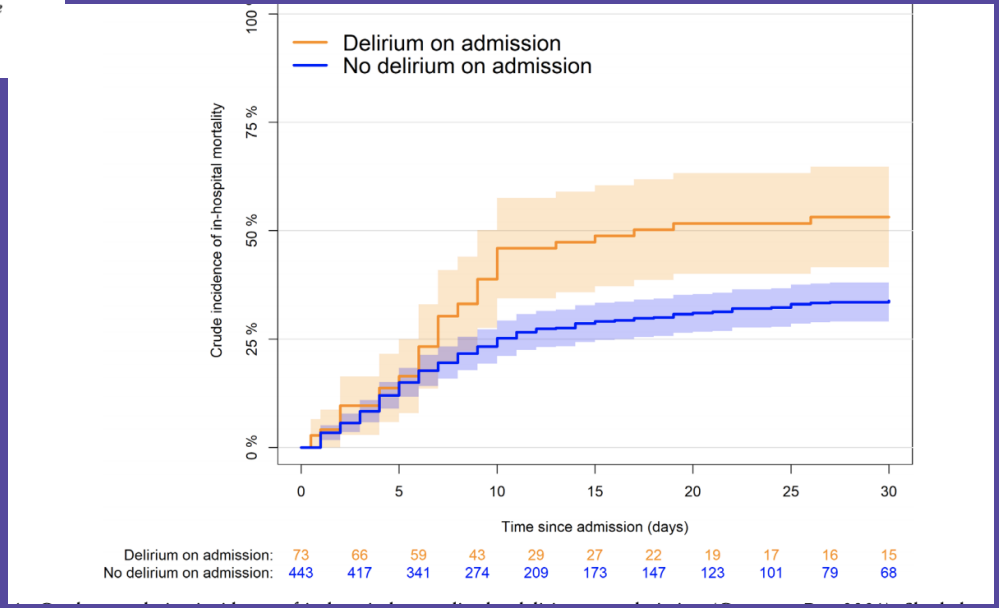
CLINICAL INVESTIGATION

Delirium in Patients with SARS-CoV-2 Infection: A Multicenter Study

Paola Rebora, MS, Renzo Rozzini, MD,† Angelo Bianchetti, MD,‡ Paolo Blangiardo, MD,§ Alice Marchegiani, MD,§ Andrea Piazzoli, MD,§ Francesca Mazzeo, MD,† Giulia Cesaroni, MD,† Anita Chizzoli, MD,‡¶ Fabio Guerini, MD,‡ Paolo Bonfanti, MD,§‖ Alessandro Morandi, MD, MPH,**†† Bianca Faraci, MD,** Simona Gentile, MD,** Claudio Bna, PhD,‡‡ Giordano Savelli, MD,‡‡ Giuseppe Citerio, MD,§ Maria Grazia Valsecchi, MS,* Paolo Mazzola, MD,§§§ and Giuseppe Bellelli, MD,§§§ for the CoViD-19 Lombardia Team*

516 pacientes
Lombardia
Idosos

14% delirium admissão



Contents lists available at ScienceDirect

Journal of Clinical Neuroscience

journal homepage: www.elsevier.com/locate/jocn

Review article

Neurological manifestations and complications of COVID-19: A literature review

Table 1
Comparison of Neurological complications and manifestations between the severely ill Chinese and French patient series.

Variable	Mao et al. [11]	Helms et al. [12]
Study design	Retrospective Chart review	Observational study
Total Number of cases	214	58
Number of seriously ill patients	88	58
Median Age (Years)	58.7	63
Neurological Involvement	45.5%	84%
Dizziness	19.3%	NR
Headache	17.1%	NR
Impaired consciousness	14.8%	NR
Hypogeusia	5.6%	NR
Hyposmia	5.1%	NR
Skeletal muscle injury	19.3%	NR
Simplified Acute Physiology Score II	NR	52
Agitation	NR	40 (69%)
Delirium as documented by CAM-ICU	NR	26 (65%)
Corticospinal tract signs	NR	39 (67%)
Dysexecutive syndrome at discharge	NR	14 (36%)
Ischemic stroke	5 (5.7%)	3/13 (23%)
Hemorrhagic Stroke	1 (1.13)	Nil
Leptomeningeal enhancement on MRI	NR	8/13 (62)
EEG	NR	1(8) diffuse bifrontal slowing

Foot Notes. CAM-ICU; Confusion assessment method in Intensive care unit, EEG; electroencephalogram, MRI; Magnetic resonance imaging, NR; Not reported.

Prevalence and risk factors for delirium in critically ill patients with COVID-19 (COVID-D): a multicentre cohort study

Brenda T Pun, Rafael Badenes*, Gabriel Heras La Calle, Onur M Orun, Wencong Chen, Rameela Raman, Beata-Gabriela K Simpson, Stephanie Wilson-Linville, Borja Hinojal Olmedillo, Ana Vallejo de la Cueva, Mathieu van der Jagt, Rosalía Navarro Casado, Pilar Leal Sanz, Günseli Orhun, Carolina Ferrer Gómez, Karla Núñez Vázquez, Patricia Piñeiro Otero, Fabio Silvio Taccone, Elena Gallego Curto, Anselmo Caricato, Hilde Woien, Guillaume Lacave, Hollis R O'Neal Jr, Sarah J Peterson, Nathan E Brummel, Timothy D Girard, E Wesley Ely, Pratik P Pandharipande, for the COVID-19 Intensive Care International Study Group†*

- Mechanical ventilation
- Use of restraints
- Benzodiazepine, opioid
- Vasopressor infusions
- Antipsychotics

were each associated with a higher risk of delirium the next day (all p≤0·04)

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REVIEW

The intensive care delirium research agenda: a multinational, interprofessional perspective

What are some of the top study areas/trials to be done in the next 10 years?

1. Development and validation of objective tools for delirium screening/diagnosis in critically ill patients, e.g., electroencephalogram, computer-based apps
2. Understanding the pathophysiology of delirium and its relationship mechanistically to long-term cognitive decline
3. Development of new models to improve delirium phenotyping
4. Understanding the attributable risk of delirium on outcomes; going beyond associations to causal inferences
5. Elucidating the biomarkers of delirium and incorporation into predictive models

Intensive Care Med (2017) 43:1329–1339

- MONITORIZAÇÃO
- ESTRATÉGIAS SEDAÇÃO – NÃO AOS BENZODIAZEPÍNICOS
- MOBILIZAÇÃO PRECOCE
- CICLO SONO/VIGÍLIA