Prevention of Post Intensive Care Syndrome in adult ICU patients

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Post Intensive Care Syndrome (PICS)

- PICS refers to new or worsened physical impairments, mental health, cognitive imapairments or social problems.
- These impairments may persist even after leaving intensive care unit or hospital.
- PICS occurs in more than 50% of patients six months after hospitalization in the intensive care unit.

Posa, P., Singh, J., & Stollings, J. L. (Eds.). (2020). ICU Liberation Second edition. Society of Critical Care Medicine
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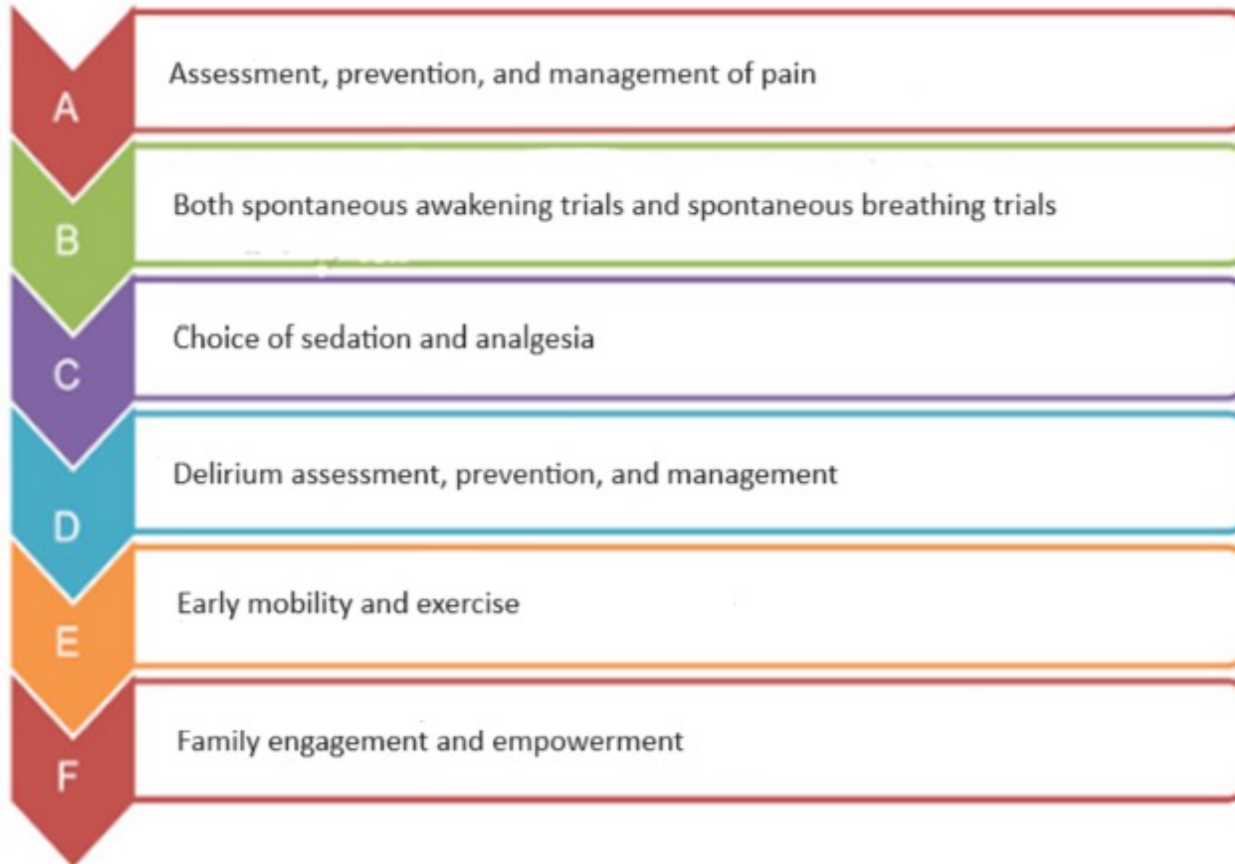
2023

Intensiivravijärgse sündroomi ennetamine täiskasvanul

Eesti Anesteesia- ja Intensiivraviõdede Ühing

PICS guideline

Prevention of PICS



	Bundle Element	Primary Accountability	Additional Team Member Responsibility
A	Assessment, prevention, and management of pain	RN	Physician; Pharmacist or PharmD
B	Both spontaneous awakening trials and spontaneous breathing trials	RN; Respiratory care practitioner	Physician; Pharmacist or PharmD; RN
C	Choice of sedation and analgesia	Physician	RN; Pharmacist or PharmD
D	Delirium assessment, prevention, and management	RN	Respiratory care practitioner; Pharmacist or PharmD; Physician; Physical therapist and/or occupational therapist
E	Exercise and early mobility	Physical therapist and/or occupational therapist; RN	RN, Respiratory care practitioner
F	Family engagement and empowerment	RN; Family	All
G	Good sleep	RN	Physician; Pharmacist or PharmD; Respiratory care practitioner; Family

A - Assessment, prevention, and management of pain

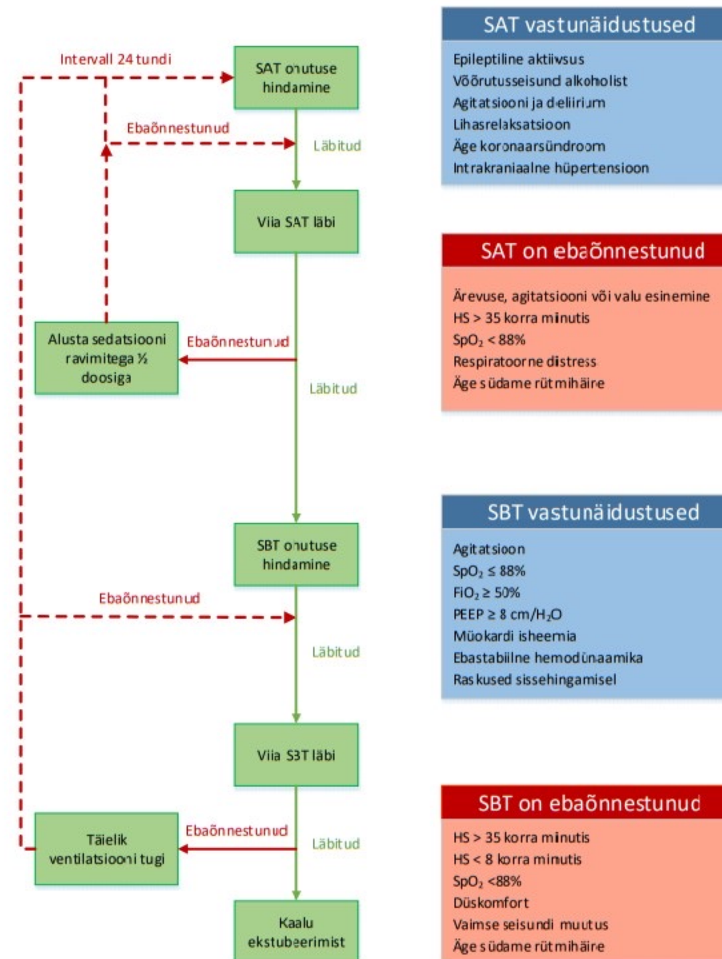
- Adequate assessment of pain using validated tools.
- Assessing and treating pain adequately are necessary to optimize recovery and reduce risks for the development of short-term and long-term problems.
- Verbal or visual pain scale vs behavioral pain scale.
- Multimodal approach to pain management includes nonpharmacological therapies

Assessment of pain:

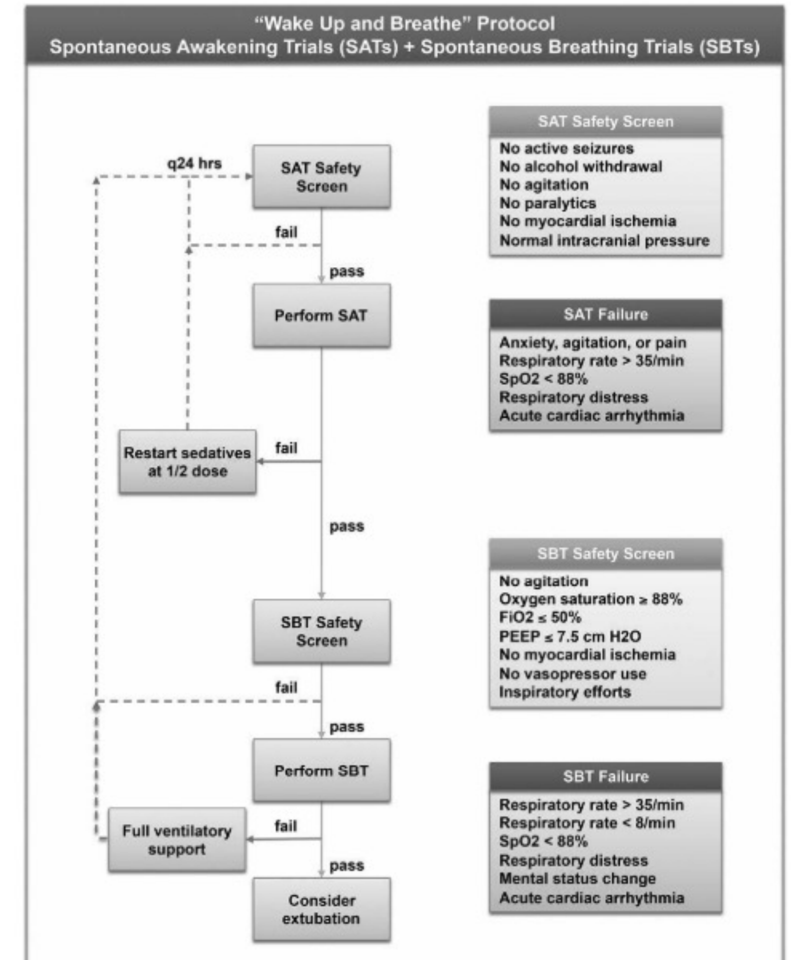
- upon arrival at the department
- at least 6 times a day
- at rest
- before standard care procedures (i.e turning, endotracheal suctioning)
- during activities and procedures
- prior to administration of an analgesic
- at the peak effect of an analgesic
- 1 hour after opioid administration

B – Both spontaneous awakening trials and spontaneous breathing trials

- Coordination of spontaneous wakening and breathing trials is the basis for weaning from mechanical ventilation.



Joonis 1. Spontaansete ärkamise ja hingamise katsete kriteeriumid[11].



Abbreviations: PEEP, positive end-expiratory pressure; Spo_2, oxygen saturation.
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Posa, P., Singh, J., & Stollings, J. L. (Eds.). (2020). ICU Liberation Second edition. Society of Critical Care Medicine.

C – Choice of sedation and analgesia

- Analgosedation - first analgesics, then, if necessary, sedatives.
- Timing of analgesic administration before procedures.
- Opioids at the lowest effective doses for procedural pain are favored.

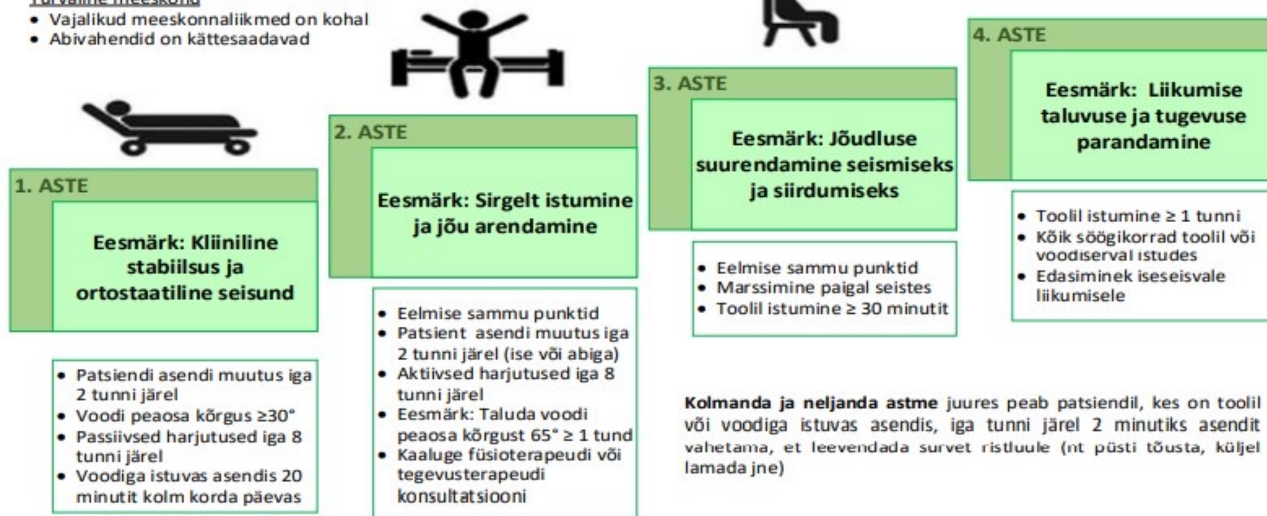
D – Delirium assessment, prevention, and management

- Delirium has been subtyped according to motoric manifestations into hyperactive delirium, or hypoactive delirium.
- Use appropriate tools for screening delirium.
- When identifying delirium, it is important to think about the reason for its occurrence.

Delirium prevention strategies

- Frequent reorientation
- Day/night cycle maintenance
- minimizing light at night to improve sleep quality
- Nonpharmalogical sleep protocols
- Ear plugs at night
- removing catheters and physical restraints as early as safely possible
- Early mobilization
- Use of own eyeglasses/hearing aids
- Minimize extraneous noise
- Adequate analgesia based on frequent objective monitoring
- Avoid deliriogenic medications

E – Early mobility and exercise



Joonis 2. Varajane liikumine ja treening[8].

- Early mobility and exercise are part of optimal patient care practice.
- The final goal is independent movement of the patient.
- Mobility must be safe for the patient!

F – Family engagement and empowerment

- By involving the family, it is possible to increase the quality of patient care.
- Building relationship starts with greeting the family and caring behavior at the bedside.
- Help the family to understand the situation and their potential role in the patient's care.
- Family can be involved in:
  - various activities (oral care, massage)
  - training
  - preventive activities.

G – Good sleep

List of Factors That Patients Report as Disruptive to Sleep	
Environmental	**Physiologic and Pathophysiologic**
Noise	Pain
Light	Discomfort
Comfort of bed	Feeling too hot or too cold
Activities at other bedsides	Breathing difficulty
Visitors (clinician or family)	Coughing
Room ventilation system	Thirst and hunger
Hand washing by clinicians	Nausea
Bad odor	Needing to use bedpan/urinal
Care Related	**Psychologic**
Nursing care	Anxiety/worry/stress
Patient procedures	Fear
Vital sign measurement	Unfamiliar environment
Diagnostic tests	Disorientation to time
Medication administration	Loneliness
Restricted mobility from lines/ catheters	Lack of privacy
Monitoring equipment	Hospital attire
Oxygen mask	Missing bedtime routine
Endotracheal tube	Not knowing nurses' names
Urinary catheters	Not understanding medical terms

Promoting and improving sleep

- To improve patients' sleep:
  - understand their normal sleep
  - create an environment conducive to sleep
  - allow enough uninterrupted time for sleep
  - avoid sleep disruptive medications as much as possible
  - assess sleep daily.

- Sleep can also be disturbed by immobility, limited mobility, worry, fear and anxiety.

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