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**Adherence to the ICU Pain, Agitation and Delirium care bundle: Audit of practices in a teaching hospital**

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**Is this work original?:** Yes

**Background and Objective:**

Analgesic and sedative drugs are commonly administered to critically ill patients. Recent recommendations regarding management of Pain, Agitation and Delirium (PAD) in the intensive care unit (ICU) have been published. These suggest metrics to monitor quality of practices in assessment, treatment and prevention of these problems. The aim of our study was to describe current practices and compliance to the proposed PAD bundle in Belgium.

**Setting and Method:**

A prospective 6-week point of prevalence in 3 general ICU wards (a total of 26 beds) in a teaching hospital. Adult patients requiring invasive mechanical ventilation for at least 24 h were included. Exclusion criteria were pregnancy, cardiopulmonary arrest and palliative care. Baseline demographic data were collected upon admission. The following data were recorded daily: assessment scale, prescription and administration of analgesics and sedatives, daily sedation interruption, physical restraints,...

**Main outcome measures:**

Compliance to predefined metrics.

**Results:**

A total of34 patients were included (220 patient-days). -PAIN- An analgesic was prescribed in 87.7% of patient-days (193/220). Among these, no pain assessment was documented for 99.5% of patient-days (192/193). There were 8.7±6.1 painful procedures per patient-day but only 1.2±2.1 opioids infusions boluses or paracetamol “as needed” administrations per patient-day. -AGITATION- An intravenous sedative was administered to 54.1% of patient-days (119/220) of which 30.3 % (36/119) for therapeutic coma (i.e. acute respiratory distress syndrome, instable intracranial pressure, refractory epilepsy or use of neuromuscular blocking agents). Among patients for whom sedation monitoring was required (i.e. excluding therapeutic comas) a mean of 1.0±1.6 assessments per day was documented and 70.3% of these (64/91 assessments) measured over-sedation (i.e. RASS=-3 to -5, SAS=1 to 2, Ramsay=4 to 6). Decreasing or stopping infusions accordingly, in within 2 h of these measurements, was performed in 21.9% of cases (14/64 assessments). A target score for sedation was prescribed in 34.9% of patient-days (29/83). Daily sedation/analgesia interruption was performed for 20.5% of patient-days (17/83). -DELIRIUM- Mean number of delirium evaluations reached 0.3±3.3 per day. After excluding therapeutic coma patients, physical restraints were used in 87.5% of patient-days (161/184) and antipsychotics were administered in 5 patient-days. Among non-pharmacological prevention, mobilization was applied in 81.4% of patient-days (179/220).

**Conclusions:**

This audit provides several insights for improving PAD management in ICU. Efforts should focus on elaboration of appropriate protocols inspired by the PAD bundle starting with systematic use of assessment scales for an appropriate prescription and administration of drugs. Better consideration of painful procedures and non-pharmacological prevention of delirium must also be undertaken.