Topic: **Perioperative Intensive Care:**
Analgesia, sedation & cognitive dysfunction

Title: **INTERNATIONAL MULTICENTER STUDY ONE DAY PREVALENCE OBSERVATIONAL STUDY FOR DELIRIUM ON ICU (IMPROVE-ICU) - SUPPORTED BY THE EUROPEAN CRITICAL CARE RESEARCH NETWORK (ECCRN)**

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Text: **INTRODUCTION.** Delirium is seen in 11 to 87% of the ICU patients. It is associated with a threefold risk of dying within 6 months after ICU discharge (1) and a worse cognitive outcome (2). Delirium monitoring is performed rarely in only 30% of the ICU patients (3). The ability to accurately detect ICU delirium improved after the use of a validated delirium score (4). **OBJECTIVES.** The primary aim of the study was to investigate the implementation rate of delirium monitoring in critically ill patients after having increased awareness in the last years ESICM meeetings. **METHODS.** The study (ethical approval No EA1/165/10) was designed as an anonymous international multicenter clinical survey. The data assessment on the 25th of January (one-day prevalence study) was performed with an online questionnaire (electronic case report file, eCRF; created with LimeSurvey, version 1.55+). Repeated email invitations were sent to all ESICM members six months prior to the study date. All ICUs were eligible for taking part in the study. Descriptive statistics were computed for all study variables using IBM SPSS Statistics 19. **RESULTS.** 657 visitors accessed the website,129 questionnaires were submitted. Finally, 101 ICUs completed the questionnaire and were included in the analysis. Most institutions taking part were university hospitals (86%) including mixed (68%), surgical (26%) and medical ICUs (5%). A validated score for delirium monitoring was implemented in 55 out of 101 ICUs (55%): Confusion Assessment Method for the ICU > Delirium Detection Score > Intensive Care Delirium Screening Checklist > Nursing Delirium Screening Scale. However, merely 30% of the ICUs monitored delirium every 8 hours. Almost all ICUs treated delirium symptoms with pharmacological agents: antipsychotics > benzodiazepines > α2 adrenergic agonists > serotonin antagonists and reuptake inhibitors. 77% of the ICUs monitored sedation, 80% of the ICUs routinely assessed pain levels. **CONCLUSIONS.** The implementation rate of delirium monitoring was 55% . This shows the right trend of increasing awareness in ESICM members to use delirium monitoring. However, more education is needed to increase the frequency of delirium monitoring compared to sedation and analgesia monitoring to improve early treatment (5, 6).

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Keywords: 1. Quality indicators
2. Sedation
3. Outcome - Mortality

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