

---

English Session

## [EngO1]English Session1

Chair: Sungwon Na (Department of Anesthesiology and Pain Medicine, Yonsei University College of Medicine, Korea)

Fri. Mar 1, 2019 9:00 AM - 10:00 AM 第11会場 (国立京都国際会館1F Room C-2)

---

### [EngO1-3]Work related noise exposure and stress in intensive care unit

Seungho Jung, Jeongmin Kim, Sungwon Na (Department of Anesthesiology and Pain Medicine, Yonsei University College of Medicine, Korea)

【ライブ配信】

In intensive care unit (ICU), various types of noise occur during patient management. It happens all day long, even in night time. There can be medical device origin noises, communications within medical steps, and so on. WHO (World Health Organization) standards suggest maintaining a noise level below 30 dB in the intensive care unit at night. Recently, many efforts are being made for reducing night time noises and exposing patients to them. Such efforts are providing ear plug, back ground music. These efforts aim to improve sleep quality of patients.

This study aimed to measure the degree of noises that occur in surgical ICU and analyze the sources of noises to find how to reduce the occurrence of noises. We used two sound level meters and one personal noise dosimeter for measuring the exposure of noises in surgical ICU. We hypothesized that more noises will be made in isolation rooms and where the patient get mechanical ventilation (MV). In addition to objective parameters, we carried out a self-report type survey with night duty nurses about perceived stress to measure the degree of noise stress.

21 patients were involved in our study. 9 patients were in isolation rooms and the others were in open rooms. 9 patients were mechanical ventilated and 7 patients were sedated. During night time, both in open or IR room, noise above 50dB was continuously measured. Average was  $53.91 \pm 3.67$  dB. The overall difference between them was not significant. There was also no significant difference between mechanical ventilated and non-mechanical ventilated group. However, in IR room, less noises were made in non-mechanical ventilated group.

The night noise levels in the intensive care unit are much higher than the WHO standard. Trying to reduce noise through intervention therapy can help improve sleep quality of patients and reduce stress of medical staff working in intensive care.