Introduction:
To gain insight in the place and additional value of the acute non-physician provider on the Intensive Care Unit (ICU).

Methods:
A systematic search on the value of acute non-physician provider on the ICU was conducted. The methodological quality of the included studies was rated using the Newcastle Ottawa scale (NOS). The agreement between the reviewers was assessed with Cohen’s kappa.

Results:
In total 145 studies were identified. Twenty comparative cohort studies were identified which compared non-physicians with either residents or fellows. All studies comprised adult intensive care. Most of the included studies were moderate to good quality. A random effects meta-analysis from all studies regarding length of stay and mortality showed no differences between non-physicians and physicians, although there was a trend to better survival when implementing acute non-physician providers in the ICU. Mean difference for length of stay on the ICU was 0.36 (95% CI -0.07 – 0.79; I2=88%) and for in hospital -0.15 (95% CI = -0.90 – 0.61; I2=83% ); while the odds ratio for ICU mortality was 0.94 (95% CI = 0.73 – 1.20; I2=60%) and for hospital mortality 0.94 (95% CI 0.89 – 1.00; I2=0).

Conclusion:
The acute care non-physician provider in the ICU seems a promising clinician on the ICU with regard to quality and continuity of care. Whether they also can reduce mortality remains to be determined by designing studies, which adequately measure the contribution of the non-physician providers in ICU care overall and per task. Their role in Europe remains to be elucidated.

Image 1:
Forest plot demonstrating in hospital mortality between ICUs with NP/PA and residents

Image 2:
Forest plot demonstrating comparison in hospital length of stay between ICUs with NP/PA and with residents